III. THE MECHANISM OF PLANTATION-TYPE ECONOMIES

Outlines of a Model of Pure Plantation Economy[a]

By

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I. A Partial Typology of Economic Systems

The larger study[1] of which this outline essay forms a part is concerned with the comparative study of economic systems. Following Myrdal[2] and Seers[3], we have taken the view that economic theory in the underdeveloped regions at any rate, can profit by relaxing its unwitting pre-occupation with the special case of the North Atlantic countries, and by proceeding to a typology of structures[4] each having characteristic laws of motion.

Plantation Economy, the type which we have selected for intensive study, falls within the general class of externally-propelled economies.[5] Specifically, we isolate *Hinterland Economy* which can be further distinguished, for example, from *Metropolitan Economy.* In the latter, too, the adjustment process centres on foreign trade and payments but the locus of discretion and choice is at home and it is by this variable that we differentiate. Hinterland economy, indeed, is what is at the discretion of metropolitan economy. The relationship between the two may be described, summarily at this point, as mercantilist. In this designation inheres certain specifications regarding what may be called the *general institutional framework* of collaboration betweeen the two. It will suffice here to note the five major rules of the game, as it were.

First, there is the most general provision which defines exclusive spheres of influence of a metropolis and the limitations on external intercourse for the hinterland. In the real world there have been, and still are, many examples of this: the Inter-American System, the British Commonwealth, the French Community, the centrally-planned economies, and so on. For con-

[a]This is a somewhat revised version of the paper presented to the Conference.

[1]This is a study of so-called "Industrialisation and Growth in the Caribbean" being undertaken by the West Indies Project Team at the Centre for Developing Area Studies, McGill University. This paper draws heavily on joint work by Professor Kari Levitt and the author See, particularly Lloyd Best and Kari Levitt, *Selected Essays*, mimeo. 1967.

[2]*Economic Theory and the Underdeveloped Regions*, Duckworth, London, 1957.

[3]"The Limitations of the Special Case", in *Bulletin of the Oxford University Institute of Economics and Statistics*, May 1963, and reprinted in Kurt Martin and John Knapp (eds.), *The Teaching of Development Economics*, Frank Cass, London, 1967.

[4]For one excellent attempt to do this see Dudley Seers, "An Approach to the Short-Period Analysis of Primary Producing Economies", *Oxford Economic Papers*, February 1959.

[5]"The Case of Mauritius", presented by Phillipe Hein as a companion paper to this, deals with the same species. As Hein points out, they have a kinship with Seers' "Open Petroleum Economy", presented in *Social and Economic Studies*, June 1964. For a discussion of the similarity see, Lloyd Best, "Economic Planning in Guyana", *The Caribbean in Transition*, Andic & Mathews, (eds.), University of Puerto Rico, 1965.

venience, we assign the phenomenon a generic term: *Inter Caetera.*[6]

Secondly, there is the provision in respect of the division of labour between metropole and hinterland. This we will name the *Muscovado Bias*. This "rule" tends to restrict the hinterland to terminal activity: either to primary production and crude processing or at the other extreme, to assembly. In either case, elaboration is left to the metropolis and with that, the lion's share of value added.

Thirdly, there is the specification relating to the monetary system. This we denote by *Metropolitan Exchange Standard.* It entails the use in the hinterland of metropolitan financial intermediaries, the maintenance of free convertibility with metropolitan currency at a fixed rate of exchange, and with that, the assurance that the liabilities of financial operators in the hinterland are fully matched by metropolitan assets. The effect is to ensure that hinterland assets are readily realizable in terms of metropolitan supplies of goods and services.

Fourthly, there is the origin, destination and carriage of trade. Let us call this the *Navigation Provision*. It is meant to guaranteee metropolitan intermediation in all hinterland trade just as the Metropolitan Exchange Standard ensures a similar intermediation in payments.

Finally, there are the general conditions under which hinterland producers are able to dispose of their output in the metropolitan market. Let us call this *Imperial Preference* – to find another generic formulation.

When we move from the general rules of the mercantilist game to the more specific definitions of relationships between metropoles and hinterlands, we must further acknowledge the existence of at least three families of the latter. Here we differentiate by the type of economic institution which achieves dominance in the hinterland. The typical institution is necessarily an expression of the motives which initiated the mercantilist connection, an incorporation of the resources which are transferred from the metropolis and a recognition of the conditions encountered in the hinterland. In short it is a reflection of the way in which these determine the form of penetration and the organization of resources for the purpose of production and trade.

The motives for initial contact may be various, including plunder, exchange or production, the last for different purposes. That is to say the "view" may be short or long with profit "horizons" anywhere in between. Related to this, the entrepreneur may be pirate, merchant, producer for trade, or producer for settlement. The resources transferred may be any or all of the following: capital, proprietorship, ownership, management and labour. The initial resource situation in respect to land, labour, and organization – to use Nieboer's[7] polar types – may be "open" or "closed"; open if the basic resource, land, is a "free good", closed if it is scarce. In this context, we can identify num-

[6]A reminder of Alexander VI's celebrated Bull of 1493 in which he made the first Donation and settled the dispute between Spain and Portugal regarding "spheres of influence".

[7]Herman Nieboer, *Slavery as an Industrial System*, Martinus Nijhoff (Second Revised Edition) The Hague, 1910. For these concepts, see p. 386.

erous types of hinterlands: enclaves, settlements, garrisons, trading posts, enceintes, gorods, to name a few.[8] It is from among them that we have chosen our three families of hinterlands: hinterlands of *conquest*, of *settlement*, and of *exploitation*.

Hinterlands of Conquest[9]

At one extreme we identify the hinterland of conquest. Here, metropolitan interest is not so much in land as a productive asset, as in the organization of people to facilitate the redistribution and transfer of wealth. Accordingly, State (Crown) entrepreneurship is paramount and intervention takes the form of military and administrative occupation. The privilege of participating in the venture of conquest is closely circumscribed by royal favour to exclusive ports, exclusive trading houses and favoured conquistadores. The requirements of naval and military defence of the lines of communication to the hinterland dictate a totally exclusivist form of external economic organization.

Resources flow from the metropolis to the hinterland to create infrastructure necessary for the transfer of booty and the collection of tribute. This, in effect, entails the harnessing of native labour to produce communal goods, consumption supplies and precious metals. To this end, the *encomienda* is devised as an appropriate institution. The resource situation is closed, the population being already highly organized on the land. Breaches in the indigenous system of organization are effected by any redefinition of resources and by the use of superior techniques of coercion. The resulting syncretic institution is thus "open" in some ways, "closed" in others.

The surplus mobilized in a hinterland of conquest is divided into four shares, the *encomendados* having already found for themselves. There is the royal tribute, the *quinto*, a fixed proportion of the treasure gleaned. The remainder is then divided among three groups of claimants. First there is the element of *rent* accruing to the major officials resident in the hinterland and enjoying royal favour in the form of proprietory rights to land and titles to office. Second, there is the element of *paniagua* accruing to the minor bureaucratic officialdom (the "senior staff") who supervise the day-to-day activities of the population. Finally, there remains a residual which accrues as *venture profits* to the merchants.

Hinterlands of Settlement[10]

At the other end of the spectrum we identify the hinterland of settlement.

[8]See Henri Pirenne, *Economic and Social History of Medieval Europe*, p. 22, for multiple forms of penetration, particularly by the Norsemen. Also T. S. Willam, *Studies in Elizabethan Foreign Trade*, Manchester University Press, 1959.

[9]This is meant to correspond to the case of Spain in Andean America and New Spain. For background see particularly, J. H. Parry, *The Spanish Seaborne Empire*, Hutchinson, London, 1966.

[10]This is meant to correspond to the case of the North and Middle Colonies of North America. The classic work is Charles M. Andrews *The Colonial Period of American History*, Yale University Press, New Haven 1937. See also Louis Hartz, *The Founding of New Societies*, Harcourt, Brace & World, New York, 1964.

Here mercantilism expresses itself less in the direct organization of production and more in detailed regulations concerning what may be produced and the terms and manner in which trade may proceed. Imports to the hinterland must come from metropolitan sources; staples must be sold exclusively in metropolitan markets; the carrying trade is typically reserved to metropolitan carriers; there are prohibitions on what may be produced in the hinterland.

Hinterlands of settlement have evolved from early ventures of exploration and trade. They are inhabited by descendants of indentured labourers, soldiers, clerks, and women brought by initiative on the part of the State (Crown), the company, or the private group. For all practical purposes this type of hinterland is a new metropole. Institutions have little chance of success if they restrict rights which were regarded as customary or even to which settlers simply aspired in the metropolis. The "open resource" situation therefore creates "open" institutions.[11] Production is organized around the family unit.

Initially the settlers engage in production both of export staples and of foodstuffs for home consumption. They must pay back advances as well as subsist. If their competitive position as exporters of staples is weak and their cash earnings on that account are correspondingly small, their best possibility for earning foreign exchange is by selling their surpluses of food and supplies to other hinterlands which specialize in staples.

The family claim constitutes a highly flexible and self-sufficient unit of enterprise. Land is free in exchange for the work of clearing it and defending it against previous and original inhabitants. The difficulty of obtaining metropolitan purchasing power and the high price of imported goods induces an inventiveness in the making of implements and other necessities of life.

A high proportion of the output of the settlers' farmstead is used for own-account consumption and investment. Efforts requiring more resources than can be mobilized by a single family are assisted by neighbours. As land is free, there are no landed classes. Taxation is organized by local communities for local purposes. The ethos is democratic and egalitarian, the way of life austere and uniform. Patterns of demand here being formed have a high local content and form the basis of markets for domestic manufacturing industry.

Hinterlands of Exploitation[12]

Between the hinterland of conquest and the hinterland of settlement lie hinterlands of exploitation. Here, the metropolitan interest shifts from plunder and exchange towards production for trade, though it never reaches pro-

[11]The conditions under which initial institutions broke down in some North American colonies are discussed in Sigmund Diamond, *The Creation of Society in the New World*, Rand McNally, Chicago, 1963.

[12]For a definition of the boundaries of this experience see Charles Wagley, "Plantation-America: A Culture Sphere", in Vera Rubin (ed.) *Caribbean Studies: A Symposium*, University of the West Indies, 1957.

duction for hinterland consumption. Whereas in the hinterlands of conquest the metropolis provides only military and administrative infrastructure, now it provides economic enterprise, organization and initial capital, as well. Metropolitan labour, however, flows only to hinterlands of settlement. Here, labour is brought in from other countries. These are selected with regard to military and cultural considerations which permit institutions compatible with both the resource situation and the particular entrepreneurial ethos involved.

The combination of a merchant-pirate ethos with a short view and the introduction of labour into an open resource situation, governs the form of social and economic organization in the hinterland in much the same way as the mercantilist intent to transfer a surplus dictates exclusivist trading arrangements with the metropolis. Where land is free to be used for subsistence production, the recruitment of labour exclusively for export production imposes a need for "total economic institutions" so as to encompass the entire existence of the work force.[13] The plantation which admits virtually no distinction between organization and society, and chattel slavery which deprives workers of all civil rights including right to property, together furnish an ideal framework.[14] Hence, the term *Plantation Economy* for the particular species of hinterland economy of exploitation which we have selected for intensive study.

II. Plantation Economy[15]

With the shift to mercantile production, the Crown is now largely passive except in framing the regulations regarding trade, production and property. It participates by dispensing titles of land ownership to favoured intermediaries. These are the lords proprietors. For a consideration tantamount to rent they, in turn, farm out their rights to joint-stock trading companies under the auspices of which ventures are undertaken. Only this unit of enterprise can mobilize the merchant skills and the enormous concentrations of capital needed. The trading company initially tends to encourage pooling of capital and sharing of entrepreneurship. Partnership is common. Stock is ventured by lord, merchant, and planter alike.[16] But even if it is planters who transport their persons to the hinterland, it is by and large a merchant's game, and it is he who takes the title of venturer.

13The concept of "total institutions" comes from Erving Goffman, *Asylums*, Doubleday, New York, 1961. For an adaptation to the sociology of the plantation, see Raymond Smith, "Social Stratification, Cultural Pluralism and Integration in West Indian Societies, in *Caribbean Integration*, Sybil Lewis & Thomas Mathews, (eds.) University of Puerto Rico, Rio Piedras, 1967.

14Edgar T. Thompson, "The Plantation Cycle and Problems of Typology", in Vera Rubin, *op. cit.*

15In this section no attempt will be made at documentation in detail since this is only a summary presentation of material. References are thus general for the most part. They are also confined to secondary sources. (This is by design. The aim is to stress the methodological point that economists have to rely on historians to discover, check and make available the source materials which are their input, as it were.)

16Richard Pares, *Merchants and Planters*, Economic History Society, Cambridge, 1960, pp. 1-13 *passim*.

Since the economy produces almost exclusively for trade with the metropolis, the merchant occupies a strategic position. He operates at the metropolitan centre where finance and shipping are organized, supplies mobilized, and output disposed of. He is particularly well placed to secure his share of the product, whatever the state of trade.

In the hinterland of exploitation then, the typical unit of enterprise is the joint-stock trading company. This mobilizes the venture capital, and converts it into fixed capital – slaves and equipment – as well as into working capital – the "magazines" of provisions, tools and supplies. The plantation is the typical unit of production. Save for supplies produced and consumed on own-account, it produces a single crop. Accordingly, the hinterland economy is comprised of a single sector, fractured into plantations. Each plantation is a self-contained, self-sufficient, "total" institution, encompassing even its own civil government. Military government is provided by the metropolis. The pure plantation economy is modified only by the existence of a few nomadic native survivors, runaway slaves, and small settlers from the metropolis who resist the hegemony of the plantation.

The unit of enterprise and the unit of production are linked by the processes of supply and disposal. Within the framework of mercantile regulations laid down by the metropolitan government, trade and payments are effected as "intra-company" transfers and book transactions. The only breach in the closed nature of the business occurs when the metropolis is unable to furnish provisions. This opens the way to the interloper. Best placed to exploit such opportunity are hinterlands of settlement attached to the same metropolis.[17] By dint of their disadvantage in staple production, they are most eager to earn exchange and they alone have the required surplus of food and stores. Besides, being within the same mercantile walls, they are better able to finance a triangular trade (through the metropolitan merchants) than potential competitors. And, furthermore, they fall within the provisions of the *Navigation Provision*, the *Metropolitan Exchange Standard* and, of course, *Inter-Caetera.*

The Golden Age

In the nature of the case, the foundation period of the plantation economy constitutes a veritable golden age. The system responds exclusively to external demand. Indeed, its establishment has been prompted by excess metropolitan demand and high prices. More slave labour is continually introduced and more virgin land brought under cultivation. Output per slave is well above input per slave. There is a considerable surplus product available for distribution between lords proprietors, planters and merchants. If we ignore income produced by indigenous people, runaway slaves, and by small settlers, between them they receive the whole of the domestic product. The product accruing to slaves is, strictly speaking, an item of maintenance

[17]Richard Pares, *Yankees and Creoles*, Longmans, London, 1956.

costs. During this foundation period the economy acquires characteristic patterns of behaviour.

The first characteristic relates to the pattern of expansion. Since all supplies and capital goods used by the plantation are imported, the secondary effect of expansion of the output of these goods is experienced in the metropolis and in hinterlands of settlement which are able to operate within the mercantile regulations. The secondary effect of expenditure out of factor incomes depends partly on where the landlords, planters and merchants live, and, more importantly, on their pattern of demand. As a restricted high income group their expenditures already tend to create a diversified demand for a whole range of luxury goods other than large demands for a few basic items.[18] If, in addition, they live abroad and have a taste for metropolitan wares, their expenditures give the plantation economy no chance to diversify itself. Any dynamic in the economy must then be infused by the surviving small settlers and by manumitted slaves. But the former are pushed out as the plantations engross themselves; and the latter, brought up on plantation fare, have a high propensity to import and seek opportunities to produce goods or services for export.

The second characteristic[19] of pure plantation economy, which becomes established in the foundation period, is the form of adjustment to fluctuating earnings. Market conditions, though favourable in general, vary from time to time in response to temporary over-expansion, changes of weather, outbreak of war, and the like. Favourable conditions encourage expansion; but unfavourable conditions cannot be met by contraction, since labour-power is a fixed cost. When therefore, they are forced to reduce the output of the staple, the planters typically deploy slave labour power towards domestic and other services, towards augmentation of the infrastructure for export production, and towards the production of substitutes for imported supplies. But the extent to which these alternatives can be pursued without disrupting the routines, altering the methods of organization, and modifying the structure of skills appropriate to the main task is severely limited by the high degree of specialization involved in the production of the staple. Adjustment, therefore, tends to take the form of political intervention by land policy to restrict entry into the business, and otherwise to support prices or reduce costs. Such intervention is facilitated by metropolitan residence, or frequent visits by proprietors, merchants, and planters.

The third characteristic of the plantation economy relates to the size and distribution of the product. For several reasons, all deriving from the "total" and closed character of the business, rewards and profits are marked by a certain "incalculability".[20] First of all, slave-labour — the main capital asset

18Celso Furtado, *Development and Underdevelopment*, University of California, Berkeley and Los Angeles, 1964, p. 64.

19Lloyd Best, "Current Development Strategy and Economic Integration in the Caribbean", Lewis and Mathews, *op. cit.*, pp. 61-64.

20The term is borrowed from Douglas Hall, "Incalculability as a Feature of Sugar Production during the Eighteenth Century", *Social and Economic Studies*, September, 1961.

– is subject to an indeterminable depreciation. Secondly, the output of capital goods in the form of cleared land, and construction, and the performance of consumer services by slaves, constitute income to planters.[21] On both counts, real net product is made difficult to measure. Thirdly, proprietor, planter and merchant tend not to be distinguishable one from the other. It is, therefore, difficult to identify what is rent, what is reward for planting, or what is venture profit on merchandizing. Fourthly, the practice of provisioning the plantation in kind and of settling claims in produce and in both the hinterland and the metropolis separately, complicates accounting enormously. Finally, the communal consumption patterns associated with Great House living and the absence of any real distinction between economic organization and plantation society, cloud the distinction between intermediate supplies in the form of feeding to slaves and factor incomes in the form of *paniagua* to "senior staff".

Over time, however, the situation simplifies itself to some extent. As the system expands, the merchants are called upon to mobilize new and larger stocks of capital. As new land is engrossed and fresh territory opened up, supply out-paces demand and prices weaken. Profits, however, remain good and expansion continues since, in any event, new land yields higher profits than old. The merchants now have a double incentive to protect the earning power of their capital by switching to mortgage lending on old enterprise and by shunting funds to new. Gradually, the longer established planters are accorded the entire entrepreneurial function; the newer ones, a diminishing minority, still tend to share it with the merchants.[22]

Gall and Wormwood

A second phase is initiated in pure plantation economy as planters assume the entrepreneurial role and receive the corresponding venture profits or losses. This is the phase of decline and collapse[23], of "Gall and Wormwood" as one planter described it. For a time, while profits are still high, they are able to encumber their estates with legacies. They are also in a position to employ senior managerial staff in the hinterland while they themselves retire to the metropolis, having acquired title from the proprietors. But as the system expands, costs rise and prices come steadily down. Soil exhaustion forces the employment of more labour-power per acre and per unit of output. At the same time the rising demand for labour forces up the price of slaves. Meanwhile chronic over-supply depresses the market. Rent is eliminated since new entrants undertake cultivation on virgin land. Rising costs and falling prices squeeze profits thinner and thinner.

What is more, there is now an extra burden of costs. Encumbrances made

[21] Celso Furtado, *The Economic Growth of Brazil.* Berkeley and Los Angeles, 1965. See especially Chapter 9, "Income Flow and Growth," pp. 50-58.

[22] Pares, *Merchants and Planters*, pp. 29-37.

[23] Lowell Ragatz, *The Fall of the Planter Class in the British Caribbean 1763-1833*, Octagon Books, New York, 1963. (New Edition).

in better times are a fixed charge on product. The manager-attorney in the hinterland has to receive his *paniagua* and his share of product. Besides, he probably exploits the opportunity to increase his real draught on plantation income in other ways. Typically, he is a factor who draws commission from the metropolitan merchant; he stands, therefore, to gain by inflating the plantation's import needs. As manager and attorney he benefits from augmenting current output at the expense of a swifter consumption of the planter's capital.[24] As bad times persist, mortgage debt is contracted or extended, so increasing the burden of fixed interest charges on product. Deteriorating conditions of trade increase risk to creditors and push interest rates up.

Yet the planter has few possibilities of successful adjustment. Even if he can find the capital for it, the rules do not permit him to undertake the elaboration of his product in the hinterland. He is restrained by what we have described as the *Muscovado Bias*. Nor does the high degree of specialization of all the hinterland institutions, including the near uniqueness of the form of labour organization, permit him any real flexibility in the choice of production techniques or in the composition of output. To move to new territory is an expensive and troublesome business requiring him to uproot a whole society and to move an entire agro-industrial complex.[25] Caught in what we choose to describe as a "Goveia Syndrome", his only genuine option is to seek support for prices through the use of political influence in the metropolis.

But by now the metropolitan economy is undergoing far-reaching changes. Merchant enterprise has been organizing industry, activating agriculture, and transforming the economy. Increased commodity production both in the hinterland and in the metropolis, reduces the scarcity value of the imported luxuries. In the course of time the expansion of production and the extension of the market erodes mercantile profit and with that, mercantile influence. This we describe as the "Williams' Effect".[26] Capital shifts from trade to production. Large numbers of workers have now to be fed in the towns. Expansion in the metropolis, too, has brought the system up against the limited supply of land. The exclusivist structure erected to protect the profitability of mercantile economy is seen by rising industrial interests as a brake on further expansion.

The signals of these changes reach the hinterland in the form of inadequate profits even for reasonably efficient producers. Ultimately, the cause of the secular downward run in prices is the shift of investment into new terrain as metropolitan "merchants" use their discretionary power to switch capital to more profitable enterprise. The result of this is to bring into play cheaper supplies which, in turn, make the system of Imperial Preference un-

[24]Douglas Hall, "Absentee Proprietorship in the British West Indies", *The Jamaican Historical Review*, Vol. IV, 1964, p. 21.

[25]Elsa Goveia, *Slave Society in the British Leeward Islands at the End of the Eighteenth Century*, Yale University Press, 1965.

[26]Eric Williams, *Capitalism and Slavery*, Deutsch, London, 1964.

profitable to the metropole and strengthen the case for dismantling the exclusivist arrangements. Part of the switch of the capital made by the merchant class in the hinterland trade is into industry. To the extent that the resulting industrialization becomes a cumulative process it makes the hinterland more and more a taker of technology and of taste from the metropole. And in so far as the bargaining power of workers in the metropole is strengthened in the process, a floor is set on the prices of manufactures and therefore, on the extent to which the long-run terms of trade can ever favour the hinterland.

These results can be avoided only if the Plantation Economy faces the fact of over-maturity and lack of competitiveness by replacing its basic structures and institutions, thereby introducing more flexibility into the adjustment process. This implies a "political" solution. The economic solution is largely ruled out by the fact that it requires large capital outlays to de-specialize, to transform technology and to finance the culturally entrenched taste for imports built up in the Golden Age. In the age of decline these are not available. The economy must, therefore, borrow. With taste and technology fixed this implies the consumption of capital, which expresses itself in growing indebtedness, and in lagging productivity and output. The growing indebtedness has two effects. First, it increases the discretionary power of the creditors and secondly, it reduces the share of total product which is unencumbered and, therefore, disposable. The further effect of this is to discriminate against those in the hinterland with the least power to intervene. These are the slaves. By enhancing the degree of political instability, this only hastens the need for a political solution.

The possibility and the character of such a solution are both powerfully influenced by the economics of the situation. The growth of the discretion of metropolitan creditors is paralleled by a willingness of the metropolis to maintain stability by military intervention. Economic decline, however, implies mounting costs to this operation. Ultimately, when the costs become intolerable, the metropolis has little choice but to attempt the political solution which is needed by itself initiating institutional reform. At this point, the Plantation Economy is presented with a new situation though it carries forward, among other things, a legacy of taste and of a capital stock in mortgage to metropolitan merchants.

III. Adjustment of Hinterlands[27]

The change in economic conditions in the metropolis which induce these developments in Plantation Economy also affect other hinterland economies and those are also all called upon to adjust. Those which have been exporting within the framework of mercantile protection are forced to become com-

[27]This section is intended to assist time and space comparisons of different hinterland experiences in adjusting to changing economic conditions in metropoles. It provides only a summary view.

petitive either by reducing costs or by switching to new exports. Or they must substitute home production for imports. Those which previously had not been exporting now have the chance to do so. The industrial expansion of the metropolis does not merely increase the demand for wage goods. Also wanted are fertilizers for the new lands, raw materials and mineral resources for industry, better quality and more exotic foods for consumers as the standard of living of the metropolitan population rises.

The pattern of adjustment is profoundly influenced by whether a particular hinterland is one of conquest, one of exploitation or one of settlement; by the degree of maturity which each has achieved in its status as a member of one of the three groups; and by the strength of the stimulus, from its own metropolis or from some other, to produce for the external market.

Adjustment in pure *Hinterlands of Settlement* is comparatively easy. Foodstuffs previously produced by settlers for domestic consumption become major staples in high demand in the expanding metropolitan markets. Hinterlands of settlement established within the framework of the old mercantile system experience population expansion as successive waves of migrants are displaced from the land by the process of industrialization in the metropolis. Entirely new hinterlands of settlement are also founded.

The demand for cheap food and cheap agricultural raw materials induces a flow of capital from the metropolis to the hinterland. The objective is to extend the area of economic cultivation by lowering the costs of transportation. From profits accumulated in the metropolis there is a real transfer in the form of capital investment in railways, ports, harbours, steamships and other forms of infrastructure directed to supplying metropolitan markets with cheap foodstuffs. The metropolitan shortage of land is eliminated by extending the frontiers of cultivation across the oceans. While geographic and economic factors favour some hinterlands of settlement in comparison to others, the less favoured eventually get their turn as metropolitan demand and infrastructure investment further extend the frontiers of cultivation.

Hinterlands of Conquest find adjustment a far more complicated matter. They have the formidable problem of replacing the military and administrative apparatus which served metropolitan plunder and transfer by one which facilitates metropolitan participation in production for the international economy. While metropolitan governments may help in "calling this new world into existence", the pressure to transform the institutional order is exerted principally by private enterprise in quest of specific resources. Crown entrepreneurship is succeeded by private entrepreneurship which is, however, financial rather than mercantile or industrial. Its influence on the hinterland is exercised by raising capital and making funds available to the government to create infrastructure suitable for export production. Resources for purely domestic uses receive assistance only incidentally.

Transformation proceeds through the establishment of units of production which tend to be self-contained and self-sufficient. They possess a flexibility which the institutional order denies to producers in general. They are established either by enclosure of land and local labour or by the introduction of alien labour after the fashion of the plantation with the important difference that there exists an enormous domestic sector. The phenomenon of "enclaves" thus appears. At the same time, or alternatively, entirely new hinterlands of settlement are founded alongside the hinterlands of conquest and begin to draw recruits from them. The more these hinterlands of conquest are impelled by their own maturity to adopt new forms of economic organization, the more there is a merging of migrants from the traditional order with new settlers. This creates the phenomenon of "dual economy".

The enclaves, and the settlements on the flanks of the old hinterlands of conquest are, in the nature of the case, small and wealthy in relation to the setting. They are highly specialized in exportation and earn foreign exchange out of which to supply their diverse consumption needs. Expenditures place no great pressure on supply in the hinterland itself. Supply conditions in any case are akin to those of a pure hinterland of conquest. The system expands in response to the growth of external demand. For all practical purposes, the unit of enterprise is the metropolitan bank or firm which initiates export projects, as a means of selling metropolitan investment goods, of investing metropolitan capital and of provisioning the metropolitan economy with needed supplies. Local entrepreneurs are involved in furnishing capital and in the management of production. They do not, however, constitute the dynamic class in the economy.

Hinterlands of Exploitation experience the greatest difficulty in adjusting to the breakdown of the mercantile order because here the mercantile system has left behind its most elaborate productive apparatus. The legacy of institutions, structures and behaviour patterns of the plantation system are so deeply entrenched that adjustment tends to take place as an adaptation within the bounds of the established framework. By and large, the economies do not experience any considerable or sustained relief from their dependence on the traditional export staple.

At the same time, there exists such a variety of situations that generalizations concerning the responses of the various economies to the ending of the mercantilist era is difficult. It is, therefore, necessary to distinguish at least three initial situations. On the criterion of established patterns of land use, we distinguish the mature plantation economy, the new plantation economy and the mixed plantation economy.

Mature Plantation Economies[28]

In the mature hinterlands of exploitation, staple production has long encompassed the entire territory. Plantations exhaust the area of cultivable land. The system has expanded to its limit and beyond. Soil exhaustion and increasing difficulties in obtaining slaves have raised costs of production

[28]The best cases in point are Barbados and the Leeward Islands.

while over-supply of metropolitan markets has been depressing prices. The plantations are no longer viable. Some go out of business, others cut back production; and land and slaves are thrown into idleness. Plantations turn to the metropolitan government for aid in the form of subsidies grants, bounties, development loans and assistance for the purpose of maintaining law and order as enforced idleness of work-units brings political instability. However, the political climate in the metropolis is hostile to any bolstering of mercantilist privilege. The new industrialist class is actively engaged in dismantling the traditional exclusivist structures. The metropolitan government responds to the pressures by abolishing the old labour regime in the hinterlands and by removing the market monopoly.

The effect of these changes is to aggravate the problems of the plantations and to force them to undertake internal adjustments. To begin with, more plantations fold up and more land is released. The liberated slaves are able to acquire land by purchase or by squatting. To the extent that peasants and small farmers establish themselves outside the plantation sector, the planters are faced with a smaller and less reliable labour supply and by rising wage rates. The competition for labour directly attributable to the establishment of a domestic agricultural sector is aggravated by the growth of an urban sector. A market for crafts and services springs up in response to the greater money demand resulting from higher levels of real income and from the break-up of the old system of bulk importation and provisioning in kind.

The terms on which the ex-slaves will offer labour to the plantation are determined by the amount of land which they can acquire and by the productivity of that land. The greater the amount of land available to the cultivators and the higher their productivity, the more restricted the supply of labour available to the plantation, and the greater the upward pressure on wage rates. The labour market is also affected in a very special way by the high value placed on independence which fixes a minimum requirement of own-account production, and by taste patterns which dictate a minimum requirement of imported consumption goods. These are parameters fixed by the legacy of slavery. However high are wage rates on the estates, labour will work its own land in the interest of independence. However low they be, cultivators will offer a few tasks of work in order to procure cash to buy imports. The necessity to work for low wages in the latter case is imposed by the limited plantation demand for domestically produced output. This in turn reflects the leakages out of plantation income, either because many planters live in the metropolis or because, when they are resident, considerations of taste dictate consumption patterns with a high import content. Thus, it is the legacy of obligations to absentee owners and the inherited taste for metropolitan goods which inhibit the diversification of the economy by setting close limits on the demand for domestically produced output. Both the planters and the cultivators need the foreign exchange provided by the export staple.

Faced by falling prices and rising costs the planters must find ways to maintain profitability. Specifically, they must either introduce improved methods and increase output per man, or they must secure more and cheaper labour through a greater participation by the cultivators in estate work. However, the extent to which productivity can be raised is limited by the difficulty which a moribund business faces in raising funds. The planters, therefore, attempt to raise output per man on the estate by measures which do not require capital. They offer labour the incentive of metayage as an incentive to raising productivity.[29] And cultivators acccept this as a way of securing their foreign exchange on a permanent basis. But the planters cannot afford to make the scheme permanent because in good years they would have to relinquish too big a cut of their profits.

They therefore, use their political influence to create more favourable conditions in the labour market.[30] They enforce restrictive land and credit policies on the government with the intention of limiting the amount of land which cultivators can acquire. Similarly, in education policy, they oppose efforts by the government and the church to equip the population with skills that would enhance the productivity of the domestic sector. They attempt to restrict entry into urban trades. Finally, they impose taxation on imports in order to reduce the purchasing power of wages and so to draw more labour on to the market. In the face of this sort of pressure, the only escape for the population lies in migration. The irony of this is that it makes it possible for more efficient plantations to establish themselves in other hinterlands.

Efforts to solve the problems of high cost production by rationalization are thus frustrated. The mature hinterlands of exploitation survive only to the extent that the prices of manufactured imports fall faster than staple prices; or to the extent that as producers with a backward technology, they have a secure market in supplying inputs to metropolitan processors whose technology is correspondingly out of date. Under threat of late comers with new techniques, producers in both the metropolis and the hinterlands have a common interest in erecting shelters for their less efficient operations.

New Plantation Economies[31]

While in the mature hinterlands of exploitation the passing of the mercantilist era introduces severe pressure on profits, in the new lands opportunities for staple cultivation are opened up. The old mercantile system to which these lands were attached, had lacked the dynamic to organize production. Entrepreneurship had concentrated either on plunder or on exchange. With

29See Woodville Marshall, "Metayage in the Sugar Industry of the British Windward Islands, 1838-1865", *Jamaican Historical Review*, Volume V, May 1965.

30See Venetta Ross, "Emancipation: Revolution or Reformation in the Leewards?" unpublished mimeo. Also, W. A. Lewis, "Foreword," to Gisela Eisner, *Jamaica, 1830-1930*, Manchester University Press, Manchester, 1961, p. xix. Still further, Eric Williams, *History of the People of Trinidad and Tobago*, PNM Publishing Company, Port of Spain, 1962, pp. 213-15.

31This type is best instanced by Trinidad in the nineteenth century and particularly by Cuba in the nineteenth and twentieth centuries.

the internationalization of trade and capital flows across old mercantile boundaries, hitherto unexploited lands are in a prime position to cultivate the export staple. New techniques of production can be adopted from the start. To take advantage of these, large capital investments are required and are easily attracted to unencumbered property. On all counts the competitive potential of these new plantations is strong. Because industrialization in the metropolitan countries is now well underway, capital comes in the form of machinery and equipment with built-in modern technology. In so far as the capital comes from newer industrial countries with less developed lending institutions but where firms are large and dynamic, investments tend to be effected through subsidiaries.

The constraint on expansion is the availability of labour. This type of hinterland economy has been slowly developing from a military garrison into a colony of peasant farms and indifferent plantations. Labour must, therefore, be introduced from outside. The mature hinterlands are a natural source. What they cannot provide must be procured elsewhere. In either case, institutional forms must be devised to ensure efficient control of work-units in a situation of abundant land. This calls for indenture, contract labour, or a ratooning of slavery in some form. Industrialization in metropolitan countries and in the hinterlands of settlement creates a rising demand for the staple but is remunerative only to reasonably efficient producers. The new lands expand at the expense of the mature plantation economies, which then release a constant stream of labour.

As expansion proceeds, the plantations encroach on the preserves of the established peasant sector. They engross land and displace labour. The ready availability of foreign exchange invites the importation of a highly diversified set of consumer goods, restricting the expansionary effect of rising incomes on domestic suppliers. The plantation sector becomes the major influence on public policy and determines the allocation of infrastructure investment. A highly specialized economy develops, well equipped to take advantage of favourable markets. Fortified by their competitive advantages over more mature producers, plantations expand without limit.

Mixed Plantation Economies[32]

The mixed plantation hinterland arrives at the end of the mercantile era with an economy in which the declining fortunes of the staple have set in before plantations occupy all cultivable land. Although plantations predominate, there exists a peasant sector of small settlers who had always been outside the orbit of the staple, or who had fled from it.

In the peasant sector leakages out of income are lower than in the plantation sector. Peasants and small farmers are relatively free from the legacy of the plantation and their consumption patterns have a correspondingly smaller import content. While they produce minor exports, they are not compelled to specialize in them because they have fewer requirements for foreign

[32] Jamaica is the outstanding real-life example of this abstraction.

exchange. A large part of their output is consumed within the sector. These settlers have a keen interest in raising productivity. They exercise a restraining influence on the planters so that public policy is not exclusively dominated by plantation interests. Infrastructure is correspondingly less specific to the staple than in mature plantation economies.

The break-up of the mercantilist labour regime, and the ready availability of land exert strong upward pressure on wage rates. Adjustment takes the form of widespread bankruptcy and the peasant sector is expanded by the exodus of land and labour from staple cultivation. In this economy there are no landless workers. Three forms of land occupancy can be discerned.[33] First, there are small farmers who engage in the cultivation of a number of minor cash crops for the metropolitan markets. Secondly, there are occasional labourers who cultivate leaseholds and freeholds on which they grow provisions for their own use, and for domestic sale. Thirdly, there are full-time labourers who, however, rent provision grounds from the plantations. The expansion of the independent rural sector generates a corresponding growth of urban activity. Craftsmen, artisans, and petty traders join the merchants in servicing the requirements of the enlarged domestic sector. A town class emerges.

Squeezed by rising wage costs, the plantations seek ways to stabilize their labour supply by the same methods employed by their counterparts in mature plantation colonies. These methods, however, prove much less effective. Labour has far more alternative employment on its own land. And government is far less amenable to plantation pressure because of the countervailing political influence of the town classes and the small farmers. Nowhere is this better illustrated than in the frustration of attempts to introduce external labour of a kind similar to that brought into the new plantation colonies. With the exception of the farmers who themselves require cheap wage labour, the population effectively resists the imposition of taxation for purposes which are designed to bring benefits mainly to the planters. The merchants, in particular, are adamant in their opposition to import duties which would restrict domestic purchasing power and so affect their earnings.

The planters' only option is to improve techniques and raise productivity. This, however, demands more capital than they can mobilize on the basis of their indifferent profits. Unlike new hinterlands of exploitation, the staple cannot attract external capital to modernize and rationalize. The conditions on which land and labour are available are very much less favourable. Unlike the mature hinterlands of exploitation, the mixed plantation economies adjust to the break-up of mercantilism by increasing the diversification of output. The availability of land and the existence of political structures independent of the plantation, provide an escape from the staple. For these reasons this type of hinterland is unique in regard to its economic diversity.

In the post-mercantilist era, the dynamic of expansion in these territories

[33] Douglas Hall, *Free Jamaica*, Yale University Press, 1959, pp. 158, 182.

passes to the independent sector. However, the legacy of the plantation is carried into the new domestic sectors in the form of local and regional consumption patterns. The internal migration of labour out of the plantations hardly lowers the propensity to import and undermines the potential of a growing domestic market. At the same time, the migration of the staple to the new lands establishes highly import-intensive patterns of consumption in neighbouring territories. The effect is to stunt the organic development of a regional market where population and income growth may create large-scale demand for a range of local produce. The economic future of the hinterland, therefore, hangs on its ability to supply new export staples with brighter prospects than the old.

IV. Notations

VARIABLES:

Physical Stocks and Flows

W^* Output in physical units of "ackees".

R^* Output in physical units of Great House plant, improvements to land and consumer (domestic) services.

X^* Output of the staple in hogsheads.

M^* "Salt-fish" imports measured in "Magazines".

K^* Capital stock of plant and improved land measured in physical units.

N' The stock of slave-time measured in terms of work-hours.

N^* The number of slaves.

O^* Output measured in physical units $(W^* + R^* + X^*)$.

L^* Unimproved land measured in physical units.

VARIABLES:

Values or Stocks and Flows

E Aggregate cultivation "expenses" of the plantation including profit.

W Intermediate output produced and consumed on the plantation. Since there is no market in which this output is bought and sold it is valued in metropolitan exchange at an imputed price reflecting its opportunity cost in terms of staple output foregone. In addition to the local or "ackee" component of slave subsistence it includes a covert item of "attorney" income and consumption in the form of plantation produce and services accruing to "senior staff" at the Great House.

M Intermediate goods procured by the plantations from abroad and valued in metropolitan exchange at hinterland c.i.f. net of venture profit on trade. It is the "salt-fish" component of slave subsistence. Like W, it includes an incalculable item of goods consumed at the Great House, since the system of "magazining" through a distribution sector which is internal to the plantation permits a covert element of final supply of imports as well as local produce to be counted as intermediate costs.

D	Depreciation $(D_m + D_r)$. D_m is the reduction from all causes, in the work hours stored up in the stock of slaves. It is calculated in metropolitan exchange by valuing each stored-up work-hour at a price. Here, there are the usual problems connected with the valuation of capital but it is convenient to take replacement cost as the appropriate basis for valuation. D_r is depreciation of plant and improved land after tax.
T	Certain unavoidable charges against plantation operations (hence, "taxes"). In principle, these taxes may be either poll taxes on slaves, taxes on land, *ad valorem* fines on the value of property levied by hinterland (proprietary) government; or they may be encumbrances on plantation account due as settlements made on private individuals by planters or as mortgage claims by merchant bankers. Specifically, taxes are here made up of rents and royalties (T_Q), fines, poll taxes and other property taxes (T_g), private settlements (T_{p1}), mortgages (T_{p2}), and attorney income (T_A). T_g is net of subsidies given by the metropolitan government (G_x) to the hinterland government for meeting military expenditures.
P	Gross profit including depreciation. $p=F + D$. Capital being the only factor of production, this is the same as gross domestic product.
V	Total venture profit after tax. It is made up of (i) venture profit on production going to planters (V_{p1}), of which the "distributed" share is V_x, the "reinvested" share $\triangle K_1 + \triangle K_2 \pm B$ (for K, see below); and of (ii) venture profit on trade going to merchants (V_t).
F	Net factor payments, i.e. value added net of depreciation. In this model representing the pure case of plantation economy, this is the same as conventional net profit, since capital is the only factor of production. $F = V + T$.
O	Aggregate accruals of income on plantation account, i.e. gross revenue.
R	Output of consumer services for hinterland consumption. The imputed value in metropolitan exchange of locally produced Great House "plant" and permanent improvements to land (Ir), plus the latter, is comprised of attorney consumption of services (T_{Arr}) and Government requisitions (T_g), priced in metropolitan exchange in terms of their opportunity cost in staple output foregone.
X	Exports of the staple valued at metropolitan wholesale prices.
K	The value in metropolitan exchange of the capital stock (comprised of stored-up slave-time, Great House plant and permanent improvements to land).
$\triangle K$	Net investment. $\triangle K_1$ is the imported component of reinvested

profits; $\triangle K_2$, the local component of reinvested profits. $\triangle K_3$ is the component which is borrowed from the metropole.

I_m Imports of slaves valued in metropolitan exchange at hinterland c.i.f. net of venture profit on trade. It is equal to $\triangle K_1 + D_m + \triangle K_3$.

M' Total imports valued in metropolitan exchange at hinterland c.i.f. net of venture profit on trade. Thus, $M' = M + I_m$.

B Inventory change priced in metropolitan exchange.

THE NATIONAL ACCOUNTS

In familiarization, we may express the main national accounting identities:

Gross domestic product $= P = D + T + V$ (1)

Subtract depreciation (D)

Net domestic product $= F = T + V$ (2)

Net domestic product accruing to foreigners

$= F_x = T_p + T_Q + T_{Ax} + \triangle K_1 + \triangle K_2 + V_x + V_t \pm B$ (3)

If some attorneys and senior staff are assumed to have short "tours of duty", net national product or national income $= F_r = T_{Ar} + T_g$ (4)

The export surplus $X - (M + K_1 + D_m)$ equals (5)

Factor income distributed abroad

$= T_{Ax} + T_p + T_Q + V_x + V_t$ (6)

Gross domestic capital formation

$= I_m + I_r \pm B = \triangle K_1 + D_m + \triangle K_2 + D_r \pm B + \triangle K_3$ (7)

V. Towards A Model of Pure Plantation Economy: An Accounting Formulation

We may now approach a quantitative formulation of the Pure Case of Plantation Economy. The accompanying chart constitutes an attempt at this. What is presented is an "ideal-type" accounting framework. It is ideal both in terms of its statistical feasibility and, more important to the current discussion, in that, within the limits of a quantitative medium, it seeks to embrace the institutional, structural and behavioural features which distinguish the whole family of Pure Plantation Economies. Moreover, in terms of both economic concepts and accounting categories and codes, it is set up in such a way as to establish genealogical links with the accounting systems being devised for "Plantation Economy Modified" and "Plantation Economy Further Modified."[34]

Summarily speaking, the framework has been constructed along lines which aim to bring out three main features of plantation economy while

[34]See Best and Levitt, "An Ideal-Type Accounting Framework for Plantation Economy Further Modified", forthcoming in *Report of the Second Conference of Commonwealth Caribbean Government Statisticians, Georgetown*, 1968.

focusing attention on the critical flows which could explain the peculiar manner in which the economy adjusts to changing conditions of supply and demand.

Overseas Economy

The first characteristic to be identified is that the domestic economy of a hinterland which is also a plantation economy, is structurally part of an "overseas economy".[35] As a result, the balance of payments account is the crucial one.

An overseas economy is comprised of two parts. First, there is a metropole which is the *locus* of product elaboration and disposal and the source from which the system is provisioned with capital, technical and managerial skill, and other ancillary services needed for production. Above all, however, it is the *locus* of initiative and decision, the critical linkage point between international demand and supply and the nexus through which the pattern of resource combination[36] is determined. Secondly, there is in the overseas economy, a set of hinterlands each of which is, strictly speaking, an entity for supplying materials, propelled by specific demands from its metropole and, in return, receiving the supplies needed to fulfil these demands.

The view here is that it is only in regard to the entire range of operations of these two parts of the overseas economy that there can be meaningful investigation of the classical questions concerning the wealth of nations.[37] Analysis at the level of the domestic economy of a nation (that is to say, at the level of the metropole or any single hinterland economy) subsumes too many important relationships as aggregate leakages and outflows. Thus it can readily be seen that the exploration of Myrdal's notion of "cumulative causation" involving continuing disequilibrium through the differential impact of "spread" and "backwash" effects is thought to necessitate the study of precisely the units being accounted for here: the overseas economies with their two distinct parts.[38]

[35] See Best and Levitt, *op. cit.* 1967 (p. 57) for the concept of an overseas economy in the contemporary world. The idea is borrowed from Baran and Sweezy, *Monopoly Capital*, Monthly Review Press, New York, 1965.

[36] For a discussion of this concept in the context of possible patterns of international integration see Alister McIntyre, "Some Issues of Trade Policy in the West Indies", *New World Quarterly*, Croptime, 1966, p. 19; also, Norman Girvan and Owen Jefferson "Corporate vs. Caribbean Integration," *Ibid.*, Croptime, 1968.

[37] See the query by William Demas as to what is the meaningful unit of analysis? *Economics of Development in Small Countries*, McGill University Press, Montreal, 1965, pp. 30-32.

[38] It is interesting at this point to recall attention to Dudley Seers' attempt to formulate a model for throwing light on "Comparative Rates of Growth in the World Economy". This seminal article along with Seers' other contributions (but moreso than any) advances its author's claims to be the "Kahn" of an economics which would achieve a more meaningful correspondence between international trade and payments theory and the theory of growth and development. The model seeks to go beyond the conventional explanations of the low rates of growth in primary producing countries (Area P) as compared with countries exporting manufactures (Area S). Without forcing it too much, one might say that the two areas identified in the model, though they are a little too aggregative, constitute hinterlands and metropoles respectively. There exists the crucial difference in the balance of productive resources between the two and in actual fact, "growth is almost completely autonomous in Area S" (p. 56). However, as may presently become clear, the model is less relevant to a discussion of "Pure

THE BALANCE OF PAYMENTS

Payments on Current Account

Notation and Cell (as numbered in Accounting Chart in Appendix)

Imports of Goods

	M_{xg1}	"Magazines"
A7423 - B271		from other A/C's in metropole
A7424 - B211		from hinterlands of settlement
	M_{xg3}	Slaves
A7432 - B42		from other countries
A741 - B42		from other hinterlands of exploitation
	M_{xg4}	Machinery and Equipment
A7423 - B42		from other A/C's in metropole

Imports of Services

	M_{xs2}	Cost Margins
A7423 - B231-22 & B42		from other A/C's in metropole
A7424 - B231-32 & B42		from hinterlands of settlement

Imports of Managerial Services

A7423 - B31	T_{Ax}	Attorney income

Specie Imports

A741 - B212	M_{xg2}	from other hinterlands of exploitation
A7423 - B212		from other A/C's in metropole
A7431 - B212		from rival metropoles

Factor Incomes

A7421 - B351	V_p	Distributed venture profit on production
A7423 - B331	T_p	Settlement encumbrances
A7422 - B331		Servicing of mortgages with merchants
A7422 - B352	V_t	Venture profit on trade to merchant bankers
A7424 - B352		Venture profit on trade to merchants in settlement hinterlands
A7423 - B32	T_{Qx2}	Lords and company proprietors' rents
A744 - B32		Royalties to metropolitan government (net of metropolitan expenditures on law and order)

Government Transactions (net)

A744 - B332	T_{Qx1}	Royalties to metropolitan government
A744 - B212 & B43	M_{xt1}	Duties on imports into and exports from hinterland (including payments to agents) minus
A744 - B32		Expenditures by metropolitan government on law and order in the hinterland.
A744 - B32		Grants to planters
A744 - B212 & B43		Drawbacks by planters on re-exports of staple to rival metropoles

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Plantation Economy" than of "Plantation Economy Further Modified". The latter has a sizeable domestic agricultural sector, an embryonic industrial sector and more than a law and order government. As such, industrial policy and population growth for example, may be taken as being in the long run, independent in theory if not in practice, of the "provisioning" patterns of the mines and plantations in the export sector.

THE BALANCE OF PAYMENTS
PAYMENTS OF CURRENT ACCOUNTS

Retained Earnings

A7421 - B351	V_p	Re-invested venture profit on production
TOTAL CURRENT PAYMENTS		

THE BALANCE OF PAYMENTS
RECEIPT ON CURRENT ACCOUNT

Exports of the Staple

A741 - B5131	X_1	to other hinterlands of exploitation
A7423 - B5131		to other A/C's in the metropole
A7424 - B5131		to hinterlands of settlement
A7431 - B5131		to rival metropoles

Re-exports of Slaves and Equipment

A741 - B5132	X_2	to other hinterlands of exploitation
RECEIPTS ON CURRENT ACCOUNT		
DEFICIT ON CURRENT ACCOUNT		
TOTAL		

OUTFLOWS ON CAPITAL ACCOUNT

Liquidation of Debt

A7422 - B742	to merchant bankers by plantation A to merchant bankers by plantation N
TOTAL	

Deficit on Current Account

TOTAL

INFLOWS ON CAPITAL ACCOUNT

Borrowing

A7422 - B742	from merchant bankers by plantation A from merchant bankers by plantation N

Retained Earnings

A7421 - B351	by plantation A by plantation N
TOTAL CAPITAL INFLOW	

Here, we disaggregate the external flows of trade and payments in such a way as to indicate how Pure Plantation Economy is dovetailed into the larger overseas economy. Naturally, full comprehension of the accounts would require actual quantities to be entered. Yet, as can be seen from the detailed accounts presented below, the transactions permitted in this idealization, do reveal to the student of this special case, the highly specialized roles of the different parts of the system and the pattern of income distribution associated with it,[39] and sets the stage for an understanding of the working of plantation economies..

For example, on goods account to begin with, supplies of "intermediates" (B221) as well as of building materials and equipment (part B42) originate exclusively from the metropole (A7423) save for certain illicit transactions with hinterlands of settlement (A7424).* Supplies of slaves (part B42) come from other countries only (A7432) again barring the transactions with other hinterlands of exploitation (A741) which take place under an official cloud.

Next, on service account, the preponderance of metropolitan intermediation is highlighted by the treatment as "cost" (as distinct from "value-added") margins on trade (B231-32). Thirdly, on income account, all factor incomes going abroad accrue to the metropole: to planters typically resident there (A7421), to the merchant bankers (A7422), and to other metropolitan accounts (A7423), abstracting once more from the transactions with the interloper (A7424-B352).

Moreover, on public account, metropolitan government is shown as a recipient of duties and royalties accruing from hinterland trade and production respectively and as a spender of drawbacks, bounties and grants. Thus is embraced an important part of the calculation involved in the rules of *Inter-Caetera,*** the quantitative impact on hinterland net income and balance of payments which is achieved through planters' and merchants' influence and is expressed in rates of tariffs, bounties and drawbacks and levels of grants, is made explicit.

Further, the specialized character of the economy is reflected in the capital account. Transactions (Cells B742-A7421 & 7422) are restricted to loans by merchant bankers to planters, to the associated liquidations of debt, and of course to planters' reinvestment of earnings. In other words, in this economy there is no generalized flow of capital into a banking system which then has, as is more often than not implied in the conventional theory of international economy, discretion in the matter of allocation between competing claims. Loans are specific to particular plantations (A, B, ... N) as they are to the particular purpose of provisioning the productive unit with supplies. As such, they take the form of advances by merchant bankers who, depending on the extent to which they are willing to bear entrepreneurial risk, receive venture profit on trade (as against mortgage servicing).

Total Economic Institutions

The second characteristic of the Pure Plantation Economy to be identified is that essentially it is a *locus* of "total economic institutions" held together by

[39] *Cf.* the monumental attempt by Eric Williams to trace out significant linkages between the slave economy and the development of British capitalism without the aid of a systematic quantitative framework, *Capitalism and Slavery,* particularly Chapters 3 and 5.

*In the chart transactions of non-persons or transactions frowned upon by the rules of the game are shaded over. Cell B122 x A111.2 (for both Plantation A and Plantation N) has been shaded over in error. It should contain a minus (—) sign.

**See above Part 1, p. 284.

FINAL INCOME DISPOSAL ACCOUNTS: RESIDENTS

Receipts: | *Expenditures*

HOUSEHOLDS (A71)

T_{Ars}	Attorney income in kind: "magazines"	C_s	Attorney consumption of goods and services
T_{Arr}	Attorney income in kind: local produce and services	C_w†	Slave "expenditure" on plots
		C_r	Settlers' and artisans' consumption
C_w†	Slave income in kind from plots	I_r	Gross non-plantation capital formation and
A_r	Combined income of settlers and mixed artisan income	B_r	Inventory change
D_r	Settlers' depreciation	C_w†	Subsistence consumption of Maroons transfer to "Sou-Sou". Box.
A_r†	Combined subsistence incomes of Maroons		

HINTERLAND GOVERNMENT (A72)

M_{xs1}	Import and export duties (G_x)	G	Government expenditure on law and order
T_g	Fines, property and poll taxes (G_r)		

FINAL INCOME DISPOSAL ACCOUNTS : NON-RESIDENTS

OTHER HINTERLANDS OF EXPLOITATION (A741)

M_{xg2}	Hinterland import of specie	X_1	Hinterland export of staple
M_{sg3}	Hinterland import of slaves	X_2	Hinterland re-export of slaves and equipment

PLANTERS' BANK ACCOUNT (A7421)

D_s	Depreciation	I_x	Gross capital formation of plantation (plantation investment + inventory changes)
V_p	Venture profit from production		Repayment of loan to merchant bankers.
	Loans from merchant bankers		Transfers to rest of world

ACCOUNT OF MERCHANT BANKERS (A7422)

T_{p2}	Mortgage servicing	B_s	Inventory change
V_t	Venture profit from trade		Loan to planters
	Repayment of loans by planters		Transfers to rest of world.

OTHER ACCOUNTS IN METROPOLIS (A7423)

M_{xg1}	For imports of magazines	X_1	On the staple
M_{xg2}	For imports of specie		Transfer to rest of world.
M_{xs2}	"Cost" margin on exports and imports		
T_{Qx}	Lords' and company proprietors' rents		
T_{As}	Attorney income		
T_{p1}	"Settlement' encumbrances		
M_{xg4}	For imports of machinery and equipment		
M_{xs2}	"Cost" margins on machinery and slaves		

† Transactions of non-persons.

Receipts:			*Expenditures*
	SETTLEMENT HINTERLANDS (NEW METROPOLES) (A7424)		
M_{sg1}	For imports of magazines	X_1	On the staple
M_{zs2}	"Cost" margin on exports and imports (excl. slaves and equipment)		Transfer to rest of world
M_{zs3}	"Cost" margin on slaves		
V_{t2}	Venture profit from trade		
	RIVAL METROPOLES (A7431)		
M_{sg2}	Hinterland import of specie	X_1	On the staple
	OTHER COUNTRIES (A7432)		
M_{zg3}	For slaves		Transfer to rest of world
	METROPOLITAN GOVERNMENT (A744)		
M_{zs1}	Duties on imports into and exports from metropolis (net of bounties, drawbacks and grants to planters)		Transfer to rest of world.
T_{Q1}	Royalties (net of grants for law and order)		

little more than the system of law and order. The intermediate matrix (A_1 x B_1) is tailored to reveal this. There is a clustering of transactions along the principal diagonal reflecting the fact that the plantations (A, B, ... N) are the typical economic institutions and that they provision themselves from inside or through their merchant connections in the metropole. For all practical purposes, each is self-sufficient in regard to its operations in the hinterland. Even if it may procure some services from the urban trades (A111.2-B122) and some primary staple output from settlers (A111.2-B121.11), it is almost completely independent of the rest of the economy. Each is, in point of fact, a "total" economic institution. It commands its own distribution, contruction, servicing and subsistence facilities within the single institutional complex and only a change in external demand for its own staple output can activate or de-activate them. They do not respond to changes in aggregate domestic demand as such. Correspondingly, export of the staple is the largest single component in its own final demand.

It follows that in as much as plantations dominate and are "total" in character, the Pure Plantation Economy is a segmental economy. The "firm" is the meaningful unit of economic analysis. The economy can be complexified and diversified only to the extent first, that Maroons gain legitimacy and together with settlers gain land, create intermediate and final demand linkages between and among themselves and with the urban trades; and secondly, to the extent that the embryonic domestic monetary and banking system (A71-B711) is able to create money to lubricate these exchanges.[40]

[40]For a discussion of less-than-Pure Plantation Economy with a limited but real capacity for diversification, see Celso Furtado, *The Economic Growth of Brazil*, University of California Press, 1963, Chapters 10 & 11 and especially pp. 68-70. The availability of land to the subsidiary and residentiary part of the sugar plantation economy of the Northeast and the character of the product (cattle) permitted transformation, but the character of the monetary system inhibited it.

Incalculability

The third characteristic of the Pure Plantation Economy to be identified is the "incalculability" of value flows. This is a derived phenomenon. Summarily, it stems from the processes of provisioning and disposal which are associated with a hinterland economy which is structurally part of an overseas economy and institutionally organized by total economic institutions. Almost all intermediate and final supplies of goods and services are either produced within the complex or advanced by associated merchant-bankers. Since the latter also receive the bulk of the staple for sale in the metropole and re-export, the commodity flow from stage to stage does not involve any considerable money flows. Accounting takes the form of imputing prices. There is thus a large measure of price indeterminacy.

ACCOUNTS OF PRODUCING SECTORS

Plantation Sector:

PROCURALS

W_x		"Ackee" Inputs:
	W_x	Bagasse and slave subsistence Slave plots W_{x1}, plantation W_{x2}
	R	Small settler staple output (R_1) Procurals from urban trades (R_2)
M		"Salt-fish" Inputs:
	M_{xg}	Imported goods: Magazines (M_{xg1}), Specie (M_{xg2})
	M_{xs}	Imported services: Duties (M_{xs1}), and merchants' "cost" margins (M_{xs2})
F_x		"Value Added" – Factor Payments
	D_x	Depreciation
F_x		Local component D_{xr} Imported component D_{xm}
T_A		Attorney income and income of senior staff
	T_{Ax}	Cash deposited in metropolitan banks
T	T_{Arx}	Payment in kind, including consumption of "magazines" (M_{xg1A})
	T_{Arr}	Consumption of local produce (V_{wx}) plus Great House space and domestic services (V_{pr})
	T_{Qx}	Royalties (T_{Qx1}) and rents (T_{Qx2})

DISPOSALS

G	Government requisition for law and order (T_g)
C_w†	Consumption by slaves of output from slave plots (W_{x1})
C_x	Attorney and senior staff consumption of local provisions and of domestic and other consumer services $(C_{xr} = T_{Arr})$; and of imported supplies $(C_{xr} = T_{Arx})$
C_{rx}	Food, tools and specie supplied to small settler and artisan households
I_x	Gross capital formation including gross addition to slave stock and to plant and the imputed value of construction, installation and land clearing by slaves. The import content of this is I_{xm}; the domestic content, I_{xr}
X	Exports of staple (X_1), re-exports of slaves (X_2), and re-exports of specie (X_3)
B_x	Inventory change
M_{rx}	Materials supplied to small settlers, freedmen (M_{rx1}) and urban tradesmen (M_{rx2}) including duty and merchants' "cost" margin

ACCOUNTS OF PRODUCING SECTORS (cont'd).

	Procurals		Disposals
Plantation Sector:			
T_g	Fines, poll taxes and other property taxes		
T_p	Encumbrances: private settlements (T_{p1}) and mortgage servicing (T_{p2}).		
V_{ws}	Venture profit on slave plots		
V_p	Venture profit on production including imputed value of slave services on capital formation (I_{zr})		
V_t	Venture profit on trade		
E_s	Domestic supply		
I_m	Final Imports of slaves (M_{zc3}) and machinery and equipment (M_{zc4})		
M_{zs}	Duties and margins on I_m ·		
	Total Supply	O_s	Gross Accruals on Plantation Account Total Demand
Small Settlers and Freedmen:			
W_{r1}	Own account raw materials.	C_{rr}	Subsistence consumption of food and other self-produced supplies and services.
M_{rz1}	Tools, supplies and specie from plantations including element of duty and merchants' "cost" margin.	I_{r1}	Capital formation, including construction and clearing.
D_{r1}	Depreciation	B_{r1}	Inventory change
T_{Qr}	Lords', proprietors' and company rents	R_1	Staple sold to plantations
A_{r1}	Mixed income of leaseholder/ cultivator: wages, rent, profit	O_r	Total accruals from settler operations (uses)
E_r	Total expenses of settler cultivation (supply)		
Maroons:			
$A_r\dagger$	Combined subsistence income	$C_r\dagger$	Subsistence consumption
$M_{rz}\dagger$	Booty from plantation stores		
$E_r\dagger$	Total Maroon supply	$O_r\dagger$	Total Maroon demand
Urban Trades:			
W_{r2}	Own account materials	C_{rr2}	Subsistence consumption
M_{rz2}	Tools, supplies and specie from plantations, including merchants' "cost" margin	I_{r2}	Own-account capital formation
		B_{r2}	Inventory change
D_{r2}	Depreciation	R_2	Goods and services sold to plantation
A_{r2}	Mixed artisan income		
	Total expenses of operations in urban trades.	O_{r2}	Total accruals from urban trades.

On trade account, a base price is set for imports in the market of origin and a ceiling price is set for exports in the final product market. But the actual value added at each stage of the commodity flow and with that, the division of the gains within the overseas economy, is to a great extent, a matter of custom, bargaining and "political" negotiation.[41]

Where, as in the Golden Age, the merchant-bankers assume some entrepreneurial risk and do not simply lend by mortgage, the terms of trade of the hinterland are determined first, by the allocation of earnings between venture profit on production and venture profit on trade.[42] This depends on the price (including cost margins and profit mark-ups) imputed to magazines, slaves, equipment and building materials delivered at the Great House or the mill-yard. Secondly, the (income) terms of trade are set by the customary level of slave subsistence which, in part, determines the size of the surplus available for distribution between planters and merchants. This leads to a consideration of the production account.

On production account, given the customary ration per slave and the degree of input substitutability which is feasible, the planters have, first of all, to decide on the mix between the domestic or "ackee" component on the one hand, and the imported or "salt-fish" component on the other. On this basis, they are better prepared to allocate capacity (slave-time and land) for food gardening (A111.5) and artisan services in the factory work-shop. However, since there is no wage-rate for the slave-time which is expended in the production of "ackee", it has to be shadow-priced in terms of staple output foregone (from which the cost of the "salt-fish" substitute has to be subtracted). The uncertainty of the metropolitan wholesale price for the staple apart, this involves some highly incalculable estimates: the physical productivity of a unit of slave-time on "ackee" production as against staple production, the delivered price of "magazines", and the effective planter cut of the gains.

Moreover, the customary ration is, in practice, more a variable than a fixed item even if there does exist a considerable fixed minimum. First of all, there exists an element of "expense-account" spending in it. In so far as the senior staff of attorneys, skilled workers, (house slaves) and resident planters given to spontaneous and lavish entertaining all covertly provision their larders and tables from supplies of produce and imports, the effective accounting ration per slave is correspondingly inflated.

But more important perhaps, the customary ration which the slave actually obtains has to vary to an extent with the rate of utilization of slave-time. Being a charge for maintaining the capital stock, it varies automatically with

41*Cf.*, the problem of pricing and intra-company transfers discussed by Dudley Seers in "Big Companies and Small Countries: a Practical Proposal", *Kyklos*, vol. xvi, 1963, p. 599. As to the kinds of "terminal" factors which set import and export conditions in markets of origin final disposal, see Seers' article cited in note 33.

42Where the merchants are, in effect, debenture-lenders their gains are set by the agreed rate of interest, though, even here, any variability of rates of commission for handling and any funding of debt by merchants reduce the planters' share of the total take. See Richard Pares, *Merchants and Planters*, pp. 44-50.

user cost. In the Dead Season when activity is slack, it is set at quite a different level from that ruling in the High Season when the plantation is likely to be operating at full stretch. By the same token, when market prices for the staple are expected to rise and capacity is being strained beyond the limit, the deterioration from slave over-work has to be compensated by better feeding. This again involves the planter in a highly incalculable estimate of the incremental rate of deterioration as the rate of utilization of slave power is stepped up. Nor is that all. The slave stock (A41) may be measured either in terms of "Indian Pieces"[43] or in terms of slave-time. The risk of raising the rate of utilization to very high levels is that slaves may be encouraged to run away (abstracting for the moment from whether or not an exact computation of the additional wear and tear and of the ration required to compensate for it, were possible). Again, barring the military risk to the slave involved in runaway and survival, slaves can be taken to have, in terms of strict economics, a minimum preference which is set by the level of living of Maroons. This defines their margin of tolerance, as it were. Since the preference relates the subsistence obtained to the disutility incurred in winning it, slaves may not be indifferent as between higher rations and harder work on the one hand, and lower rations and more leisure on the other.

With increased runaway, therefore, a real prospect at higher levels of utilization of slave-time, planters, or if they are absentee, their attorneys and staff, are forced, when estimating their marginal capital consumption, to make projections about both the incremental rate of runaway and the "skill-composition" of the migration.[44] The only thing is that, if they are to take measures (other than socialization) to restrict escape, they must then permit larger requisitions for law and order on the part of hinterland government.

Finally, planters have in their accounting, to impute values to the domestic and other services including slave service in construction and installation. The obvious problem of pricing involved is another factor making it difficult to gauge the true profitability of the enterprise.[45]

We may now sum up the position in regard to incalculability by scrutinizing the following account. Notation has been given in Part IV. Of all the entries, the only ones which are readily calculable are X, T_{Ax}, T_p, and T_Q (all marked *). See following page.

The Adjustments

For the purpose now of tracing through the critical value flows in the ad-

[43] The Spanish definition of an Indian piece (*pieza*) was "a man 7 quartas high, (5 ft. 11½ in.), free of any physical defect, and between the ages of thirty and thirty-five". This was the unit of account for converting, it seems, women, boys, medically unfit and other "seconds". See Noel Deerr, *The History of Sugar*, Chapman & Hall Ltd., London, 1950.

[44] For a relevant comparison from "Plantation Economy Further Modified", see G. W. Roberts and D. O. Mills, *Study of External Migration Affecting Jamaica*, 1953-55, I.S.E.R., University of the West Indies, 1958.

[45] For another discussion of "incalculability" on this account, see Celso Furtado, *op. cit.*, 1963, Chap. 9.

Costs of Cultivation Including Profit	Accruals on Plantation Account
S	W
W	$R = T_s + T_{Ar} + K_2 + D_r$
M	$X^* = M + T_{As}^* + T_p^* + K_1 + D_m + V_s$
$D = D_m + D_r$	
$T = T_p + T_Q + T_A + T_s$	
$V = K_1 + K_2 + V_s + V_i$	
E Total Cost of Cultivation	Gross Accruals

justment process, we may look at the accounting framework in a number of complementary ways. First of all, it may be noted that conceptually, the account is equally adapted to record the transactions of a single plantation, or of an entire Pure Plantation hinterland, or indeed, of a multi-national system of hinterlands of exploitation in each of which the plantation is the dominant economic institution. In order to capture a variety of situations for comparison, we may imagine the magnitudes which will be entered in the cells if we look at the framework in the perspective of the Marshallian short run when only the rate of utilization of land and slave-time can be varied in response to changing market conditions for imports and exports. Or again, we may look at it in the perspective of the long-run when alone, notionally, new capacity can be installed. Additionally, we may regard the account as if it were a statement for a plantation first, during the Golden Age and then during the phase of Gall and Wormwood. Alternatively, we may imagine two accounts: one representing a plantation "on the make", the other a "saturated" plantation.[46] What entries and what magnitudes do we expect to find?

Assume, for a start, that the books are made up quarterly, say, in the Dead Season, at Croptime, during the High Season and finally at Cropover. In a short-run perspective, notice the behaviour of depreciation *(D)*, recorded in B34. Notice, too, the behaviour of ackee and salt-fish $(W + M)$, bunched together in the intermediate matrix A111.1-5 x B111.1-99. The bunching is a not altogether adequate attempt at showing the following: the pre-occupation of the institution with the production of the staple; the fact that the plantation is a total *social* institution which capitalizes (i.e., owns) its "labour" services as well as a total *economic* institution which embodies its own facilities for intermediate supply; and, stemming from those two, the element of fixity in current costs with which the enterprise is in consequence saddled.

In the Dead Season, both the *share* of M in $M + W$ (which, subject to the incalculability of distribution margins, can be estimated by summing B211 to B231-32 along Row A111.92), and the *level* of $M + W$ as well as of D at their lowest. Slaves have maximum leisure to tend their ackee gardens. On current output account, they are involved in little more than some

[46]The characterization is by Professor L. B. Namier. Quoted in Eric Williams, *Capitalism and Slavery*, p. 113.

weeding and factory maintenance. If, at this point, we were to make a long-run analysis, the application of their labour power to construction and installation work and to land clearing would also have to be acknowledged. But presumably the normal ration embraces this recurrent activity in capital formation so that this work does not affect the level of costs.

Reverting to the short run, note that on factor income account, T_{Ax}, T_p, and T_Q are fixed and are, therefore, simply pro-rated. T_g is at its lowest, too, as are T_{Ar} and V_t but these are problematic and incalculable. An entry for V_p does not arise — the planters' profit is at this stage highly unpredictable, depending as it does on the success of the crop and the state of the market in the harvest season.

As Croptime approaches and activity picks up, V_p and V_t require larger entries as the staple is received by the merchants. M, W, and D rise only minimally. Other entries remain the same. It is in the quarter when the High Season of harvesting, grinding and re-planting takes the enterprise out to full stretch that W, M, and D rise steeply and M as a proportion of $W + M$ increases. V_p and V_t in particular, show marked increases. Shifting now to a long-run analysis again for convenience, this is the time when new slave capacity is likely to be imported in response to the pinch on slave-time (placed on planters not least by the rising requisitions by hinterland government as security slackens and slaves become more disposed to flee).

At Cropover, there is an inevitable tailing-off of rations except inasmuch as the entertaining at the Cropover balls and galas may introduce a "ratchet" effect, so-called. T_{Ar}, the Great House consumption of the senior staff explodes in the splendour noted by Janet Schaw, for one.[47] Here is a mechanism by which costs are pushed up in the long run. By a curious demonstration effect, the enterprise is saddled with larger expense accounts — mostly entailing the expenditure of metropolitan exchange to boot. For, in the interest of maintaining the status of the Great House, next year's galas will undoubtedly have to be at least as big as this year's — indeed, bigger still.

Turning now to the comparison between plantations on the make and saturated plantations, what are the differences? Summarily, we would expect first, that entries under both M and D would be relatively larger on a mature plantation than on a new one. The former would be struggling against diminishing physical productivity per input of slave-time. The planter would be responding by imposing more severe work regimes and by encroaching on land reserved in better days for food gardening.[48]

On both counts, W would be driven down. M would naturally show a

[47] Schaw's commentary on the feasting by the attorney class is cited on p. 14 in Elsa Goveia's *Slave Society in the British Leeward Islands*, Yale, 1965.

[48] Of course, if he were in a hinterland — Brazil? — where land was plentiful, he would simply have engrossed and the problem of maturity in the sense of diminishing physical productivity would not have arisen. For the case of the Caribbean "island" as distinct from the "mainland", see Elsa Goveia, *op. cit.*, p. 143.

rising tendency in compensation. How much room the planters would have to manoeuvre with compensation for falling W and a rising incremental rate of capital consumption by augmenting his importation for maintenance, will depend on his expectations and the length of his horizon, and will be influenced by the particular incalculability of depreciation where human capital is concerned.

Let us suppose that for some reason such as political revolution in other hinterlands of exploitation (even of settlement so long as they are within the same mercantile frontiers), or such as the outbreak of war between rival metropoles, markets for the staple are being continually disrupted. Prices move unpredictably up and down. In this context, a planter could reasonably hope that with a bumper crop and a lucky break in the market, he would make "a killing". He would clear expenses in the hinterland with the sale of subsidiary products and have the proceeds from the staple as "pure gravy" and in metropolitan exchange, to boot. From those, why not – the ethos of the trade is quick profit anyway – discharge liabilities, wind-up and make for home with a fortune?[49]

The decision involved in this behaviour is to consume capital. Restricting M and keeping the slaves at near-starvation ration while driving them into the ground with overwork is to convert capital into current income at the most rapid rate. It is to escape costs in the form of merchants' charges.[50] The rise in D which results hopefully does not become an issue until the planter has sold out. But all of this is abstracting from the terms-of-trade effect on the adjustment made by the changing structure of prices for salft-fish and slaves and for the export staple.

At this point we may think of the account for a plantation on the make. The big difference here is that the ratio (V/K) of profits (B35) to the book value of the slave stock (B41) would be higher than for saturated plantations but lower than that for these same saturated plantations when they were still new. This reflects the fact of rising supply prices for slaves and falling product prices for the staple as the industry has been expanding supply at a faster rate than demand. It may also reflect rising costs of provisions due precisely to the same uncertainty of marketing which is the foundation of optimistic expectations on mature plantations in the face of deteriorating physical productivity.

At any rate, when the accounts of new and mature plantations are scru-

[49]This is perhaps the phenomenon which Adam Smith was noticing when he described the behaviour of the West Indian planters: "It is commonly said, that a sugar planter expects that the rum and the molasses should defray the whole expense of his cultivation, and that his sugar should be all clear profit", *The Wealth of Nations*, Modern Library Edition, Random House, New York, p. 157. It may be interesting to compare and contrast behaviour then with the response of the Caribbean sugar industry to the Cuban Revolution in the 1960's.

[50]May this have been a reason why the more "saturated" British hinterlands saw more trading on own account than the French? For the discussion, see Pares, *Merchant and Planters*, Chapter III. Planters responding in this way would probably also be unhappy with the conventional planter-merchant linkage and would be seeking to trade on their own account both for procurals and disposals.

tinized in their entirety, there is clearly the phenomenon of a secular decline in the rate of profit. However, contrary to what a "Ricardian" view would lead one to expect, it is on the external margin of the industry that the surplus is greatest. The reason for this is that in the typical overseas economy new producers often have better land and superior technology than the old. The typical institution being "total" in character both socially and economically, it has too big a stake to modernize without incurring extensive private costs of re-tooling, re-training and changing established modes. Only a public sector with long-term developmental rather than short-term law and order preoccupations can afford the costs of transformation. The slave plantation economy is only an extreme case of this.[51] As to the better land, given the way in which the overseas world is penetrated by metropolitan enterprise and given the changing division of the world between rival metropoles, there is no special reason why the best land would be exploited first. (Here again, the historical facts behind this model afford an excellent illustration. The almost perfect conditions for sugar production in Cuba were the last to be systematically exploited).

The falling rate of profit in the industry is both effect and cause of chronic oversupply: creating a vicious circle. Given the uncertainty about short-term fluctuations and the certainty in the expectation that profits and profitability will decline in the long run, all plantations (firms) seek to maximize output in the short run. New firms can afford it so long as prices remunerate the reasonably efficient producer in the industry; mature firms are stuck with their capacity and may as well keep it active.[52] In accounting terms, the interesting flows behind this behaviour are the flows of merchant-banker income and capital; and on public account, the flows of metropolitan government receipts and expenditures on account of the activities in different hinterlands.

Come Gall and Wormwood, as we have noted, the merchants shift to mortgage lending, making first claims on plantation earnings. Now it is that V_t on mature plantations yields pride of place to T_{p2}. More liquid and more flexible, the merchants also shunt funds to new terrain, increasing total supply and forcing prices down. The more uncertain becomes the state of trade, the higher the rates of interest charged on mortgage loans, the greater the tendency to fund debt and to fund it at shorter and shorter intervals; and the greater the tendency to look for investment in new business.[53] The capital flows in Cell B742 – A7421 and 7422 reflect this adjustment. So it is only the rare planter (for example, one who alone survives a regional hurricane

[51]Elsa Goveia, *Slave Society*, p. 329.

[52]This is the phenomenon we have termed "The Goveia Syndrome". For Dr. Goveia's penetrating analysis of the predicament see *ibid.*, *passim* and especially pp. 21-22.

[53]The money came, in the last resort, from the planters themselves. The factors charged high interest – even, on occasion, compound interest. They paid it to themselves on the planters' behalf, without any order from him, and they made sure of having it, whoever else went short. The money which was received from one planter was lent again, either to him or to another planter. (Continued overleaf).

or alone gets his supply through enemy shipping) who finds a sellers' market and makes the anxiously awaited "killing".

The only recourse of the trade is to the metropolitan government.[54] Planters and merchants come together and use their influence to have duties and royalties reduced, bounties, grants and drawbacks increased. To the extent that economic considerations apply and so long as the metropolitan government is making a net profit on account of all hinterlands of exploitation together, their representations are effective. But no stable equilibrium can be created by this adjustment. The secular decline in the rate of profit in the industry means that while demands for subsidy concessions by metropolitan government are growing, accruals of revenue are diminishing as the frontiers of *Inter-Caetera* are reached and as profits on new hinterlands and plantations on the make, fail to compensate for losses on the old. The cost of the entire enterprise becomes in time too burdensome and the day can be saved only by a final grand act of investment to reform the general and specific institutional complex.

VI. Towards the Model of Pure Plantation Economy: The Bare Bones[a]

For a start, let us consider the simplifying assumptions. These are set out to begin with, under three heads relating to what have been described above as: general institutional, specific institutional or structural, and behavioural. We then proceed to spell out our assumptions about time. Finally, in turn we present some ideas on the production function, the cost function, the investment function. This sets the stage for a consideration of the conditions of profit maximization and the mechanisms by which the single plantation (firm, as it were), and the industry as a whole adjust to changing conditions. We will not, however, be attempting any systematic analysis of the adjustment process.

The General Institutional Framework (Inter Caetera)

Here, we assume the existence of several metropolitan systems, each being defined to include such territory as is encompassed by a particular set of specifications in regard to the *Navigation Provision*, the *Muscovado Bias*, the

"Thus it was the planter who was paying, so to speak, for his own enslavement. The profits of the plantations were the source which fed the indebtedness charged upon the plantations themselves. In this sense Adam Smith was wrong: the wealth of the British West Indies did not all proceed from the mother country; after some initial loans in the earliest period which merely primed the pump, the wealth of the West Indies was created out of the profits of the West Indies themselves, and with some assistance from the British taxpayer, much of it found a permanent home in Great Britain." Pares, *Merchants and Planters*, p. 50. This is cumulative causation, "spread" and "backwash" with a vengeance.

[54]This is the celebrated "Williams Effect", argued with great cogency and wit in *Capitalism and Slavery*.

[a]Kari Levitt and the author of this summary outline of the Model of Pure Plantation Economy are indebted to Alister McIntyre for assistance at the critical initial stage of the work and to Hugh O'Neale, LeRoy Taylor, David Beckles, Edwin Carrington, and Philip Nunez for valuable advice at points along the way.

rules of *Imperial Preference* and the *Exchange Standard.* Within its confines, each system has one metropole, several hinterlands of settlement and several hinterlands of exploitation as well as hinterlands of conquest. Each is an aggregate overseas economy, so to speak.

However, it is a dynamic situation. The structure of metropolitan systems reflects both historical legacy and incipient development as well as contemporary reality. Specifically, this is expressed in the existence of a *top* metropole,[55] *declining* metropoles, and *emergent* metropoles seeking to increase their influence on and control over the international economy. The top metropole is the one within whose mercantile walls lies the most significant of the hinterlands in terms of their ability to contribute to accumulation and development in the metropolis. The declining metropolitan system encompasses the significant hinterland areas of the previous era, while the emergent metropoles are less effective and slightly modified versions of the top metropole, rivalling it in marketing, transport, types of staples etc. The watchword of the times is "war and trade".[56] In the rivalry, hinterlands are perpetually in a state of "betweenity" from one metropolitan affiliation to another – a factor making for increased uncertainty and incalculability and for a shortening of the "view" in general and of the profit "horizon" in particular.

Within each metropolitan system, trade between hinterlands is organized on a triangular basis, and necessarily involves metropolitan intermediation since the metropole is the *locus* of entrepreneurial and financial servicing, is alone able to provide such ancillary servicing as clearing house facilities and, indeed, has ultimate discretion in all matters economic or other. Between metropolitan systems trade also takes place via the metropoles though there is some illicit direct activity between hinterlands if only because of the constant switching (or expected switching) of metropolitan affiliation.

Both within and between metropolitan systems the purpose of trade is to correct imbalances between metropolitan (and by extension, new metropolitan) demand and supply including imbalances arising from the "endowment" of different types of hinterland. Specifically, while the metropole (and the new or settlement metropoles) provides intermediate supplies, organization and capital the hinterlands of conquest and exploitation provide the staples (say, for example, specie and sugar). The trade between metropolitan systems is for the most part in final goods. Exchange of inputs or semi-processed commodities on which value may still be added does take place but it is either illicit or frowned upon.

Specific Institutional or "Structural" Framework

Here, we assume a hinterland with two plantations. We have thus a hinterland of exploitation which must procure its supplies from the metropole

55For the concept of "top nation", see Joan Robinson, *The New Mercantilism*, Cambridge, 1966.

56The classic treatment is to be found in Richard Pares, *War and Trade in the West Indies*, Frank Cass & Co., Ltd., London, 1963 (new edition).

(or the new metropoles) and from hinterlands of conquest. Each plantation is a "total" economic institution for all its purposes in the hinterland. In fact, it is also a "total *social* institution". Hence the labour regime implied is slavery or strict indenture. One correlative of this form of labour organization, if it is to survive in an "open resource" hinterland, is a production technique requiring minimum initiative. We, therefore, assume that work units are the only factor of production. There is one staple. It is a segmental economy, each plantation being just like all others. Hence, the two-plantation assumption is sufficient. Three, four, ... N plantations would make no difference so long as there are other hinterlands of exploitation attached to the same metropole. Let us assume, therefore, that there are several of these.

The existence of plantations implies the co-existence of a Maroon Sector. Some slaves are bound to run away. These, however, have no official or legitimate place in the economy and, in any case, are constantly under threat of military persecution. They lead a nomadic "slash and burn" existence and in production they employ a single combined factor, "Morning Sport". We may, therefore, confine the importance of this sector in the process of economic adjustment, to its effect on the number of work units available to the plantation and on the requisitions levied on planters by hinterland government for the maintenance of law and order. Hinterland government is simply the agency through which the two plantations collaborate to provide the hinterland with civil and military administration for law and order.

Behavioural Assumptions

These may be given precision in terms of five key roles which are essential to the functioning of the "overseas economy" (made up of the hinterlands and the parts of the metropolitan economy into which they are integrated). First, there is the role of the *merchant-banker*. This consists in providing capital in the form of supplies and capital goods needed for production (or trade) in the hinterlands and in receiving the output for sale in the metropolis. Secondly, there is the role of the *planter* who is the agent who makes decisions about production. He is distinguished from the merchant in that his stake in the enterprise is in real property so that he is more or less committed to a particular hinterland. Thirdly, there is the *lord proprietor* who simply has patronage over real property. Fourthly, there is the attorney (and his assistants who constitute the *senior staff*). The role here is to manage the plantation from day to day. Fifthly, there is the *slave* who consitutes a work unit (measured in terms of stored-up man-hours). Finally, there is the role of *Maroon* or runaway slave.

We may introduce an aspect of "incalculability" by permitting the first four roles to be initially all played by the same individual. Over time, however, the roles become more clearly differentiated as particular individuals are able or are forced by the vicissitudes of hinterland enterprise to retain different degrees of discretion, the merchant having the only real freedom of choice. Whatever the difference in available option, the four do, however, have two important attributes in common to the bitter end. First, they all have a short view: the ethos of the hinterland enterprise is more that of the merchant-pirate than that of the merchant-settler. Secondly, they measure their status in terms of metropolitan consumption norms and, in fact, realize their incomes in the hinterland only if obliged to do so. Strictly speaking, only the attorney lives there but even he, we may assume, will not countenance an unduly long "tour of duty".

As to the slaves and the Maroons, the link between them is runaway. The presence of the Maroon and his ability to survive keep the fire of freedom burning and help to set the limit on possible departures from the strictest slave regime. Planters dare not entertain work schedules and methods which permit the exercise of initiative lest it ends up in a social revolution organized by those outside the pale. For convenience, we assume finally, that runaway is just equal to or more than the natural increase of the slave population.[57] This reflects the unwillingness of slaves to help the expansion of the system.

Time Assumptions

Here two main phases are assumed (three, if we count the Foundation Period). Although the secular trend of profits is downward, absolute profit levels and profit rates are high during a Golden Age. Within both the single plantation and the single hinterland of exploitation, there is an abundance of spare land of the highest quality. Supplies are cheap and marketing conditions are favourable, not least because the planter interest in the metropole is influential in the administration of the rules of the game of *Inter Caetera.* The phase is marked by periodic fluctuations in the level of activity largely due to random factors, but in general, enterprise recovers and expansion resumes.

In the phase of Gall and Wormwood, however, decline sets in. The long-run fall in levels and rates of profit reveals itself as business is marked by diminishing returns, deteriorating terms of trade, and rising supply prices for both intermediate and capital goods. In this phase, the plantations no longer have the option of an expansionist[58] adjustment by breaking fresh land. To avert collapse, they must innovate and introduce structural changes in technology and organization, and undertake an intrinsic adjustment. In this regard, strict limits are imposed on them by the general institutional framework of hinterland economy, by the specific institutional framework of the plantation as a "total" form of economic organization, and by the patterns of behaviour in respect of income distribution and use which had become established in days gone by. Their only real option is political: to mobilize metropolitan help. But even this is no longer possible. Developments in the metropolis as well as the emergence of new hinterlands of exploitation

[57]See George Roberts, *Population of Jamaica,* Cambridge University Press, 1957.

[58]See Bert Hoselitz, "Patterns of Economic Growth", *The Canadian Journal of Economics and Political Science*. Nov. 1955. p. 418.

and settlement have profoundly altered the conditions of the international economy and call for a "new mercantilism".[59]

The Production Function

In the broad, what is required is a Ricardian production function which defines output in physical units as a function of the single factor, slave power, also measured in physical units and which yields diminishing returns. Ideally, it would be useful to avoid any complications which arise from including land and capital in the conventional sense and to concentrate on the factor whose role and performance make the difference between the total institution and other forms of organizing business.

Thus; $O^* = f\ (N^*, \mu)$

since slave power reduces to the stock of slaves, i.e., capacity which is variable in the long run, and to the rate of utilization of slave-time, which is variable in the short, where μ measures that rate.

More exactly;

$$O^* = A.N^{*a} .\mu$$

where "A" is a term embodying residual and random factors such as weather, climate, intrinsic fertility of unimproved land and the quality of management and α measures the elasticity of output in respect to the input of slaves.

In the Golden Age, when α is unity there are constant returns to scale. Previously, in a brief Foundation Period, there are increasing returns to scale as planters experiment and improve on modes of organization. Then the system settles down as plantations "make" themselves. Once the planters have learnt the tricks of the trade, optimal operational arrangements apply in regard to gang organization, task norms, cropping cycles, cultivation practices and mill-location. Now management becomes a matter first, of changing the rate of utilization of slave-time and of varying the composition of output, intermediate and final, in response to changing prices in the short run; and secondly, of increasing the stock of slaves in the long.

Ultimately, the economy enters its phase of decline and collapse. Gall and Wormwood means decreasing returns to scale, from soil exhaustion and maturity. As to μ, that governs the short run. As more slave-time is expended on production with the number of slaves fixed, there is diminishing marginal productivity at a rising incremental rate.

The Cost Function

Summarily, what is required is a function in which are incorporated the following eight factors:

i) the downward inflexibility in physical maintenance costs due to the fact that planters own their slaves and subject to their horizon and their policy towards capital consumption, must maintain them. This relates to $(w + m)$ where w is the ackee ration and m the salt-fish ration per slave.

[59]The "new mercantilism" of "free ports" which was devised within the old has been clearly identified by Elsa Goveia, among others, *op.cit.*, pp. 4 – 5.

ii) the upward rise of physical maintenance costs and at a rising rate when the rate of utilization of slave-time is pushed beyond a normal range (over which it is fixed), subject again to capital consumption policy. This also relates to $(w + m)$.
iii) the upward rise in capital consumption at a rising rate as the rate of utilization of slave-time is pushed beyond the normal range, the incremental rate of depreciation being qualified by provisioning policy. This relates to N which is the stock of slave-time stored up in slaves (N^*) at any point in time.
iv) the character of attorney and planter consumption as a cost on the enterprise with a rising long-run tendency and a floor in the short. Here are the "ratchets". There is lavish attorney entertaining on expense account which affects $(w + m)$; attorney's priority claim on earnings exercised by shipping produce on own account to the metropole which affects t_{Ax}; planters' settlements of encumbrances on their families and their downwardly rigid absentee expenditures on princely establishments in the metropole which relates to t_{p1} – where t is a basket of metropolitan consumer goods.
v) the increasing dependence of the planters on merchant-banker capital on terms which allow the merchant Consignees Lieu[60] and power of funding debt at will. This relates to t_{p2}.
vi) the tendency to mounting tax rates for law and order as the rate of utilization is raised and creates increased "political" instability. There ought perhaps to be a small ratchet here too, to allow for an incipient bureaucratic interest. However much a "client" administration, a government does not take kindly to declines in expenditure. At stake here is t_g.
vii) the existence of royalties and rents levied in the Foundation Period of increasing returns to scale and handsome profits.
viii) rising supply prices for slaves as the industry expands and rising prices for provisions as inter-metropolitan war and intra-metropolitan political revolution disturb supply lines.

All these effects, including the price effects expressed in (viii) can perhaps be most conveniently expressed in terms of a single composite basket of "imports" which are necessary for the production of one unit of the staple.[61] This yields a measure of the physical "import" content per unit of output. This physical "import" co-efficient is a variable. In the short run it is a function of the rate of utilization of slave-time; in the long, of the real input of slave-time per unit of output. The *volume of* "imports", of course, increases with the scale of the operation, i.e. with the size of the stock of slaves (N^*).

The whole of imports can be priced by a weighted metropolitan index of prices for hinterland trade goods, slaves and metropolitan luxury goods – weights being assigned in accordance with the share of the basket going to

60First claim without planters' consent, *cf.* Pares, *Merchants and Planters*, p.48.

61See Lloyd Best and Kari Levitt on "Measuring the National Capacity to Import" in *Papers presented at the Regional Conference on Devaluation*, Institute of Social and Economic Research, University of the West Indies, Jamaica, 1968; also, Dudley Seers, "The Mechanism of an Open Petroleum Economy", in *Social and Economic Studies*, June, 1963.

merchants as against that going to other metropolitan accounts (and to the interloper).

Ignoring the complications and the details here, we may then write the cost function as:

$$S = [(W + M) + D + T] \quad = f\,(N^{*}, \mu).$$

This approach eliminates most of the subtleties and complications susceptible of exploration with mathematical tools. However, for the current summary purpose, it is enough that the phenomenon of mounting costs can be expressed and related to levers over which the planters exercise decision.

The Investment Function

To begin, investment is governed by expected venture profit which, however, is highly incalculable. There is hardly a market for capital which is scarce and specific. Joint stock is put up by lord, merchant, planter and attorney alike and the allocation of investment is not yet determined so much by market forces as it will come to be later. Expected profits all round are, in any case, virtually certain to be high. The operative aggregate is venture profit. For the period up to the end of the Golden Age, we, therefore, write:

$$I = f\ (V)$$

It is when decline sets in and the merchants begin to use their discretion to switch to more profitable operations in newer hinterlands and to non-hinterland operations in the metropole that the function becomes interesting. With the merchants assuming a rentier kind of role in regard to the mature plantation and discriminating over the allocation of investment, venture profit on trade has to be treated separately since it influences investment in a different way. For Gall and Wormwood, we, therefore, write:

$$I = (V_p, V_t)$$

Profit Maximization

To the extent that outputs and inputs can be valued and calculated, the equilibrium condition for profit maximization can be expressed in terms of the conventional equivalence of marginal cost and marginal product. This "marginalist" formulation takes account of the "structural" factors which influence decisions by the way in which product and cost are defined. In the Golden Age, marginal product is defined as aggregate venture profit; in Gall and Wormwood, as venture profit on production. Cost, as shown above, is defined to include the large basket of "imported" goods and services necessary to produce the staple. Yet, the formal condition for profit maximization is hardly relevant to behaviour since the business is marked by high incalculability and much speculation.

Adjustment

The stage has now been set in the hope of demonstrating firms which perpetually operate beyond their optimum owing to the nature of their expectations, the character of the capital stock and the relations with merchant-bankers. Rising costs and falling product prices squeeze profits down and down. Yet planters maintain high levels of output. Desperate enough to normalize speculation, they hope for the lucky break; the industry becomes a lottery.[62] In any event, they do not have the flexibility of dispensing with slaves. They can disinvest for a long time in the hope of not having to count the cost of starving their stock. And then, the merchants, too, support the behaviour so long as produce is likely to cover the supplies they advance and some of the liquidation of debt.[63] He enjoys Consignee's Lieu.

Naturally, there comes a time when the enterprises can no longer bear these operations and merchants have to foreclose.[64] But it is not a business they can re-habilitate. In the condition of the trade, they can only mark time on the threshold of change until either political revolution from below or metropolitan government intervention from above comes thundering into the breach, ushering in the next round.

VII. The Model and the Development of Economic Teaching

The foregoing statement has been cast roughly and with some inconsistency and repetition, in *histoire raisonnée,* in an accounting formulation and then in slightly more formal economics. Clearly it constitutes no more than a set of intermediate goods. But the model of Pure Plantation Economy for which they may be used is thought to be a capital good capable of rendering valuable services to the teaching of economics in the Caribbean. There is now much debate within the discipline about the teaching of development economics, the relevance of conventional models based on the experience of the industrial North Atlantic, the adequacy of the general tool-box with which students are being equipped, and the realism of the pre-occupation in regard to instruments of economic control.[65] The approaches which we are adopting here have suggested to us that once *the doing part,* the typical or dominant firm, has been identified and analysed as an organ of economic motion in its specific natural, social, cultural and political setting, several interesting considerations — perhaps lessons — suggest themselves.

For example, the distinction between macro and micro dissolves. The firm incorporates into its behaviour the properties of the general institutional framework and the resource situation, etc.; and the relations of the typical firm with the outside world describe the market form. Thus, for the Caribbean, at any rate, the theory of the firm, the theory of international economy and the theory of growth and development seem to require a single cogent statement. Related to this, the barriers between sociology, political science,

62This is how Bryan Edwards described the position in the Caribbean. Quoted by Goveia, *op. cit.* p. 20.

63". . . By allowing the planter to remain in his debt, the factor made sure of the commissions on his future shipments of sugar . . .", Pares, *Merchants and Planters,* p. 47.

64". . .the plain truth was that the sugar industry could no longer bear the financial structure which had been raised upon it. In the end, therefore, many of the sugar plantations became the property of factors". *Ibid,* p. 49.

65Martin and Knapp, *The Teaching of Development Economics, op. cit.*

economic history, anthropology and economics, as such, need a drastic lowering. Thirdly, the history of economic thought assumes a greater importance than it is awarded in normal teaching programmes. Postlethwayt is seen to be as relevant as Galbraith. This last is perhaps only one way of saying that the tool-box which we now have is not lightly to be dispensed with.

The injunction is that spanners are to be disinguished from jacks, and both from the chassis. Above all, a unit with internal combustion is altogether a different thing from a coach in harness. A hinterland carriage operates in dimensions very distinct from a metropolitan rocket and demands quite different materials, spare parts and modes of construction and repair. Yet, no doubt, Marshallian spanners and Keynesian jacks – not to mention all the neo-classical screwdrivers — could be very handy for tinkering with both.

An Ideal Type Accounting Framework for "Pure Plantation Economy"

B1 Domestic Procurals: by producing sectors from — W ("Ackee" Components of Expenditure:- Plantation / Residentiary)

Purchases by / Sales by	Code No.	111.1 Cane (Plantation)	111.2 Grinding (Plantation)	111.4 Rum (Plantation)	111.5 Food (Plantation)	111.91 Construction (Plantation)	111.92 Distribution (Plantation)	111.99 Services (Plantation)	111.1 Cane (Plantation)	111.2 Grinding (Plantation)	111.4 Rum (Plantation)	111.5 Food (Plantation)	111.91 Construction (Plantation)	111.92 Distribution (Plantation)	111.99 Services (Plantation)	121.11-12 Settlers Goods (Residentiary)	121.19 Settlers Services (Residentiary)	121.2 Maroon (Residentiary)	122 Urban Trades (Residentiary)
A1 Producing Sectors — 111. Plantation A. — Sugar Cane Growing	111.1			-	-		-												
Plantation A. — Sugar Grinding	111.2	-		-	-		-	-								-			
Plantation A. — Rum	111.4		-	-	-		-												
Plantation A. — Food Gardening	111.5			-	-		-												
Plantation A. — Construction	111.91					-	-												
Plantation A. — Distribution	111.92																		
Plantation A. — Services	111.99																		
111. Plantation N. — Sugar Cane Growing	111.1										-	-		-					
Plantation N. — Sugar Grinding	111.2								-		-	-		-	-	-			
Plantation N. — Rum	111.4									-	-	-		-					
Plantation N. — Food Gardening	111.5										-	-		-					
Plantation N. — Construction	111.91												-	-					
Plantation N. — Distribution	111.92																		
Plantation N. — Services	111.99																		
12 Residentiary Sectors — 121.1 Settlers — Domestic Agriculture	.11						-							-		-	-		
121.1 Settlers — Staple Agriculture	.12						-							-			-		
121.1 Settlers — Own A/C Services	.19						-							-		-	-		
Maroons	121.2						-							-				-	
Urban Tradesmen	122.						-							-					-
A3 Persons Engaged	3	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
A4 Capital Stock — Slaves (Indian Pieces / $ / Work-Hours)	41	+ + +	+ + +	+ + +	+ + +	+ + +	+ + +	+ + +	+ + +	+ + +	+ + +	+ + +	+ + +	+ + +	+ + +				
Other Stock $	42	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+
Land and Crops $	43	+	+		+				+	+		+				+			+
Buildings and Equipment $	44		+	+		+	+	+		+	+		+	+	+	+	+		+
A7. Income Disposal Accounts (Inflows (+), Outflows (-)) — Households	71																		
Hinterland Government	72																		
Other Hinterlands of Exploitation	741																		
Planters' Bank Accounts in Metropole	7421																		
Merchant Bankers' Account in Metropole	7422																		
Other Accounts in the Metropole	7423																		
Hinterlands of Settlement (New Metropoles)	7424																		
Rival Metropoles	7431																		
Other Countries	7432																		
Metropolitan Government	744																		
Balance													Σ44						

B2 "Salt-fish" component of expenditure: Overseas Procurals of — M; B3 Factor Rewards received as; B4 Supply

Purchases by / Sales by	Code No.	211 Magazines	212 Pieces of Eight	221-22 Export & Import Duties	231-32 Export & Import Cost Margins	30 Value Added	31 T Attorney Income	32 T Property & Mixed Income	331 T [illegible]	332 T Other "Taxes"	34 D Depreciation	351 V_r Venture Profit on Production	352 V_t Venture Profit on Trade	40 Domestic Supply: Cost of Cultivation	42 Final Imports	43 Duties	44 Margins	49 Total Supply
A1 Producing Sectors — 111. Plantation A. — Sugar Cane Growing	111.1					(-)	-	-	-	-	-	-		(-)				(-)
Plantation A. — Sugar Grinding	111.2					(-)	-		-	-	-	-		(-)				(-)
Plantation A. — Rum	111.4					(-)	-		-	-	-	-		(-)				(-)
Plantation A. — Food Gardening	111.5					(-)	-							(-)				(-)
Plantation A. — Construction	111.91					(-)	-							(-)				(-)
Plantation A. — Distribution	111.92	(-)	(-)	(-)	(-)	(-)	-						-	(-)	-	-	-	(-)
Plantation A. — Services	111.99					(-)	-					-		(-)	-	-	-	(-)
111. Plantation N. — Sugar Cane Growing	111.1					(-)	-	-	-	-	-	-		(-)				(-)
Plantation N. — Sugar Grinding	111.2					(-)	-		-	-	-	-		(-)				(-)
Plantation N. — Rum	111.4					(-)	-		-	-	-			(-)				(-)
Plantation N. — Food Gardening	111.5					(-)	-							(-)				(-)
Plantation N. — Construction	111.91					(-)	-							(-)				(-)
Plantation N. — Distribution	111.92	(-)	(-)	(-)	(-)	(-)	-						-	(-)	-	-	-	(-)
Plantation N. — Services	111.99					(-)	-					-		(-)	-	-	-	(-)
12 Residentiary Sectors — 121.1 Settlers — Domestic Agriculture	.11					(-)		-						(-)				(-)
121.1 Settlers — Staple Agriculture	.12					(-)		-						(-)				(-)
121.1 Settlers — Own A/C Services	.19					(-)		-						(-)				(-)
Maroons	121.2					(-)		-						(-)				(-)
Urban Tradesmen	122.					(-)		-						(-)				(-)
A3 Persons Engaged	3													(+)				
A4 Capital Stock — Slaves (Indian Pieces / $ / Work-Hours)	41													(+) (+) (+)				
Other Stock $	42													(+)				
Land and Crops $	43													(+)				
Buildings and Equipment $	44													(+)				
A7. Income Disposal Accounts (Inflows (+), Outflows (-)) — Households	71						+	+			+	+						
Hinterland Government	72			+						+						+		
Other Hinterlands of Exploitation	741		+												+			
Planters' Bank Accounts in Metropole	7421										+	+						
Merchant Bankers' Account in Metropole	7422								+				+					
Other Accounts in the Metropole	7423	+	+		+		+	+	+						+			
Hinterlands of Settlement (New Metropoles)	7424	+			+								+					
Rival Metropoles	7431		+															
Other Countries	7432														+			
Metropolitan Government	744			±				±								±		
Balance		Σ0	Σ0	Σ0	Σ0		Σ0	Σ0	Σ0	Σ0	Σ0	Σ0	Σ0		Σ0	Σ0	Σ[illegible]	

B5 Disposals by producing sectors to:; B7 Transfers (outflows (+) inflows (-)) — Crossovers; Balance

Purchases by / Sales by	Code No.	50 Total Demand	511 G Law and Order	5121 C_x Plantation Consumption	5122 I_x Plantation Investment	5123 C_r+I_r Settlers and Urban Trades	5124 Maroons	5131 X Exports of Staple	5132 X Re-exports of Slaves & Equipment	514 B Inventory Change	51 Final Demand	52 Intermediate Demand	711 Sou-Sou	742 Planters' Bank Account	749 Rest of the World	Balance
A1 Producing Sectors — 111. Plantation A. — Sugar Cane Growing	111.1	(+)								±		(+)				Σ0
Plantation A. — Sugar Grinding	111.2	(+)						+		±	(+)	(+)				
Plantation A. — Rum	111.4	(+)		+				+		±	(+)	(+)				
Plantation A. — Food Gardening	111.5	(+)		+						±	(+)	(+)				
Plantation A. — Construction	111.91	(+)		+	+					±	(+)	(+)				
Plantation A. — Distribution	111.92	(+)	+	+	+	+			+	±	(+)	(+)				
Plantation A. — Services	111.99	(+)	+	+	+				+	±	(+)	(+)				
111. Plantation N. — Sugar Cane Growing	111.1	(+)								±		(+)				Σ0
Plantation N. — Sugar Grinding	111.2	(+)						+		±	(+)	(+)				
Plantation N. — Rum	111.4	(+)		+				+		±	(+)	(+)				
Plantation N. — Food Gardening	111.5	(+)		+						±	(+)	(+)				
Plantation N. — Construction	111.91	(+)		+	+					±	(+)	(+)				
Plantation N. — Distribution	111.92	(+)	+	+	+	+			+	±	(+)	(+)				
Plantation N. — Services	111.99	(+)	+	+	+				+	±	(+)	(+)				
12 Residentiary Sectors — 121.1 Settlers — Domestic Agriculture	.11	(+)				+				±	(+)	(+)				Σ0
121.1 Settlers — Staple Agriculture	.12	(+)								±		(+)				Σ0
121.1 Settlers — Own A/C Services	.19	(+)				+				-	(+)	(+)				Σ0
Maroons	121.2	(+)					+				(+)	(+)				Σ0
Urban Tradesmen	122.	(+)				+				±	(+)	(+)				Σ0
A3 Persons Engaged	3															
A4 Capital Stock — Slaves (Indian Pieces / $ / Work-Hours)	41															
Other Stock $	42															
Land and Crops $	43															
Buildings and Equipment $	44															
A7. Income Disposal Accounts (Inflows (+), Outflows (-)) — Households	71			-		-	-			±			±			Σ0
Hinterland Government	72															Σ0
Other Hinterlands of Exploitation	741		-						-							Σ0
Planters' Bank Accounts in Metropole	7421				-					±				±	-	Σ0
Merchant Bankers' Account in Metropole	7422									±				∓	-	Σ0
Other Accounts in the Metropole	7423							-							-	Σ0
Hinterlands of Settlement (New Metropoles)	7424							-							-	Σ0
Rival Metropoles	7431							-								Σ0
Other Countries	7432														-	Σ0
Metropolitan Government	744														-	Σ0
Balance			Σ0	Σ0	Σ0	Σ0	Σ0	Σ0	Σ0	Σ0			Σ±	Σ0	Σ0	

APPENDIX AND ACCOUNTING CHART

An Ideal Type Accounting Framework for "Pure Plantation Economy"

A. ROWS

[1.] *Producing Sectors*

[11.] Export Sectors

[111.] Plantation A

.1 Sugar Cane Growing
.2 Sugar Grinding
.4 Rum
.5 Food Gardening
.9 Own Account Services
.91 Construction
.92 Distribution
.99 Services including Domestic, Bagasse and Other.

[111.] Plantation N

.1 Sugar Cane Growing
.2 Sugar Grinding
.4 Rum
.5 Food Gardening
.9 Own Account Services
.91 Construction
.92 Distribution
.99 Services including Domestic, Bagasse and Other.

[12.] Residentiary Sectors

121.1 Small Settlers and Freedmen
.11 Domestic Agriculture
.12 Staple Agriculture
.19 Own Account Services including Construction
121.2 Maroons
122. Urban Tradesmen

[3.] *Persons Engaged*

[4.] *Capital Stock*

41. Slaves (work-units)
($)
(work-hours)
42. Other Stock
43. Land Improvements and Crops
44. Buildings and Equipment

[7.] *Final Income Disposal Accounts*

71. Households
72. Hinterland Government
741. Other Hinterlands of Exploitation
7421. Planters' Bank Accounts in Metropole
7422. Merchant Bankers' Accounts in Metropole
7423. Other Accounts in the Metropole
7424. Hinterlands of Settlement (New Metropoles)
7431. Rival Metropoles
7432. Other Countries
744. Metropolitan Government

B. COLUMNS

[1.] *"Ackee" Component of Expenditure*

7423. Other Accounts in the Metropole
[11.] On Plantation Outputs
111.1 Sugar Cane
111.2 Muscovado and Molasses
111.4 Rum
111.5 Ground Provisions and Other Food
111.91 Construction
111.92 Distribution
111.99 Services

111.1 Sugar Cane
111.2 Muscovado and Molasses
111.4 Rum

B (cont'd)

	111.5	Ground Provisions and Other Food	
	111.91	Construction	
	111.92	Distribution	
	111.99	Services	
	[12.]	On Residentiary Output	
	121.11-12	Settlers' Goods	
	121.19	Settlers' Services	
	121.2	Maroon Goods and Services	
	122.	Urban Trades	
[2.]	*"Saltfish" Component of Expenditure* (net of merchants' venture profit)		
	[21.]	Commodity Imports (ex-farm or workshop in metropolis)	
	211	"Magazines" (Food, Clothing, Stores, Supplies)	
	[22.]	Duties (–) and Drawbacks, Bounties, etc. (+)	
	221	On Imports	
	222	On Exports	
	[23.]	Other Service Imports ("Cost" Margins)	
	231	On Imports	
	232	On Exports	
[30.]	*Value Added*		
	31.	Attorney and Senior Staff Income	
	32.	Mixed Property Income (Royalties, Rents, Mixed Income)	
	331	Encumbrances	
	332	Other Taxes	
	34.	Depreciation	
	351	Venture Profit on Production	
	352	Venture Profit on Trade	
[40.]	*Domestic Supply* (Cost of Cultivation)		
	42.	Final Imports	
	43.	Duties	
	44.	Margins	
[49.]	*Total Supply*		
[50.]	*Total Demand* (Total Accruals on Hinterland Operations)		
		511	Law and Order (Government)
		5121	Plantation Consumption
		5122	Plantation Investment
		5123	Settlers and Urban Trades
		5124	Maroons
		5131	Exports of Staple (at metropolitan wholesale prices)
		5132	Re-exports of Slaves and Equipment
		514	Inventory Change
[51.]	*Final Demand*		
[52.]	*Intermediate Demand*		
7.	*Transfer Columns*		
		711	Sou-Sou
		742	Planters Bank A/C
		749	Rest of the World