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Working Paper

Multinational Corporations and Dependent Underdevelopment in Mineral-Export Economies

Center Discussion Paper, No. 87

Provided in Cooperation with:
Yale University, Economic Growth Center (EGC)

Suggested Citation: Girvan, Norman (1970) : Multinational Corporations and Dependent Underdevelopment in Mineral-Export Economies, Center Discussion Paper, No. 87, Yale University, Economic Growth Center, New Haven, CT

This Version is available at:
https://hdl.handle.net/10419/160019

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CENTER DISCUSSION PAPER

No. 87

MULTINATIONAL CORPORATIONS AND DEPENDENT UNDERDEVELOPMENT IN MINERAL-EXPORT ECONOMIES

by

Norman Girvan

June 22, 1970

Note: Center Discussion Papers are preliminary materials circulated to stimulate discussion and critical comment. References in publications to Discussion Papers should be cleared with the author to protect the tentative character of these papers.

MULTINATIONAL CORPORATIONS AND DEPENDENT UNDERDEVELOPMENT IN MINERAL-EXPORT ECONOMIES:[1]

Norman Girvan[2]

The purpose of this paper is to establish a framework for the analysis of the anatomy of dependent underdevelopment for economies which are structured around mineral-export industries operated by large multinational firms. In Hinterland[3] America, the economies of Venezuela, Chile, Surinam, Guyana, Jamaica, Trinidad-Tobago and the Dutch Antilles all fall into this category to a greater or lesser degree[4]. The mineral-export industry in these countries provides the bulk, or a large part, of foreign exchange receipts and Government revenue; the imports and Government expenditure thus financed are critical to the maintenance and growth of economic activity. The persistent structural dependence of these countries remains a problem for policy-makers and analysts alike.[5] The hidden and open conflicts between their Governments and the producing companies give rise to a state of virtually chronic crisis in this area of international economic relations.

My basic proposition is that the functioning of these industries in the national economies in which they are physically located can be better understood by an analysis of their functioning in the corporate economies of which they are an organic part. Such problems as their dependence on foreign demand, prices and decision-making; the large amounts of profit repatriation and its reflection, the low share of the industry's value which is "Returned"[6] to the national economy; and the lack of integration of the industry with the national economy; are the surface manifestations of the institutionalized relationships between subsidiaries and their parent firms. Analysis of the traditional national indexes

of economic dependence, though useful, has been limited in its value by a neglect of the doing part of these industries. Where the effects of company policies are treated, they are introduced in an ad hoc, unsystematic manner, almost as if they are accidental and random intrusions into the economic picture. In what follows I try to develop the idea that any analysis of the external relationships of these industries should be based on an analysis of the organic relationship between the subsidiary and the parent company in contemporary vertically-integrated multinational firms.

The pursuit of this idea led to the need for the development of the notion of a corporate economic system as a system conceptually quite distinct from a national economic system; although obviously the two do overlap in the real world. For example, a proper understanding of the behaviour of Chile Copper Company has to be based on an analysis of the global corporate economy of Anaconda, the parent company. This leads in turn to subject matter which has traditionally been the exclusive preserve of Business Economics. It became clear, to this writer at any rate, that the traditionally strict divorce between "true" Economics and Business Economics is obsolete, if ever there was a justification for it. To recognize this, one need only consider that the "national" economies of many Hinterland countries are the results merely of the activities of the subsidiaries of two or three multinational firms within their national borders.

The ideas which follow are based on continuing empirical research on the corporate economies of the aluminium, petroleum and copper firms which extract their raw materials from Hinterland America; and on the national economies of those countries in Hinterland America which are structurally dependent on the export of these raw or semi-processed mineral products by these companies. Specifically, most of the ideas are based on the following companies and countries:

The Aluminum Company of America, Alcan Aluminium Ltd,,Standard Oil of New Jersey, Royal Dutch-Shell, Anaconda Mining Company, and Kennecot Copper Corporation; Jamaica, Trinidad-Tobago, Venezuela and Chile.[7] The methodology of the research is historical analysis. The raw material is the natural consequence of this: Annual Reports of the companies, corporate histories and articles on the companies; economic histories and contemporary economic analysis of the countries. It should be stressed that the intention here is to give only some basic principles which seem to be applicable to the general case of multinational corporations and mineral-export economies.

The main questions for which we seek an answer are (1) How did these firms come to dominate the mineral-export industries of Hinterland America? (2) How does this pattern of economic organization affect the determination of the level of output in the mineral-exporting country? (3) How does the pattern of economic organization affect the level of national income, the rate of economic development and the degree of external dependence of the mineral-export economy? and (4) Why is it that Government strategies of taxing the mineral-export industry heavily and using the revenue to promote economic development meet with limited success?

The analysical framework within which these questions can be profitably discussed unfolds itself in stages which are partly chronological and partly conceptual. They are (i) Changes in metropolitan technology and demand which created new industries in the Metropoles; (ii) Changes in metropolitan economic organization which gave rise to the emergence of vertically-integrated, oligopolistic firms in these industries; (iii) The multinationalization of the typical firm; (iv) The process of growth and development of the typical firm over time and (v) The role of the subsidiary in the vertically integrated firm.

This paper is therefore divided into two parts. Part 1 discusses the multinational corporation and the mineral-export industry, and Part 2 discusses the Hinterland economy and the mineral-export industry.

I

The Multinational Corporation[3]

(i) Changes In Metropolitan Technology and Demand

The emergence of petroleum, copper and aluminium as large-scale, basic industries was marked by a number of characteristics common to all three industries. First, they all emerged in the latter part of the nineteenth century in the Metropoles, particularly in the United States. Before this time oil and copper industries did exist in a number of countries. But the level of production was relatively low, prices were relatively high, the individual producing unit was relatively small and based on easily-worked deposits: surface seepages of oil and high-grade copper ores.

What took place in the Metropoles between 1850 and 1900 was a technological revolution in production which created supplies which were not only quantitatively greater but qualitatively different. Subterranean oil was brought to the surface, refined and transported long distances by the discovery of oil well drilling and the induced changes in the technology of refining and transport Ores which contained so little copper that they were once considered worthless were brought into production by changes in the technology of mining and refining; Aluminium metal began to be produced in commercial quantities for the first time.

The changes on the supply side were in part the cause and in part the effect of changes on the demand side, in which technology also played an important part. In oil and aluminium, it was the breakthroughs in the technology

of production in the 1850's and 1880's repectively which stimulated new uses and the search for new markets; in copper, the rapid growth of demand for wire resulting from the emergence of the electricity industry in the 1880's induced the drive to mine and treat low-grade ores on a large scale. Subsequently, technical change on both the demand and the supply side interacted upon one another with cumulative effects. Thus, the automobile revolution in the early 1900s created explosive growth demands for the products of all three industries, and this induced further technical changes on the supply side.

(ii) The Emergence of The Vertically-Integrated, Oligopolistic Firm

Accompanying these changes was a revolution in economic organization which was no less significant. By the early 1900s the large number of small, single-stage, local firms in the petroleum and copper industries had been displaced by a small number of large, vertically-integrated firms national in scope and with oligopolistic market control. In aluminium, monopoly of metal production was a feature of the industry from the outset because of the Pittsburgh Reduction Company's[9] acquisition of the patent rights, and the company soon set about integrating itself backwards into raw material extraction and forwards into fabrication.

It appears that the emergence of the integrated oligopolistic firm was an inherent and possibly indispensable part of the revolution which took place in the scale of production and demand, in the level of technology, and in the quantity of capital utilized in production. With much more capital committed to production on a much larger scale, firms had to minimize the risks of investment and assure their facilities of full-capacity operation by acquiring their own raw material supplies and market outlets. All stages of production and marketing had to be brought as far as possible within the frontiers of corporate control. Those firms which got a headstart, because of strategic control of one

stage of the industry or the technology of production, or because of entrepreneurial foresight and initiative, or because of a combination of all three, were able to absorb in one way or another the weaker and more vulnerable firms. This process continued until a small number of large firms faced each other, each with its own supplies of raw materials and its own market outlets. At that point in some cases notably copper-they discovered that their competitive struggles could be profitably diluted with collusive market control, i.e. cartel arrangements to maintain prices and profits by restraining output. What usually set the limit on the entry of new firms or provided the opportunities for new entrants was the scarcity or availability of the natural resources indispensable for profitable production. Thus, the discovery of new copper deposits in Montana in the 1880s provided the basis for the new Anaconda company to break the control of the Lake Michigan producing pool; the discovery of the Texas oilfields at the turn of the century made it possible for the Texas Co. and Gulf Oil to challenge the hegemony of Standard Oil. In contrast, Alcoa's control of bauxite[10] deposits and hydroelectric resources[11] helped to effectively prevent the entry of new companies to the United States industry until after World War II, when Jamaican deposits began to be used by Reynolds and Kaiser.

Another important factor underlying the change in the nature and scope of economic organization was the emergence of national markets in the Metropoles to displace the small, unintegrated local markets which had previously existed. In large part this was due to the revolution in transport - especially the emergence of the railway - in the context of rapidly growing urban incomes. These changes meant that the typical firm had to attain national size - in the case of the United States, <u>continental</u> size - in order to compete. Its marketing outlets

had to be established accordingly. For a similar reason, it had to seek out and acquire within the Metropole as much of the reserves of the raw material and ancillary resources needed to produce it, as possible. This was and is necessary not only to ensure long-term supplies for its refineries and fabricators, but also and no less important, to reduce the actual and potential availability of these supplies to its competitors. This gives rise to the frequently observed phenomenon of firms which acquire and hold raw material reserves far in excess of their prospective needs for decades to come.

(iii) The Multinationalization of The Typical Firm

The process by which the typical firm established marketing outlets and raw material facilties in foreign countries was a logical extension of the process by which it became vertically integrated in structure and national in scope. As the market became international, the firms came into competition with firms from other Metropoles which had also undergone the process of national vertical integration. Metropolitan firms therefore began to compete with each other on each other's own home ground, as well as for the markets and the raw materials of the Hinterland countries.

Hence marketing subsidiaries and then refineries were set up by the American oil companies in Europe, and vice versa, after the First World War. A French firm tried (and failed) to penetrate Alcoa's preserve - the U.S. market - in the second decade of the century; subsequently the American firm in turn reached out to acquire hdyro-power sites and aluminium smelting facilties in France and Norway: it had already secured a large slice of Canada's hydro-power potential. On the raw material side, the American copper companies had by 1920 secured control of all the important copper reserves of Chile and Mexico. Congolese and Zambian copper had - naturally - been incorporated into the productive apparatus of English and European companies. Alcoa's control of the important bauxite deposits

of Surinam and Guyana was also complete by 1920. American and Anglo-Dutch firms fought spiritedly for Mexican oil at the turn of the nineteenth century; in the 1920s the battleground shifted to Venezuela and the Middle East.

By the 1930s at the latest, the present-day pattern of multinational-corporate ownership of these three mineral-resource industries in the American Hinterland had been set. Chile's copper was vertically integrated with the facilities of Anaconda and Kennecot, Surinam's and Guyana's bauxite with the facilities of the Alcoa-Aluminium Ltd. complex most of Venezuela's oil formed part of the multinational organizations of Jersey Standard, Shell, Gulf and Texaco. Subsequently, Jamaica's bauxite was secured to the needs of Alcan Aluminium Ltd., Reynolds Metals and Kaiser Aluminum.

(iv) <u>The Processes of Growth, Development and Resource Allocation For the Firm</u>.

It goes without saying that the complex and fascinating process of the firm's continued growth and development involves all the dimensions of activity already outlined; i.e. the continued drive for new markets and new raw material reserves, the continued rounding out, and extension, of its integrated structure. The institutionalization of Research and Development for thereduction of costs and for product innovation is of course an important part of this process. What is of particular importance to the present analysis are two aspects of the firm's growth process: (a) how it allocates its needed raw material production between different raw material-producing subsidiaries; (b) how it allocates its production, financial and research resources between different end-products. Both processes, as I shall subsequently elaborate, have an important effect on the determination of the level of output in the mineral-export industry of the Hinterland countries in the short, medium and long run.

(i) Raw Materials

Intuitively, it can be assumed that the first factor taken into account in determining the distribution of production between raw material subsidiaries is the structure of relative costs (including taxes) in the different subsidiaries. Other things being equal, we would imagine that the company would allocate its raw material production so that the sum total of "tax-paid" costs of all subsidiaries represents the least costly way of obtaining the sum total of the raw materials it needs to support its end-product output. Other things, of course, are usually unequal, so much so that one has to take explicit account of other factors in an abstract analysis if we are to hope to understand the actual raw material policies of the firms.

The most important qualification to the "least-cost" rule arises out of certain factors which place a positive value on the firm's maintaining a fairly wide geo-political spread of raw material supplies. Usually these factors arise out of the actions of national Governments. Some supply sources are given preferential access to some markets because of neo-mercantilist policies (e.g. American oil on the American market). In most countries the firms must develop and maintain some acceptable level of production of the resource as a condition of securing and keeping resource concessions. And there are differences, frequently wide differences, between the degree of political risks in different countries.

Such factors limit, but do not destroy, the operation of the least cost principle. A standard pattern appears to be for the firms to maintain a certain geo-political spread of raw material production, and to allocate over time the bulk of incremental production in one or a small number of particular low-cost sources as its raw material needs grow. At the same time, the firms are constantly seeking new sources of raw materials in order to widen their options, reduce their competitors' options, and displace depleted sources.

The logic of this is that the firm's planning must include the planned displacement of any existing source of supply, including (and for some reasons especially) each one located in each Hinterland country.

The planned displacement of each source operates both on the level of the firm's actual intentions and on the level of its contingency planning. Any given source may be abruptly lost to the firm because of a change in Government policy, expropriation, war or such other acts of men which the firm might well put in the same category as Acts of God. Thus, there must be a contingency plan for such unforeseen developments. But, for those particular sources where the rate of extraction is relatively high because incremental production is being located there, the firm must actively plan for that more or less foreseeable point in the future when it will locate incremental production at some other source or set of sources. The most important pressures giving rise to this are the depletion of high-grade or easily-extracted reserves of the natural resource and the associated growth in extraction costs; and the growth of the tax rate and perhaps of state intervention as the Hinterland Government struggles for a growing share of the large surpluses realized by the industry.

The history of the oil companies provides the most sharply defined cases of planned displacement of supply sources. American oil companies shifted incremental production from the United States to Mexico in the early twentieth century, from Mexico to Venezuela between the 1920s and 1940s, from Venezuela to the Middle East in the 1950s and 1960s, and will shift progressively to Africa and Alaska in the 1970s. But the copper and aluminum firms also behaved in analogous ways. Anaconda and Kennecot located incremental output in Chile from the 1920s to the 1940s, and then shifted back to United States sources when they got into trouble with the Chilean Government.

Alcoa and Alcan shifted from the U.S. to Guyana and Surinam for their bauxite supplies from the 1920s to the 1940s, to Jamaica and the Dominican Republic after the Second World War, and will shift increasingly to Australia and Africa in the 1970s.

There is a striking historical analogy here between the behaviour of the corporations and the behaviour of the plantation economies of the New World over time. Best has noted that plantation capitalism tended to "shift terrain" - i.e. incremental production - from one Hinterland country to another.[12] The pressures for such shifts were (i) the exhaustion of the soil and the attraction of virgin lands in other Hinterlands, (ii) the restlessness of the slave or low-wage labour force, and (iii) changing patterns of Metropolitan preferential trade policy. The first two are clearly analogous to the depletion of high-grade reserves and the growing interventionism of the Hinterland Government in multinational mineral economy.

(b) End-Products. Insofar as any given commodity tends to experience a low-high-low growth cycle over the long-run, this has certain important implications for the relative specialization and diversification of the firm's product mix. It is widely accepted that the goals of the corporations are long-term profitability and growth. The pursuit of these objectives, it appears, has led to the interesting pattern for the firms investigated to specialize in a particular commodity when its growth rate is high, and then to shift incremental resources out of that commodity as its growth rate levels off or falls, into another commodity which is then experiencing its period of rapid growth. By such means the firms have benefitted from the rapid-growth phase of a particular commodity, but their growth has transcended the fate of any one commodity and embraces those of others in their high growth phase.

In the oil industry, the shifts have been to jointly-produced commodities. First, the companies shifted incrementally from kerosene to gasoline in the early part of the century as electric lighting displaced the kerosene lamp and as the automobile revolution created an explosively growing gas market; then since 1950 they have shifted incrementally into petrochemicals as the rate of growth of demand for gasolene levelled off in the United States and the demand for petrochemicals has grown rapidly. In the copper industry, the shift has been to a competing commodity: Anaconda, Revere Copper and Kennecot all acquired stakes in the aluminium industry in the post-Second World War period, as this commodity ate hungrily into the incremental market for metals. It is not difficult to recognize the reasons for these incremental choices: shifting into jointly-produced commodities makes use of the firms existing production facilities, shifting into competing commodities makes use of their existing marketing facilities.

There is more to it however. Basic to the process of growth and displacement of commodities are the twin engines of changing technology and changing demand. The firms are themselves deeply involved in influencing these changes: their large Research and Development establishments are constantly developing new products based on their resources and new ways in which customers can use their products; their large propaganda activities are geared to expanding demand for their existing and new product lines. In other words their technological and propaganda efforts necessarily include activities designed to promote products which are jointly produced, or competitive, to their main product lines. By such means they help insure themselves against the losses, and help assure themselves of the benefits, from long-term shifts in technology and/or demand which affect the entire industry.

The logic of all this is that part of the firms' planning must include the planned incremental displacement of its main product line with another one, and that there have been, in the past, periods when the firms have both planned and carried out such displacements. On the basis of this, it is not surprising to learn that the oil companies have begun to display interest in the nuclear power industry, which has begun to compete with diesel and natural gas-generated electricity. One would also expect - although I have not so far seen any evidence of this - that some part of the planning of the aluminium firms should include a strategy for that time when the demand for plastics reaches the point where it becomes a real threat to the rapid growth of the firms specializing in the white metal.

All these factors - the process of allocating output between different raw material subsidiaries, the phenomena of planned displacement of supply source and of produced commodity - are important in the analysis of long-run output-determination of the mineral-export in the Hinterland country, as we shall subsequently see. Also, they throw interesting light on changing patterns in the use made by Metropolitan capital of the resources of the Hinterland world through time. Finally, they point to the need to recast the mold of theories of international trade and international investment into institutional categories which are more relevant, at least so far these theories relate to trade and investment in raw materials and resource products.

(v) The Role of The Subsidiary

Implicit in what has been said so far is the idea that the typical subsidiary of these firms is an organic part of a multi-stage, multinational and perhaps multiproduct enterprise with a single centralized resource-allocation and planning agency at the head. On the basis of an examination of nearly one hundred of the largest industrial enterprises in the United States, Chandler gives the

following picture of the typical administrative structive of the modern, large, vertically-integrated multiproduct firm:

> "At the top is a general office. There, general executives and staff specialists coordinate, appraise and plan goals and policies and allocate resources to a number of quasi-autonomous, fairly self-contained divisions. Each division handles a major product line or carries on the firm's activities in one large geographic area. Each division's central office, in turn, administers a number of departments. Each of these departments is responsible for the administration of a major function - manufacturing, selling, purchasing or producing of raw materials, engineering, research, finance and the like. The departmental headquarters in its turn coordinates, appraises and plans for a number of field units. At the lowest level, each field unit runs a plant or works, a branch or district sales office, a purchasing office, an engineering research laboratory, an accounting or other financial office, and the like. The four types of administrative positions in a large multidivisional enterprise are thus: the field unit, the departmental headquarters, the division's central office, and the general office."[13]

Chandler noticed that the copper companies and Alcoa were amongst the important exceptions to those companies which evolved a highly formalized structure with operations and administration so clearly differentiated from long-term planning. Thus "Since World War I, the over-all policy-making at Anaconda was carried out in weekly meetings of the heads of the functional subsidiaries",[14] and "The Kennecot story has been one of increasing centralized administrative control",[15] finally, at Alcoa "At the central office, each of the three Executive Vice-Presidents has charge of a group of several functional Departments."[16] and "Overall appraisal and planning are carried on at Alcoa by the three Executive Vice-Presidents, the President, the Chairman of the Board, and the Chairmen of the Executive and Finance Committees."[17] In other words, in these firms the function of long-term planning did not become sharply differentiated from the function of overall administration of the firm, but the centralization of control over Departments and field units was no less evident.[18] The model structure outlined by Chandler can, therefore, be used to illustrate the relationships of the raw material subsidiaries which comprise the mineral-export industries of the Hinterland countries, with the firms of which they are

constituent parts. In terms of the four-tier system noted in the long quotation above, the raw material subsidiary exists at the lowest tier: the level of the field unit. In this category would fall the copper-producing subsidiaries in Chile, the crude oil and bauxite-mining subsidiaries in the countries in and around the Caribbean. Raw material production as a whole for each firm falls into the category of the department, while all the different stages of vertically-integrated production - say, for copper and aluminium - fall into the category of the division which in some actual cases also corresponds to the enterprise as a whole. In the light of this, Chandler's description of the tasks and responsibilities of each tier in the structure in instructive.

> "Only in the first, the field unit, are the managers primarily involved in carrying on or personally supervising day-to-day activities. Even here, if the volume of activity is large, they spend much of their time on administrative duties. But such duties are largely operational, carried out within the framework of policies and procedures set by departmental headquarters and the higher offices. The departmental and divisional offices may make some long-term decisions, but because their executives work within a comparable framework determined by the general office, their primary administrative activities also tend to be tactical or operational. The general office makes the broad strategic or entrepreneurial decisions as to policy and procedures and can do so largely because it has the final say in the allocation of the firm's resources - men, money and materials - necessary to carry out these administrative decisions and actions and others made with its approval at any level."[19] (My emphasis)

A sharper definition of the structure of administration, commodity flows and cash flows within the firm can be given by diagrammatic representation. In Figures 1 and 2, I have adapted Chandler's Chart[20] showing the administrative structure of the multidivisional firm, for the present purpose. A uni-divisional firm is shown (oil, copper, aluminium) in which the Central Office carries out both the function of long-term planning and that of central coordination of the functional Departments. In Figure 1, Instructions are seen to flow downwards

from the Central Office to the Departmental Headquarters and finally to the Field Units, while information flows upwards from the Field Units to the Departmental Headquarters and finally to the Central Office. The Central Office's instructions to the Departments concern such matters as the coordination of mining, refining, fabricating and selling, which each Departmental Headquarters then translates into operational output and shipment decisions for its Field Units to carry out. The Field Units supply of information to the Departmental Headquarters concern such matters as local cost, labour, tax and/or marketing conditions. This information is consolidated into Departmental conditions for each Department, which can then be supplied to the Central Office to enable it to take rational decisions.

Also represented in Figure 1 are the directions of the main commodity movements within the firm. The firm's main product moves from mines to refineries to factories and finally to sales units, from which it goes to the firm's customers. Centralized purchases of supplies are effected by the Purchasing Department's units which then direct them to field units of all Departments. The volume, mix and prices of these intra-firm commodity flows are determined by the Central Office in accordance with the firm's objectives of maximizing its long-term profitability and growth, and minimizing its labour, materials and tax disbursements.

To round out the picture, Figure 2 represents the main cash-flow movements within the firm on current account. (Capital account movements would complicate the Diagram and in any case present few problems of exposition). Cash is shown to be generated by the Sales Department and placed at the disposal of the Finance Department. Finance in turn allocates cash to all the Departments (including itself) in accordance with the operational implications of the

Figure 1: Administrative and Commodity Flows for the vertically-integrated, uni-divisional firms.

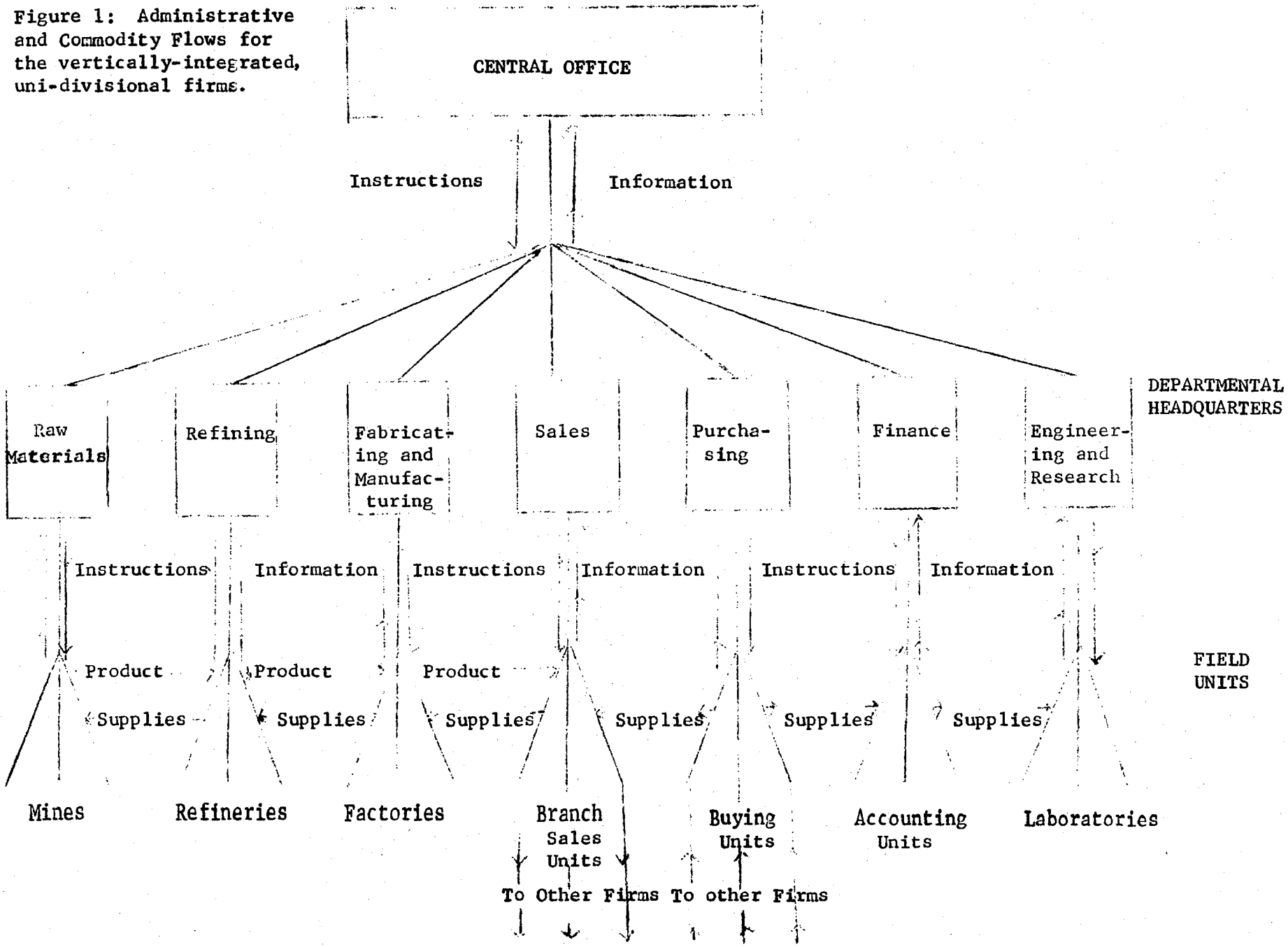
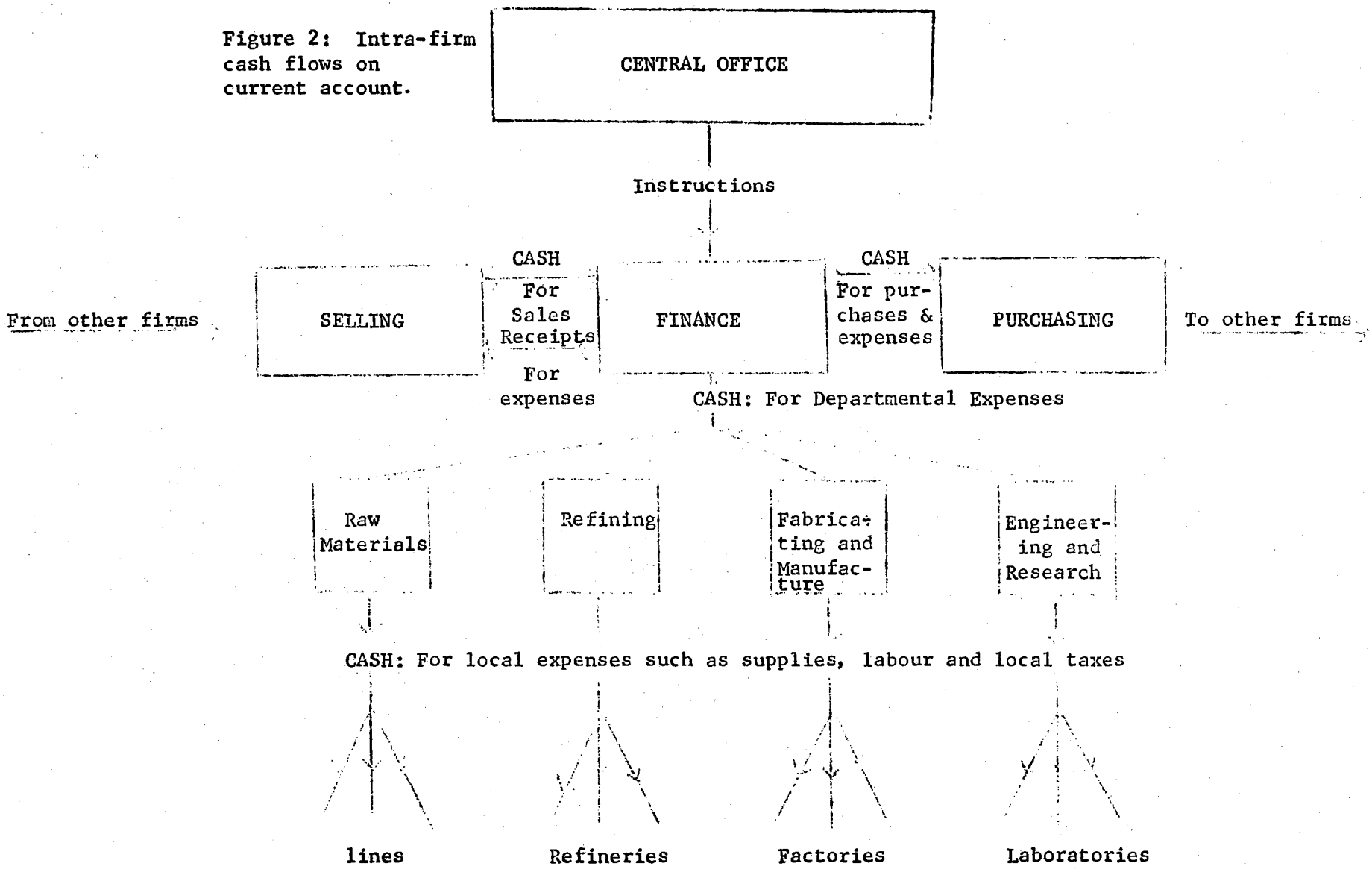


Figure 2: Intra-firm cash flows on current account.



Central Office's decisions. Cash is sent to the Purchasing Department to cover the costs of centrally purchased supplies, as well as the operational costs of that Department. Cash is sent to the other Departments to cover locally purchased supplies and other local costs, i.e. wages, salaries and local taxes. The cash surplus of the firm consists of the excess of the receipts of Finance from Sales over its cash outlays to all the Departments. For all Departments other than Finance and Sales, the "surplus" consists of the excess of the imputed value of the goods and services supplied to other Departments over the sum of the imputed value of the goods and services taken from other Departments plus the cash outlays received from Finance. Hence these surpluses at the Departmental and Field Unit levels[21] have neither a cash nor an operational significance, they are accounting items determined centrally in accordance with the needs of cost—wage-and tax-minimization.

The relationship of each raw material producing subsidiary with its parent firm can now be easily identified by looking at the position of the mining field unit in the diagram. Each such unit receives from its parent (i) instructions about the level, nature and destination of its output; (ii) goods and/or services either produced within the firm or purchased centrally; and (iii) cash to meet local purchases, labour and tax payments. In turn it provides the parent with (i) the raw materials as instructed, and (ii) information about production conditions to assist future decision-making.

This means that for many, if not all, raw material subsidiaries many of the decisions which the traditional theory of the firm assumes to be internal decisions are taken externally. The level, price and destination of output; the sources, prices and possibly specifications of inputs; and the techniques

of production utilized, are all contained in instructions or decisions previously taken by the higher offices. The objective of the manager of Chile Copper Co. or Reynolds Jamaica Mines is not "profit-maximization" per se at all; it is to produce the quantum of material ordered by the higher offices with the least possible delay and at the least possible local costs, and place it at the disposal of the parent company. For those of us who are accustomed to think of a "Manager" as someone with independent initiative, it would be more appropriate to think of the manager of the raw material subsidiary as being in much the same position as a plant supervisor.

A second level of structural dependence for the raw material subsidiary relates to the rate and direction of change of its activities. That is, the rate of new investment and of expansion of capacity, the techniques of production used, and the acquisition of new "markets" are all decisions which are derived from the long-term planning decisions taken by the Central Office. To give only one illustration: it makes very little sense to analyse the degree to which the raw material subsidiary "reinvests" its profits. Reinvestment policies are determined centrally, "reinvestment" in the raw material subsidiary is derived from the determined expansion of end-product capacity and decisions about the locus of new raw material capacity. It is quite possible for the firm's global reinvestment ratio to be high but its reinvestment in any given subsidiary low; the opposite is also quite possible; and in the real world both phenomena have been observed.

II

Hinterland Economy And The Mineral-Export Industry[22]

Against this background of the emergence, structure and behaviour through time of the vertically-integrated multinational firm, it is possible to arrive at

certain insights about the mineral-export industries of the Hinterland. Such insights are yielded by an understanding of the subsidiary-parent company relationship. In this part of the paper I wish to discuss in broad outline the question of foreign ownership, the question of output-determination, the effects of the industries on the "national" economies in which they are located, and the attempts of the Government to transmit economic development from the industry to the national economy by its taxation and expenditure policies.

(i) Foreign Ownership. Seen in its historical perspective, the acquisition of the natural resource industries of Hinterland countries by Metropolitan firms was merely the result of the extension of a process which had already taken place in the Metropole. This was the process by which small-scale, single-stage, competitive producers oriented to local markets were swallowed up by large, vertically-integrated, oligopolistic producers oriented to the national and ultimately to the international market. In Venezuela and in Chile, as in the United States, copper mining and oil extraction were in the hands of small producers in the middle of the nineteenth century. What then took place was a revolution in economic organization which cut virtually unresisted across national boundaries, extending itself into the American Hinterland. Independent miners in the Metropole and Hinterlands alike were transformed into wage-labourers, and small capitalists into minority stockholders, of the large corporations. For the miners of Montana the enemy became the "capitalists from New York", for the Venezuelans and Chileans it was to become the "foreign capitalists" or the "Yankee Imperialists"; both perhaps, unconsciously, were attacking the same historical development. The concern about the denationalization of Chilean copper which aroused a lively debate in that country from the

second decade of the century,[23] was clearly historically analogous to the complaints about "big business" which began to be heard in the United States a generation before.

It is interesting here to consider briefly two of the reasons most frequently advanced for the past and continuing prevalence of foreign capital investment in these industries in the Hinterland countries. These are the alleged shortage of capital, and the alleged technological backwardness of these countries.

In at least one historical instance - that of Chile - it was strongly argued by contemporary national observers, including economists, that the quantity of capital funds required to set up the industry on the new basis was available within the country.[24] It is possible that further research could yield other cases. But even if for the sake of the analysis it was assumed that these countries were short of capital at the time, this by itself does not demonstrate that they had to rely on <u>direct</u> foreign investment. Purely on the basis of the historical profitability of these industries, it could easily be shown that had hypothetical national capitalists borrowed abroad the funds required for the early investments, the subsequent flow of profits was sufficient to service this indebtedness and ultimately repay it, as well as to pay dividends and to finance at least a part of further investment from internal sources.[25] The immediate reply will naturally be "perhaps, but could they have sold the product on an international market controlled by a few oligopolistic firms?" This is precisely the point: the national capitalists - or more properly the small, single-stage producers, - were defeated at the level of economic organization. Moreover, the defeat admitted no recovery through the mechanisms of the private capital market: the corporations normally own all of the capital stock of their

raw material subsidiaries and do not trade this stock even on the metropolitan capital market. Even if national capital was short then but is available in whole or in part now, the stock is simply not for sale.

It is virtually the same where technology is concerned. In most cases, the technology used initially in these industries was not enormously complex or inaccessible. In the cases of the El Teniente and Chuquicamata mines in Chile, the technical changes needed to bring the deposits into large-scale production were carried out after foreign capital acquired the mines; that is, the necessary technical change was induced by the commercial potential of the deposits in the context of a rapidly growing market. Subsequently the process of technological change was institutionalized by the Research and Development departments of the corporations. Local capitalists and the local Government could not develop either the incentive or the resources to engage in their own technological research, since they did not own the industry.

The real question to be answered, therefore, is why is it that these countries failed to develop large-scale, vertically-integrated, capital-and technology-intensive corporations capable of resisting the advance of the Metropolitan firms. Insofar as the revolution in economic organization in the United States was itself the product of revolutions in the scale of demand and methods of production, then the further question must be why these changes in demand and technology failed to take place in the countries South of the Rio Grande as well. The answer takes us to the roots of development and underdevelopment itself. It almost certainly lies in the differing effects of the different types of colonial economic institutions in the New World,[26] on the potential for the steady growth of the purchasing power of the mass of the population; and on the opportunities for upward social and economic mobility

enjoyed by the numerically dominant ethnic and/or social groups.[27] If this interpretation is broadly correct, then the origins of the institutional dependence of these industries must be sought in the historical evolution of the economies from centuries before.

(ii) Output-Determination. To say that the mineral-export industries are dependent on external demand is to miss the point in an important sense. Output is rather dependent on the needs of and alternatives open to the particular firms whose subsidiaries operate in the industry. Let us assume the simplest possible case: a single metropolitan firm producing and selling the end-product on a single metropolitan market, drawing its raw material from a single Hinterland source. The cost conditions for the extraction of the raw material form part of the total cost conditions of the firm: these total cost conditions, in conjunction with demand conditions for the end-product, determine the equilibrium quantity traded on the market. This equilibrium (given the ratio of raw material to end-product) determines the level of output/exports of the mineral resource industry in the Hinterland.

In this, the simpliest case, there is a clear and unambiguous relationship between demand for the end-product and the output (derived demand) for the raw material. Changes in the level of output will depend on changes in the structure of relative prices and in the level of income on the metropolitan market, in conjunction with the relevant elasticities of demand for the end-product. They will also depend on changes in the firm's cost conditions and in the raw material: end product ratio.

However in the real world there are many markets, many firms and many supply sources. Typically, there are a number of firms in each market, drawing their

raw materials from a number of geo-political sources, and in many cases more than one firm draws its raw material from the same Hinterland country. To isolate the effects of these factors on the output-determination picture, let us retain the assumption of a single metropolitan market which absorbs the entire end-product output, and let us take as given and fixed such factors as the level and rate of growth of metropolitan income, the income-elasticity of demand for the end-product, the structure of relative prices and the price-elasticities of demand, and the raw material: end product ratio. The other assumptions of the simple case will be relaxed gradually to indicate the additional factors determining output. The original firm will be called Firm X and the original Hinterland, Country A. The framework of output-determination is diagramatically represented in Figure 3 as Case 1.

First, assume that there is another firm on the market Firm Y drawing its raw materials from another Hinterland country, called B. This is represented as Case 2 in Figure 3. The additional factor determining A's output is the share of market supplied by X. The larger X's share, the larger, cet. par., will be A's output, and vice versa. A's extraction costs will affect X's market share through their effects on X's production costs, it is true. But a number of other factors will affect X's market share, such as its marketing ability, its rate of technological innovation, and possibly even market sharing agreements. The interesting implications of this is that A's output relative to B's does not necessarily reflect its production costs relative to B's: it can be a relatively high-cost producer and yet enjoy a higher share of raw material output for example, because the non-raw material production costs of its parent are much lower than those of B's parent. Naturally, the opposite can also hold.

Another vital implication is that the rate of growth of A's output relative to B's depends exclusively on the rate of growth of Firm X relative to Firm Y. Thus a Hinterland tied to a non-dynamic firm will share the fate of that firm, and vice versa.

Now let us give each firm one additional Hinterland to choose from in the satisfaction of its raw material needs. Countries A and C are now attached to X and countries B and D are attached to Y (Case 3 in Figure 3). In allocating its raw material requirements between A and C, X will presumably use the "least-cost" principle. In effect, X's minimum cost curve for different levels of its end-product output includes the optimum combinations of A's and C's output for the total raw material requirements implied by the different levels of end-product output. What is now happening is that country A is competing with country C within the structure of the firm; its output is determined, inter alia, by its production costs relative to C's. Its competition with other raw material produces - B and D - also exists, but it is very indirect and roundabout.

One implication of this is that if X's alternative supply source were a different country with different cost conditions from C's, A would be competing with a different set of cost conditions and would almost certainly have a different level of output. In other words since the level of raw material output for any given country depends on the alternative suppliers with which it competes through the structure of the firm, a different combination of firms with countries implies a different distribution of raw material output between countries.

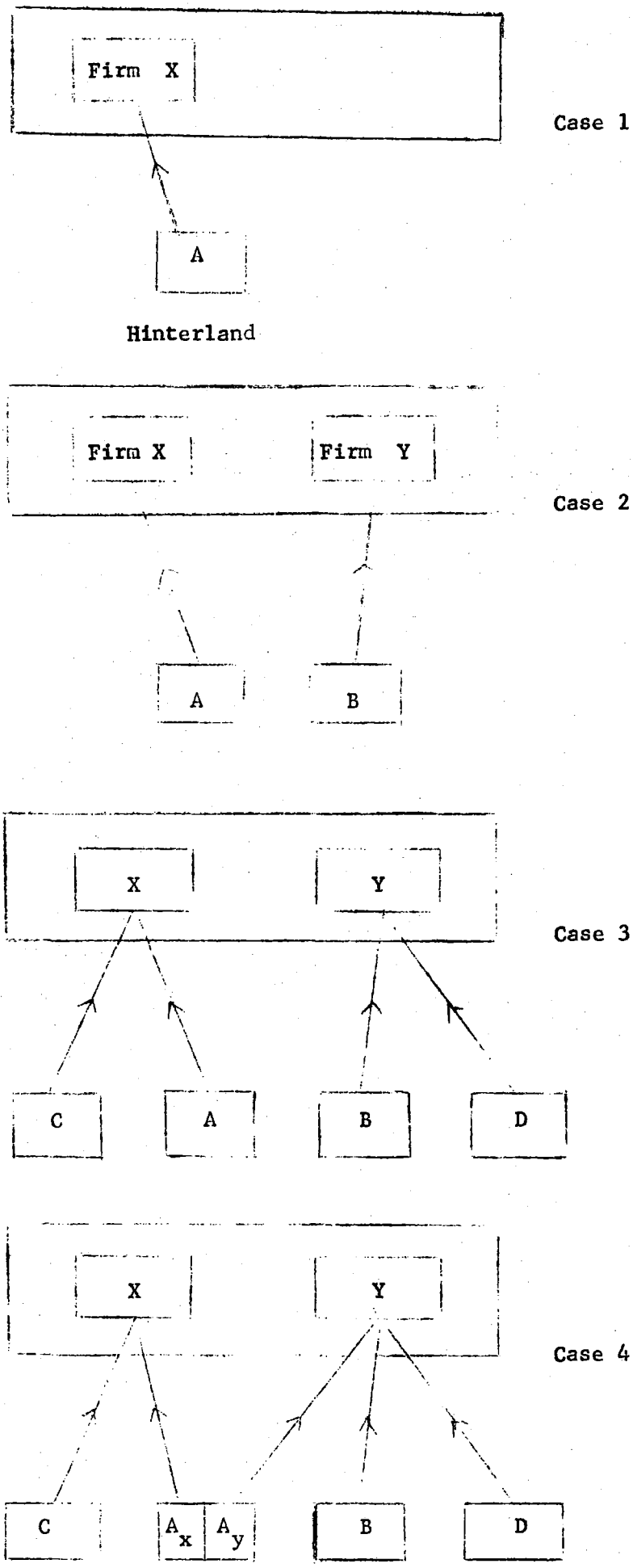
Finally, let us assume that both X and Y draw supplies from A, with the other conditions unchanged. This is represented as Case 4 in Figure 3. This brings us closest to the conditions in the real world, where many mineral-export countries have more than one firm drawing supplies from within its borders. A's output is now the sum total of the requirements of X and of Y which is drawn from that country.

That part of its reserves controlled by X competes with C, that part controlled by Y competes with B and D. Obviously, it is quite feasible for the least-cost considerations to yield a level of output in A which is high for firm X and low for firm Y; or a high rate of growth of output in A for firm Y and a low one for firm X, and so on.

Those cases in the real world where a country has experienced a period of high and sustained growth in its mineral-exports - Chile, Venezuela and Jamaica for example - well illustrate the operation of these factors. For in all these cases there were three conditions favourable to growth: (i) demand on the end-product market was growing rapidly, (ii) the companies controlling the bulk of reserves in the country controlled an important, and sometimes growing, share of the end-product market, and (iii) the alternative raw material supply sources available to these firms were scarce, or relatively high-cost. Similarly, when the boom phases in the Venezuelan and Chilean mineral-export industries ended in the 1950s, this reflected not so much changing demand conditions for petroleum and copper, as the changing end-product and raw material strategies of the firms. Venezuela, it can be said, was feeling the effects of the oil companies' planned displacement of supply source; Chile was feeling the effects to some degree of the copper companies' planned displacement both of supply source and of end-product.

Since it is inherent the nature of these booms that they taper off as a result of deliberate corporate decisions, it makes all the more important the question of the extent to which the operations of the mineral-export industries contribute to the attainment of self-sustaining growth in the Hinterland economies where they come to dominate the process of national income creation. In other words, we have seen that it is inherent in the dynamics of the system with which we are dealing that the survival and growth of the corporate economy as a whole transcends the survival and growth of any one subsidiary, and sometimes of any one product line as well, while the raw material subsidiaries in a given Hinterland country which do enjoy a period of rapid growth enter eventually into a phase of relative stagnation. Our next question is, what are the implications of the internal mechanics of the system for the ability of

Figure 3: The Framework of Out-put Determination



of the national economy's growth and development to transcend the performance of the raw material subsidiaries located within it and providing it with much of its dynamic?

(iii) Dependence and Underdevelopment in Mineral Economy

The fact is that in all the mineral-export economies in Hinterland America the problem of external structural dependence remains acute, and shows little sign of being substantially relieved in the near future. I say "remains" because most of these economies have had at least twenty to thirty years of active Government intervention allegedly designed to diversify the bases of economic growth. Many of them (e.g. Venezuela, Chile, Trinidad-Tobago and Jamaica) have moreover been able to finance these policies with relatively large tax revenues made available from the mineral industry itself. The strategy of using the industry's tax revenues for expenditure designed to reduce the economy's dependence on the industry has been embodied in the popular consciousness in Venezuela in the phrase sembrar el petroleo ("sow the petroleum") for more or less the last thirty years.

It would be unnecessary - and probably impossible - to discuss all the factors responsible for the persistence of dependence in these economies in every individual case. I wish rather to suggest that there are certain features inherent in the terms on which these raw material subsidiaries operate which are partly responsible for the fact that (a) they do not transmit their growth to other strategic growth sectors in the national economy, and (b) the national economy stubbornly resists Government attempts to reduce its structural dependence on the mineral-export sector.

(a) The Mineral-Export Industry and the National Economy: Before Government Intervention

The first set of considerations concern the failure of the mineral-export sectors to serve as catalysts for the diversified development of the

national economy, in other words, to play the same role in the twentieth century Hinterland countries as trade-oriented industries played in North America and Australia in the nineteenth. Why have they remained "enclaves", better integrated with the outside world than with their host economies, and giving rise to the phenomenon which Rostow and Demas have described as "growth without development"?

The specific manifestations of this has been, in every case investigated, the fact that (i) few purchases of local agricultural and manufactured goods are made by the industry, (ii) the capital/labour ratio used in the industry is high relative to the rest of the national economy, and as a result, labour productivity and wage rates are relatively high, but the total labour force and the total wage bill are low relative to the national labour force and the national wage bill respectively; (iii) profits and depreciation form a high proportion of the value of the industry's output (also as a result of the high capital/labour ratio) but this surplus is either repatriated to the foreign owners or reinvested within the mineral-export industry itself: it is not invested in other national industries where it can contribute to diversified economic growth; finally (iv) as a result of (i) to (iii) above, the value of the industry's output "returned" to the national economy(principally local purchases, wages and taxes) is well below the total value of its "sales."

In explaining all this, there are certain predictable arguments available from what we might call Metropolitan "Economic Development" theory[29] on the one hand, and from Metropolitan Marxist theory on the other. "Economic Development" theory ascribes the smallness of local purchases by the industry to the underdevelopment of the intermediate and capital-goods manufacturing

industries, and the fact that extractive industries use little intermediate goods in any case. The high capital/labour ratio is held to be due to the inherent capital intensity of the industry, and the accrual of profits abroad is ascribed to the unavoidable dependence on foreign capital because of capital shortage at home. Often it is virtually implied that what does remain in the national economy in the form of "Returned Value" is largesse which the country earns without contributing anything, and for which it should be thankful.

Marxist theory[30] on the other hand, would explain the capital intensity of the industry in terms of the continued accumulation and deepening of capital; and in explaining the smallness of "Returned Value", would assert that the very purpose and motivation of imperialist capital is the extraction of a surplus from the poor countries.

I do not doubt that most of these arguments contain an element of validity. It is obviously true that underdeveloped countries have underdeveloped manufacturing industries, and that bauxite and copper mining and crude oil production use relatively little intermediate goods. It is also obvious that the processes of electrolic production of copper and aluminum, and the process of oil refining, inherently involve large amounts of capital in relation to labour. Likewise it is obviously the case that the purpose and motivation of all capital investment is to earn a surplus of returns over costs, so that direct foreign investment inevitably leads to a subsequent outflow of profits.

But in some respects the explanations raise as many questions as they purport to answer. It is not clear, for example, why the mineral-export industry does not <u>exert any pressure</u> for the establishment of national supply-

ing industries, such as capital goods industries for the supply of the capital equipment, and intermediate goods industries for the supply of the materials used in such refining as is carried out locally. Nor is there any full explanation for the virtual absence of any tendency for the industry's factor proportions to adjust to the relatively capital-short, labour-plentiful situation in these economies. Capital shortage as an explanation of total foreign ownership looks weaker and weaker in the face of the emergence, in countries such as Venezuela and Chile, of a class of domestic capitalists eager to put their money to work. Finally, if the objective of imperialist capital is to extract a surplus from the country as such, and assuming that other profitable investment opportunities exist within the country outside of the mineral-export sector, why is the surplus not invested in these other sectors after having made a killing in the mineral-export sector?

My main contention here is that it is to the institutional integration of these industries with multinational corporate systems that we should ascribe their lack of integration with the national economies. Take first the question of the locus of supply of inputs and capital equipment to the subsidiaries which comprise the industry. There is every reason to expect that such goods will be supplied to the subsidiary by the headquarters of the parent firm, and will be obtained from metropolitan sources. First, some of the inputs may be produced by the parent firm itself, as a result of its horizontal integration. Some of the aluminium firms, for example, themselves produce the caustic soda for the alumina process and the cryolite for the aluminium process.[31] Second, the purchase of materials and capital equipment for all subsidiaries will in all probability be centralized by the firm's central office, in order

to effect economies and to standardize the processes used and the goods produced at each stage of output. Under these circumstances it is perfectly natural that the firm will use well-established metropolitan suppliers. Third, the transport of goods to the subsidiary overseas may involve little or no real cost to the firm, insofar as they can be shipped on the company's own empty ships on the return journey after offloading the raw material from overseas. Both Anaconda and Alcan Aluminum Ltd. have used their shipping subsidiaries to carry fuel and other materials to their plants in Chile and in Jamaica respectively. Finally, it must be pointed out that while there may be a foreign exchange shortage for the national economy of the Hinterland, this may never be reflected in the transactions between the subsidiary and the parent firm. In terms of intra-firm accounting, the shipment of produce from the subsidiary to the parent firm gives the subsidiary a credit in its accounts with the parent, against which supplies and interest on the former's debt with the latter are debited, as well as cash transfers to cover local purchases, wages and local taxes. The residual forms the "surplus" which merely remains with the parent. On those occasions when the subsidiary's debits with its parent exceed its credits - usually because of a large capital investment programme - this deficit may be covered simply by an increase in the parent's stockholding or interest-bearing investment in the subsidiary, i.e. by lending to the subsidiary.[32] This type of economic organization ensures that foreign exchange is automatically available to finance the imports of the mineral-export industry, the producing units in the industry feel no incentive to seek out local supplies or to promote the development of supplying industries, even if they had the degree of independence from their head offices which would permit them to do so.

Closely associated with the question of the degree of linkages between the industry and local manufacturing is that of the degree to which the raw material is processed or refined into intermediate goods - not to speak of end-products - within the national economy. Since some of the processes use considerable intermediate materials they establish permissive conditions for the stimulation of supplying industries, as well as create additional national value added in the form of wages and taxes. However the history of the mineral-export industries of Hinterland America provides a virtual classic story of their relegation to those activities just necessary to get the materials out of the country. In Chile the subsidiaries of Anaconda and Kennecot actually increased their production of the low-valued blister copper and reduced their production of the higher-valued fire-refined and electrolytic copper in the period after the Second World War. Guyana and Surinam were exporting bauxite for about forty years before production of alumina began. In Venezuela, the proportion of crude oil refined nationally had reached only one-quarter in the middle of the 1950 decade; ten years later it was still only slightly higher than one-third.

In every case, the pattern can be traced to the vertical integration of raw material output in the Hinterland with the refining capacity of the companies in the Metropole. Both Anaconda and Kennecot built electrolytic copper refineries in the United States to process blister copper from their Chilean subsidiaries, in the post-War period. Alcoa and Alcan Aluminium Ltd. built and expanded alumina and aluminium plants in the U.S. and Canada to process bauxite from the Guianas. Jersey Standard and Shell built huge refineries in Aruba and Curacao to process their Venezuelan crude. It is therefore the

pattern of locational allocation determined by the needs of the corporate economies which is responsible for the considerable underutilization of the potential of these industries to serve as "growing points" within the national economies.

It is true that the tariff policies of Metropolitan Governments in imposing higher duties on finished goods than on raw materials are partly responsible for the firms' location of processing capacity in their home countries. But they are by no means a full explanation. Powerful factors have operated at the level of the internal economics of the firm. In some cases it was cheaper to expand processing plants which had originally been based on metropolitan raw materials, to process the materials coming from abroad, than to build new plants overseas. Operational economies of scale could also be obtained from such a course. Another advantage is that it allowed the firms to adjust processing plants to accomodate to the desired distribution of raw material production between different sources. Location at any one Hinterland source might have committed the firm to drawing all the feed for the plant from that source, thereby precluding "least-cost" adjustments over time. Another factor arose out of the strategic significance of these materials during wartime. Shipments from Chile and the Caribbean were particularly susceptible to submarine attacks during the Second World War, and the fear operated during the Korean War as well. By shipping the unrefined rather than the refined product the value of the material lost from any sinking was minimized: both the corporations and their home Governments had an identity of interest on this point. Finally, there was the well-known factor that the companies preferred (and still prefer) to risk as little capital as possible in countries where the political order cannot be

relied upon to regard their existence as sacrosanct.

The next question concerns the adoption of techniques in those industries which are not only capital-intensive relative to the national economy at the outset, but frequently become increasingly capital-intensive over time. An outstanding example is the Venezuelan and Dutch Antilles oil industries, which shed 33 and 70 percent of their labour force respectively between 1950 and 1966, although output doubled in the former and remained the same in the latter over the same period. The virtually total failure of the mineral-export industry to adapt to the relatively labour-abundant, capital-scarce nature of the Hinterland economies becomes perfectly understandable if we consider the factor-endowment situation of the corporate economy of which each producing unit is an organic part. Capital is relatively plentiful and cheap to the multinational corporation; first because of its large use of depreciation allowances and retained earnings for new investment, and second because it has direct access to the highly developed capital markets of the Metropoles. In contrast, the skilled labour needed to operate the machinery and equipment in the Hinterland is relatively scarce, and the firms themselves often have to bear the costs of training it. Moreover, the technology of production embodied in the capital goods which the company must purchase for its new investment, has become increasingly capital-intensive in response to the increasingly capital-rich nature of Metropolitan economy. The absence of an indigenous capital-goods sector in the Hinterlands appropriate to the factor-endowments there precludes the very availability of production processes and capital goods which are relatively more labour-intensive. In summary, the price of capital relative to that of labour to the firms does not represent

the social opportunity cost of using capital relative to labour in the Hinterland (especially considering the high costs of using direct foreign capital); and the same reasons underlying this also mean that a labour-intensive technology is simply not available.

It is to the structure of the corporation that we must also look for the explanation of the failure of the surplus of the mineral-export industry to be invested in other sectors of the national economy. The surplus is in reality tied to the needs and strategy of the corporation as a whole. Indeed as we saw earlier the surplus of the raw material subsidiary is an accounting item which has neither a cash nor an operational significance to the subsidiary itself, hence it is simply that part of the firm's total cash surplus which it elects to "impute" to the subsidiary for purposes of tax minimization. How much it decides to reinvest there is a different question again: it depends on the determined expansion of end product capacity and the determined location of new raw material capacity. What is not reinvested in the given raw meterial subsidiary is not available to the national economy but to the corporate economy. Hence it is allocated in a manner consistent with the firm's strategy, between different raw material subsidiaries, different refineries, fabricators, sales and other departmental units, different end-products, and dividends, debt reductions and additions to working capital.

Finally, there is the question of the "reliance" on foreign capital in the industry, which was discussed earlier in the paper. Suffice it here to recall that, viewed in its historical perspective, the denationalization of the mineral industries of the Hinterland was merely the corolarry of the multinationalization of the Metropolitan corporations. And further, that the practices of the corporations make it impossible for national capitalists to restore

the industries to national ownership. The large fraction of the industry's sales value accruing abroad in the form of depreciation and net profits is only one of the more visible consequences of this.

(b) The Mineral Export-Industry and the National Economy: Achievements and Frustrations of Government Intervention

The rules of the game, therefore, mean that the struggle of the Hinterland economy for a larger share of the industry's sales - a greater share of "Returned" value in total value - is chanelled chiefly through the efforts of the labour force, and the national Government. However, there are limits to the extent to which the labour force can enlarge its share in the industry's value, as distinct from raising wage rates. First, since the labour content per unit of physical output in the industry is low, large increases in wage rates can be conceded to militant mine workers with relatively small increases in labour share - indeed, mechanization can and often does reduce the wage content of output even as wage rates increase. (In Venzuela between 1950 and 1966, labour income per man in the oil industry trebled, but total labour income as a share of the value of output fell from 15 to 11 percent because of the substitution of capital for labour.) Moreover, the bargaining power of labour is frequently weakened by the existence of a large reserve of unemployed labour and by deliberately repressive policies of the national Government.

Indeed, the history of the mineral-export industries in the American Hinterland shows that the fact that the wage bill is one of the chief components of the national take from the industry is no guarantee of Government's support for efforts to increase it. Oilfield workers in Venezuela were forcibly suppressed in the 1930s and 1940s, as were Chilean copper workers in the 1940s. For

years, labour unions in the refineries of the Dutch islands faced official opposition, and in Trinidad-Tobago the passage of legislation to control strikes in 1965 was aimed mainly at the oil workers. The reasons for the militancy of the mine workers on the one hand, and the frequent hostility of the national Government to them on the other hand, arise directly out of the nature of the industry. The fact that the workers are well-paid relatively to the mass of the labour force, and have relatively skilled tasks to perform, give them much greater confidence in their attitude to management by comparison to farm workers who are subject to traditional paternalistic relationships. At the same time, the fact that ownership and management in the industry are foreign, and frequently culturally and racially distinct from the national population, sharpens the inherent antagonism between labour and capital. Left-wing leadership is therefore frequently quite strong in the labour movement in the industry. Faced with the fact or the prospect of the emergence of an independent base of power in the political system, a national Government unsure of its own popular support inevitably develops an insecurity complex. Moreover, where the Government and the companies have reached an understanding on the questions of taxation and the rate of expansion, militant labour demands threaten to upset the delicately balanced "partership." Indeed, the very existence of a large-scale state apparatus in many cases is the direct creation of the taxes paid by the industry: if militant labour demands threaten the rate of expansion of the industry determined by the companies, it threatens the rate of expansion of the state apparatus as well.

But even where bargaining is relatively free the capital-intensity of the industry and the possibilities of continuing capital/labour substitution

limit the possible growth of labour's share, as has been pointed out. The real locus of the struggle to increase the national "take" from the industry inevitably emerges as the distribution of the large surplus between the foreign company and the national Government, i.e. between depreciation-cum-net profits on the one hand and taxes on the other.

In some important cases (Venezuela, Chile, Surinam and Jamaica) it is possible to distinguish clearly an initial period of light and indifferent taxation followed by a period of growing tax rates and attentive regulation of the factors governing the tax take. In Venezuela and Chile, the first period lasted up to the Depression years of the 1930s and was associated with the laissez-faire attitudes of contemporary Governments and a low national awareness of the large surpluses accruing to the foreign owners of the industry. The Depression years precipitated a radical change in the degree of state intervention in the economy and a rapid growth of national interest in increasing "Returned Value" by means of tax measures. In Surinam and Jamaica the first period lasted up until the middle 1950s and was due to ignorance of the real potential of extracting taxes from the industry, as well as the indifference and/or hostility of the Dutch and British colonial administrations to the question. Renegotiation of the tax arrangements was the work of the first generation of national politicians anxious to increase the spending power of the embryonic national state.

In all the economies concerned, the growth of the industry or the growth of the rate of taxation, or both, resulted in the "Returned Value" of the industry becoming a major source of foreign exchange, and the tax payments of the industry becoming a major source of Government revenue. This development has

a profound significance to the national political economy. In the first place, the maintenance and growth of the levels of investment, domestic output and consumption become structured around the imports of capital, intermediate and consumption goods financed by the foreign exchange provided by the industry's "Returned Value." In the second place, the maintenance and growth of the level of national income become structurally dependent to a significant degree on the current and capital expenditure of the Government, a large part of which is financed by the industry's tax payments. Finally, the possibilities for structural transformation of the economy come to lie not with the direct effects of the industry on the rest of the economy, but rather with the success of the Government's economic development policies, which are implemented by expenditures whose size and growth become critically dependent on the industry's tax payments.

We should pause here to note the different nature and degrees of structural dependence of the corporate as compared to the national economic system on the raw material producing subsidiaries located in the Hinterland economies. To the corporate economic systems, the subsidiary is one of a number of such subsidiaries located in different national economies providing the enterprise with the strategic input upon which rests its global network of transport, refining and fabricating facilities, and therefore its level of sales and net profits. For the national economic system, the subsidiary is one of a very small number (sometimes the only one) which provides it indirectly with a large part of its strategic commodity inputs, its level of aggregate expenditure and therefore income, and the possibilities of its structural transformation.

The dependence of the two systems on the subsidiary is inherently asymmetrical: i.e. the national economy is more dependent on the subsidiary than is the multinational corporation, in spite of (indeed, perhaps because of) the fact that the subsidiary is an institutional part of the latter economy and not of the former. The reasons are as follows. First, most companies draw their raw materials from a number of different geo-political supply sources, and negotiate with the political authorities of each one separately. The country however depends on one or at best a small number of subsidiaries and, what is more important, the inherently non-discriminatory nature of Government mining and tax legislation means that the Government negotiates with the mineral industry as a collective whole, irrespective of the number of subsidiaries in it. Second, the profits "imputed" to the raw material subsidiary by the parent firm forms only a part of its total profits imputed at different stages of production, and the location of the different components of its total profits can be shifted from stage to stage and therefore from country to country with a large degree of corporate freedom. While it is true that there are other sources of tax revenue for the national economy, in all the mineral-export national economies, no other single industry has a taxable capacity of the size and growth potential of the mineral-export industry.

It is however, at the level of long-term growth and development that the asymmetrical nature of the dependence is most clearly shown. For while the strategic planning of the corporation ensures that its continued growth does not depend on the life of any one raw material subsidiary or even on any one product, the attempts of the Governments to do the same thing for the national economy have invariably met with limited success. It is to an analysis of some of these frustrations that I next turn.

Government attempts to use the industry's tax revenues to diversify the bases of economic growth are basically similar in strategy in all the economies, although the details of policy and programmes do vary from case to case. The basic strategy is to use Government expenditure and policy to try to raise output and initiate new activities in the agricultural and manufacturing sectors. The targets are to substitute domestic output for imports in a considerable range of agricultural and manufactured goods, and eventually to develop new export lines. The objective is that these two key sectors will develop a momentum of growth which can be internally sustained and thereby reduce the economy's dependence on the mineral-export industry. The overall social goals are of course, the elimination of structural unemployment and the raising of the level of material welfare of the mass of the population.

This strategy involves the Government in heavy infrastructural expenditures designed to support and to stimulate private capital investment in the required areas, and to help provide bouyant markets for domestic output by stimulating internal demand. The main areas of spending are in such overhead facilities as roads and highways, ports, harbours and railways, power and communications, and mass education. These are sometimes supplemented by a large public buildings programme rationalized by the need for employment and income creation, but also used to provide the image of "modernity" judged necessary to attract foreign investment and to service the aspirations of the political establishment to Metropolitan life-styles.

This strategy has been followed in its essence since World War II by virtually all Hinterland countries which have not opted for socialist central planning, and to discuss the reasons for their failure to solve any of the

fundamental problems of Hinterland economies is obviously beyond the scope of this paper. Attention here is focussed on some of the frustrations of applying the strategy in the particular conditions of mineral-export economies, and which arise in spite of the fact that the mineral industries often give these Governments large and growing revenues with which to finance the strategy.

One set of frustrations arise of certain external diseconomies of the mineral industry in relation to agriculture and forestry. In the first place, the supply of land and of labour to the agricultural sector may be adversely affected. Both the aluminium and the oil companies are in the habit of holding large areas of the national territory with proven or probable reserves of the desired material. The objectives are of course to maximize the long-term availability of raw materials to the parent firm and to minimize its availability to competitors, objectives which frequently give rise to holdings far in excess of what is used by the firm over a long period of time. Such holdings significantly reduce the actual or potential national acreage which is held or used principally for purposed of agriculture and forestry. This also extends to the use of associated natural resources such as water and local building materials.

The effect of the industry in reducing the supply of agricultural labour is one of its better-known external diseconomies. The relatively high wages paid by the companies and the quasi-urban areas established by them for extractive and administrative activities attract a heavy migration from the agricultural areas. In addition, when the Government begins large-scale expenditure programmes the capital city usually absorbs a disproportionately large share of expenditures, and this acts as a magnet to rural labour as well. The result is that labour for the traditional low-productivity, low-income agricultural activities becomes in increasingly short supply at the going

wage rate on the plantations and haciendas, and at the going level of average real income on the minifundia. Farm workers and the younger members of the farm family prefer to seek employment in the mining areas and in the capital city, or simply prefer to be unemployed, rather than work for what are now considered to be unconscionably low returns. To bring about some degree of rationality in the structure of wages and incomes would require (a) land reform and technical change in the agricultural sector, and (b) the institutional integration of the mineral industry with the national economy. Both require fundamental institutional changes which are not possible without political changes as well.

The mineral industry also indirectly affects the pattern of commodity demand for agricultural products. The small group of well-paid mine workers and the growing group of relatively well-paid public sector employees give rise to patterns of food consumption in which the simple starchy staples traditionally produced by peasant farmers become progressively less important, and experience low, falling or even negative income-elasticities.[33] Agricultural products with a higher and more balanced nutritional content, such as high-protein foods, meat and dairy products; and products associated with Metropolitan urban and suburban life-styles, such as processed and pre-cooked foods, are amongst those with high income-elasticities. The initiation of activities to satisfy these demands is beyond the capacity of the traditional agricultural sector, especially peasant agriculture, acting by itself. They involve not only quantitative and qualitative changes in the supply of inputs to the sector, but also complementary investments in transport, storage and distribution facilities, and complementary marketing policies.

A second set of frustrations arise out of the external diseconomies of the mineral industry to the manufacturing sector. In the first place, the most immediate and obvious possibilities for the establishment of a dynamic manufacturing industry lies in most cases precisely with the mineral industry itself; i.e. in creating a whole network of backward and forward linkages centered on the processes and products of the industry, which would eventually grow to acquire a dynamic of its own. This means initiating the production of capital and intermediate goods, supplying the needs of and using the products of the industry, and carrying its vertical integration within the national economy forward to the production of final goods where possible.

It is precisely these possibilities which are to a large extent precluded by the vertically integrated structure of the corporation. The standardization of processes and products and the minimization of costs required by the corporate economic system mean that the purchase of all important supplies is centralized at the Purchasing Department on its equivalent in the Metropole, and almost certainly obtained from Metropolitan suppliers; the gearing of raw material capacity in the Hinterland to processing capacity in the Metropole means that Hinterland output is not free to be processed locally. In other words the possibilities of utilizing the resource as a basis of backward and forward linkages within the national economy is restricted by its already existing use as a basis of backward and forward linkages withing the corporate economy.[34]

There are also diseconomies which, like those which apply to the agricultural sector, arise out of the effect of the industry on the structure

of wage rates and of consumer demand throughout the economy. The relatively high wage rates in the mineral industry tend to set the pattern of wage rates throughout the economy, especially in manufacturing where an occupation-by-occupation comparison with the mine workers is often possible. Wage rates in the mineral industry display a persistent tendency to rise, as the mine workers compare their wage scales with those of metropolitan workers in the same industry and with their own rising average productivity, due to capital/labour substitution. This exerts a continual upward pressure on wage-rates in manufacturing, where the capital/labour ratios, and therefore average labour productivity, is lower, and the weight of wages in total production costs higher.

Two adverse results can be immediately seen to follow from this. One is that the consequently high structure of production costs in the sector severely weakens its ability to successfully compete with imports, and achieve the overall objective of substantial import-substitution which is self-sustaining. The second is that the structure of high labour costs in particular encourages the tendency for capital/labour subsitution already inherent in the dependence of Hinterland economies on Metropolitan technology and corporations. This severely dampens the employment-creating capacity of the sector.[35] Capital-intensity also makes it more difficult for manufacturing plants to achieve low operational costs on the basis of the domestic market alone.

The effects of the industry in creating enclaves of high-income mining and Government employees also biases the structure of demand for manufactures in the direction of relatively expensive consumer durables such as motor-cars and household equipment. These are precisely the kinds of goods which it is most difficult for indigenous enterprise using indigenous technology and

indigenous inputs, to undertake in the early stages of its development. This is all the more so given the tieing of consumption to particular brand-names such as Kelvinator and Chevrolet - which the multinational manufacturing companies have popularized multinationally. Indeed, this applies even to the simpler manufactures such as soft-drinks (e.g. Coca-Cola) and cigarettes (e.g. Chesterfield). What therefore emerges by the name of manufacturing industry is a set of "tariff-hoping" assembly-plants established by metropolitan companies and based on their capital, intermediate goods and technology.[36]

These dificiences in the structure and the performance of the agricultural and manufacturing sectors are moreover allowed to persist for some time without becoming a serious problem to the political economy, precisely because of the abundance of foreign exchange provided by the mineral industry itself. Import of food are readily available to fill in the gap between food demand and local food supplies, imports of capital equipment and intermediate goods are available to service the dependent character of the manufacturing sector, and imports of finished consumers goods are available to meet the domestic demands that domestic manufacturing fails to meet. Moreover, the boom in imports and in public spending do give rise to certain investment opportunities within which national capital can find secure, quick and high returns. These are the activities of import trading, and its ancillary activity, internal transport; the promotion and construction of office buildings and residential accomodation, public work contract business, and personal and commercial services. The most important of these activities are those which are centered on physical construction, as an inspection of the National Accounts of Venezuela, Chile, Trinidad-Tobago or Jamaica, or a visit to Caracas, Santiago, Port-of-Spain or Kingston, Will readily

The overall result is that most important structural changes taking place in association with the growth of the level of foreign exchange and tax revenue provided by the industry, are those which assume the continued existence of these flows. In terms of the country's external accounts, this is reflected in the continued weight of the mineral export in total exports, and the rapid growth of imports both of final consumer goods and of intermediate goods for local assembly. In terms of the national accounts, it is reflected in the weight of the mining, Government and service sectors in the Gross Domestic Product by Industrial Origin. In terms of the demand components, it is reflected in the importance of exports, foreign investment in the mineral industry, and Government expenditure on current and capital account. Long-term growth is governed by the rate of expansion of the mineral-export industry. Structural dependence, rather than being reduced, has in an important sense been intensified by the partial incorporation of the industry into the national economy via the public sector.

So long as output in the mineral-export industry grows steadily and prices on which taxes are based remain firm, this system is capable of continued expansion along the lines of what we might call "dependent growth without development." There will be high investment rates, and a relatively high rate of growth of total and average per capita national income, although structural poverty and unemployment remain widespread. But as we have seen the mineral-export industry does not expand indefinitely: the very factors which make it important to the national economy - the high rate of growth of output and the growth of the tax take - are those which make it necessary for the company or companies ultimately to shift the location of new capacity elsewhere. The

consequent reduction in the rate of growth of output is directly reflected in the decline in the growth of tax revenue and foreign exchange receipts. This puts pressure on the most important propulsive mechanism of the system - the growth of public spending - and the most important permissive mechanism - the growth of imports. Hence the political economy will either have to contain these mechanisms, or to find ways and means of allowing them continued operation.

It will not be easy for these mechanisms to be contained, precisely because they become intrinsic parts of the political economy itself. The momentum of public spending is difficult to control because of both real and monetary factors. The real level of recurrent spending has to rise steadily because of the recurrent costs of servicing the steadily growing stock of public assets, such as schools, hospitals, roads and public buildings. Powerful political pressures exist for the maintenance and growth of capital spending as well, for neglected socio-economic and geographic groups, whose expectations have been aroused, make their demands for their share of Government services. The growth of population adds yet another factor which public spending has to account for. Finally, the steady growth of wage rates consequent on the internal demonstration effect of the mine workers adds an important inflationary factor to public spending. Obviously, a political establishment which exists because of its ability to accomodate to such demands will find it very difficult to contain them.

Neither will it be easy to contain the growth of imports without severe effects on the economy and therefore severe costs to the polity. It is precisely the growth of imports which permits the propulsive mechanism to operate without entailing severe costs in terms of domestic price inflation.[37] Imports also sustain the level and growth of output in the fledgeling manufacturing sector,

by providing intermediate goods; and sustain the level and growth of activity in the internal trade and transport sectors. Hence there is a limit to the degree to which imports can be restricted without jeopardizing output, employment and incomes in domestic manufacturing and import-based services, and internal price stability.

Thus while some degree of internal containment may be attempted, the Government is likely to seek ways and means of obtaining additional fiscal receipts in the form of foreign exchange, in order to allow both public spending and imports to continue to grow. The two principal forms potentially available are foreign public borrowing and additional taxes on the mineral-export industry. Ironically, the very existence of the mineral-export industry makes it easier for the Government to accumulate heavy foreign indebtedness, since its external credit-worthiness is good. This is probably one reason why Governments such as those of Venezuela, Chile and Jamaica, which are relatively well off in Hinterland America, have experience a rapid growth of their external public debt in the last two decades. However this method is at best at temporary solution: foreign loans are not available indefinitely at a steadily high rate of growth in the absolute level, and in any case they create obligations which grow proportionately to their use. Hence the Government finds itself with the need to try to extract even greater surpluses from the mineral-export industry.

Essentially, this was the position in which Chile found itself at the beginning of the 1950 decade, and Venezuela at the beginning of the 1960 decade. Their subsequent experiences show that there is a limit to which a Government already taxing the mineral-export industry relatively heavily (say, at over 50

percent of net profits) can further increase its take of profits without coming into open conflict with the corporate economic system. For the attempt to increase revenues leads inevitably to the more basic questions of control over production, accounting, pricing and marketing, since the variables determining the very size of the net profits to which the tax rate is being applied, are to a large extent under the control of the corporation itself. In the first place, the company starts out with considerable leeway over the size of the depreciation, depletion, and amorization allowances which it deducts from its income in declaring taxable profit. For example, whether exploration and development expenditures are capitalized or treated as operational costs, what rate of depreciation or depletion will be used, whether and what kind of investment and depletion allowances will apply. Second, the company begins with almost total control over the price used to value the product, which is essentially an intra-firm accounting item used for tax-minimization purposes. The Government eventually discovers that apparently minor changes in accounting procedures and prices can make as big a difference in its tax take as relatively large changes in the percentage rate of tax on profits.

The inevitable logic of this is that the Government must assert its right to participate in those decisions which determine its tax take: accounting, pricing and marketing. It is not difficult to see that, apart from reducing profits, such moves go against the grain of the corporate system itself: its routines, its reflexes, its administrative structure, its decision-making procedures - the rules of the game, as it were. While most companies appear to have accomodated without great difficulty to these encroachments on their

authority, part of their response is to utilize alternative supply sources as a means to pressure the governments and of obtaining new supplies on relatively free terms. The counter-response of the Governments is necessarily to reduce the companies' area of maneuverability by international collective bargaining, i.e. associations of producing countries. This was to a large extent responsible for the leading role played by Venezuela and Chile respectively in the formation of the associations of oil and copper-exporting countries.

It is not difficult to see that a further logical counter-thrust of the national economic system is full national ownership and control over the mineral-export industry. This development is already well under way in these two countries, with the formation of the national oil company in Venezuela and the "Chilenization" arrangements for copper made by the Frei Government.

The logic of this analysis is that the momentum of nationalization of pricing, marketing, ownership and decision-making may in fact represent the demand of the national economic system to continue along the same expansion path as before merely by breaking the constraints on the continued growth of its fiscal and foreign exchange receipts represented by the structure and policies of the multinational corporation.

The diversification of the bases of economic growth, and the elimination of structural unemployment and of material poverty, would not take place without complementary institutional changes and complementary policies with respect to agriculture, the financial system, the manufacturing sector and the educational system. Without such complementary changes, it is quite easy to envisage an economy which remains structurally dependent on its nationalized mineral-export industry, in the sense that the structure, level and rate of growth of national income are dependent on the performance of the industry. What will

have changed however, are the institutional ties which made investment, production, processing and prices in the industry subject to the needs of a global enterprise. Which is to say that whereas nationalization is not a sufficient condition for the elimination of the structural dependence of the national economic system on the industry, it is certainly a necessary one.

Footnotes

[1]Much of the research on which this paper is based was done for the Project on Externally Propelled Growth and Industrialization in the Caribbean, and I wish to acknowledge the support of the Co-Directors, Lloyd Best and Kari Levitt. Material on the Chilean copper industry referred to here was gathered on a visit to Chile in 1969 which was financed by the University of the West Indies and the Ford Foundation, and was also made possible by the facilities afforded me by the Instituto De Estudios Internacionales of the University of Chile.

This paper has benefitted from comments on earlier versions made by Lloyd Best, by the members of the inter-disciplinary seminar of the Faculty of Social Science at the University of the West Indies at Mona, by the members of Seminar on Economic Dependence at the Instituto De Estudios Internacionales at the University of Chile, especially Osvaldo Sunkel, and by Edith Penrose. I alone bear the responsibility for any errors and for its point of view.

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[3]Throughout this paper the term Hinterland is used to refer to a country or region which is a taker of economic organization, capital, technology and tastes. Metropole denotes a country which exports these factors. The terms are taken from the Project on Externally Propelled Growth and Industrialization in the Caribbean. A more complete discussion of the reasons for using these terms, and their historical significance, can be found in Lloyd Best's "A Model of Pure Plantation Economy", Social and Economic Studies, September 1968.

[4]Traditional agricultural export activities remain an important source of employment in Trinidad-Tobago, Guyana and Jamaica, and an important source of foreign exchange in the last two of these three countries. Thus it might be more appropriate to call them mixed plantation-mineral export economies.

[5]See William Demas' The Economies of Development For Small Countries With Special Reference to the Caribbean, McGill, 1965, for a treatment of the Caribbean case; Anibal Pinto's Chile: Un Case De Desarrollo Frustrado Editorial Universitaria, Santiago, 1962, for the Chilean case; and Colegio de Economistas De Venezuela, Diagnostico de la economia Venezolana, Caracas, 1964 for the Venezuelan case.

[6]This term "Returned Value" has become current in Chile and Venezuela (i.e. the Spanish Valores Retornados or simply Retornos) to refer the total sales of the mineral-export industry which is actually paid out to the national economy. It consists mainly of wages and salaries to national staff, local purchases of materials and supplies (which may, however, have an import-content) and the total of taxes paid locally.

[7]Reference will be made, however, to other companies and countries.

[8]The principal sources use for the analysis of the historical origins and evolution of the companies are as follows. General: Alfred Chandler Jr., Strategy and Structure, New York, 1962. (ii) Stephen Hymer, "Multi-National Corporations and Uneven Development" in J. Bhagwati, (Ed.) Economics and World Order, New York, 1970. Petroleum: (i) The American Petroleum Industry: Volume 11, The Age of Illumination, 1859-1899, by Harold Williamson, Ralph Andrew, Arnold Daum and Volume 11, The Age of Energy, 1899-1959, by Harold Williamson, Ralph Andreaw, Arnold Daum and Gilbert Elose. Northwestern University Press, 1959 and 1963. (ii)

Footnote 8 continued: The Empire of Oil, by Harvey O'Connor (iii) Edith Penrose: The Large International Firm and Developing Countries: The Case of the International Petroleum Industry, London, 1968, and (iv) J. Hartshorn, Oil Companies and Governments, London, 1967. Copper: (i) United States Department of the Interior: Materials Survey - Copper, 1952; (ii) Isaac Marcosson: Anaconda, New York, 1957; (iii) Harvey O'Connor: The Guggenheims, New York, 1937; (iv) Anaconda Mining Co., formerly Anaconda Copper Mining Co.) Annual Reports, 1905 to 1968; (v) Kennecot Copper Corporation, Annual Reports, 1915 to 1968. Aluminum: (i) Donald Wallace: Market Control in the Aluminum Industry, Harvard, 1937; (ii) Merton Peck: Competition in the Aluminum Industry, 1945-1958, Harvard, 1961; (iii) United States Minerals Yearbook, (Annual), Chapters on "Aluminum" and "Bauxite", (iv) Annual Reports of The Aluminum Company of America, Alcan Aluminum Ltd., Reynolds Metals Co., and Kaiser Aluminum and Chemical Corp.

[9]This company was subsequently to change its name to the Aluminum Company of America, (Alcoa).

[10]Bauxite is the ore of aluminum. After mining, it is chemically converted into alumina (aluminum oxide) which is then reduced by electrolisis to aluminum metal.

[11]The process of aluminum reduction consumes large quantities of electricity, and a large, reliable supply at low cost is therefore of enormous value to the aluminum producer.

[12]See his "Plantation Economy" op.cit.

[13]Alfred Chandler, Strategy and Structure, New York, Anchor Books Edition, 1966, page 11.

[14]Ibid, p. 406.

[15]Ibid, p. 407.

[16]Ibid, p. 418.

[17]Ibid, p. 420.

[18]However, Standard Oil of New Jersey was one of the first companies to evolve the model structure, and was one of the four companies studied in detail by Chandler as a means of revealing how the model structure was induced by the strategies of vertical integration and diversification. Other oil companies had only partly adapted to the structure at the time of Chandler's investigation (the late 1950s).

[19]Ibid, pp. 11-13.

[20]Ibid, p. 12 (Chart 1).

[21]I.e. Excepting Sales and Finance Departments. Note however that these Departments do not have responsibility for the disposal of the surplus: this is taken by the Central Office.

[22]The main additional source material used for this Part of the paper were as follows:

General: Norman Girvan, The Caribbean Bauxite Industry, Jamaica, 1967. Dudley Seers, "Big Companies and Small Countries" Kyklos, Chile: (i) Anibal Pinto, Chile: Un Caso De Desarrollo Frustrado, Santiago, 1962. (ii) ---Chile, Una Economia Dificil, Fondo De Cultura Economica, 1964. (iii) Santiago Machiavello: El Problema De La Industsia Del Cobre En Chile Y Sus Projecciones Economicas Y Sociales, Santiago, 1923. (iv) Clark Reynolds, "Development Problems of an

Footnote 22 continued: Export Economy: The Case of Chile and Copper," in Mamalakis and Reynolds, Essays on the Chilean Economy, Yale, 1965. (v) Mario Vera: La Politica Economica Del Cobre En Chile, Santiago, 1962. Venezuela: Edwin Lieuwen, Petroleum in Venezuela, Berkeley, 1954. (ii) Héctor Malavé, Petroleo Y Desarrollo Economica De Venezuela, Caracas, 1962. (iii) Armando Cordova, Notas Sobre El Desarrollo Economico Venezelano, (Mimeo), Caracas, 1963. (iv) U.N. Economic Commission For Latin America, "Economic Developments in Venezuela in the 1950's" in Economic Bulletin For Latin America, Vol. 5 No. 1. (v) Venezuela, Miniserio De Minas E Hidrocarburos, Petroleo Y Otros Datos Estadisticos, 1966. (vi) Dudley Seers, "The Mechanism of an Open Petroleum Economy" Social and Economic Studies, June 1964. Trinidad-Tobago, (i) Frank Rampersad, "Growth and Structural Change in the Economy of Trinidad and Tobago, 1951-1961" Institute of Social and Economic Research. (ii) Government of Trinidad and Tobago, Second Five Year Plan, 1963-1967. (iii) Third Five Year Plan, 1968-1972. (iv) Ainsworth Harewood, The Oil Industry of Trinidad and Tobago, Unpublished Master's Thesis, McGill, 1969. (v) William Demas, op.cit. Jamaica, Norman Girvan, Foreign Capital and Economic Underdevelopment in Jamaica, Institute of Social and Economic Research (Forthcoming).

[23]Santiago Machaivelle, op. cit. Chapter 7.

[24]Ibid.

[25]This exercise has been carried out for the case of the Jamaican bauxite industry. See Girvan, op.cit, Chapter 3.

[26]Various aspects of this have been discussed by Celso Furtado, The Economic Growth of Brazil, Berkeley, 1963; Anibal Pinto, Chile Frustrado, op. cit. Lloyd Best, "Plantation Economy" op.cit. and Andre Frank, Capitalism and Underdevelopment in Latin America.

[27]Identifying underdevelopment in terms of these factors would, of course, put the plantation South of the United States with the rest of Hinterland America, as it properly should be.

[28]William Demas, op. cit. pp. . He refers to W. Rostow, The Stages of Economic Growth.

[29]I.e. the bulk of the literature on the subject of economic development emanating from the North Atlantic from such sources as Universities, International and Inter-regional organizations. A good reflection of these views applied to the case of Chilean copper is found in Clark Reynolds, "Development Problems of an Export Economy: The Case of Chile and Copper", op.cit.

[30]The classic Marxist statement on the general relationship of metropolitan capitalism and Hinterland underdevelopment is Paul Baran's The Political Economy of Growth, New York, 1957.

[31]E.g. Alcoa and Kaiser.

[32]In fact all net investment by the subsidiary, whether it exceeds its accounting profits or not, increases the capital interest of the parent in the subsidiary, in one form or another. Some useful insights into the mechanics of this process can be had by examining the published accounts of the Braden Copper Co. of Chile with its parent, Kennecot, between 1915 and 1924; and those

Footnote 32 continued: of Chile Copper Co. with its parent, Amaconda, between 1924 and 1929.

[33]The Jamaican case has been excellently documented by Nassau Adams, "An Analysis of Food Consumption and Food Import Trends in Jamaica, 1950-1963" Social and Economic Studies, March 1968. The Venezuelan case is documented in the references to Venezuela given above.

[34]Here is a clear example of the clash between the perspectives and structure of the multinational firm and the national economy inherent in the distinction made by Hymer: "Multinational corporations are private institutions which organize one or a few industries across many countries. Its polar opposite (the anti-multinational corporation perhaps) is a public institution which organizes many industries across one region." From his "Multinational Corporations and the Law of Uneven Development" cited.

[35]See Dudley Seers, "Open Petroleum Economy" op.cit.

[36]Some aspects of this are treated by Havelock Brewster and Clive Thomas, The Dynamics of West Indian Economic Integration, Jamaica, 1967; Norman Girvan and Owen Jefferson, "Corporate vs. Caribbean Integration" New World Quarterly, Jamaica, 1968; and Osvaldo Sunkel, "Latin American Underdevelopment in the Year 2000" Forthcoming.

[37]The Chilean inflation appears to have been caused in part by a failure to contain precisely those mechanisms. See Osvaldo Sunkel, "Inflation in Chile: An Unorthodox View" in International Economic Papers, No. 10.