LINKAGES BETWEEN AGRICULTURE AND INDUSTRY IN THE COMMONWEALTH CARIBBEAN

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INTRODUCTION

Traditional competition between Agriculture and Industry for priority as vehicles of economic development continues to arouse much debate today. The thinking of Commonwealth Caribbean development planners has, since 1950, shown a decided emphasis on industrialization as the engine of faster economic growth, and this, sadly enough, is at the expense of the domestic agricultural sector.

This fact is evidenced by average growth rates of the Manufacturing Sector of 7.0 per cent (1963-1968) for Trinidad and Tobago[1] and 6.6 per cent (1963-1967) for Jamaica[2] as against averages for the Agricultural Sector of 2.4 per cent and 2.9 per cent for the given periods, respectively.

Growing populations, with increased incomes, have demanded food import bills of $93.4 million for Trinidad and Tobago and $116.5 million for Jamaica, in 1967. These startling figures have served as an excellent reminder to Commonwealth Caribbean planners of the need to integrate the development activity by the interaction of Agriculture and Industry.

This paper compares the linkages between the agricultural and industrial sectors of a developed economy, as exhibited by the input/output model of the U.S. economy[3] based on the latest available (1958) data, with those of underdeveloped economies exemplified by the Commonwealth Caribbean. It then spot-lights the gap between production and demand for industrially processed agricultural goods in Jamaica and Trinidad and Tobago by looking at the import data on these goods in recent years. The case study is done for Jamaica and Trinidad and Tobago alone, because similar recent data from the other countries in the Commonwealth Caribbean was unavailable.

Although the islands chosen for the paper represent a biased sample, together they constitute the major proportion of the Commonwealth Caribbean markets. The arguments, therefore, for inter-sectoral linkages between Agriculture and Industry typify the situation for the entire Region. Further, Demas[4] has argued that there are at least four fundamental similarities among the economies of the Commonwealth Caribbean which give added validity to the exercise.

For our purposes, an underdeveloped economy can be described as underdeveloped to the extent that it lacks the dynamism of an integrated intersectoral system.

Although much has been said in recent times about the necessity of designing special technologies to meet conditions peculiar to underdeveloped economies, the process of development consists, essentially, of an adaptation of the system built into the advanced economies like the U.S.S.R. and the U.S.A.—with, of course, due allowance for the restraints imposed by the local pool of resources and the availability of skills necessary to exploit them.

One example of an underdeveloped economy to which input/output analysis has been successfully applied is the Israeli economy.[1] The input-output model for this country shows, among other things, the measure of the inter-linkage effects within the economy, and, through this, just how far Israel falls short of having a fully integrated industrial economy; in which sectors it is weakest and in which sectors it can push development most expediently.

Let us define sectoral "self-sufficiency" as that state of development at which non-replaceable imports of that sector are covered by the exports of that sector needed to pay for them.

Like that of the Commonwealth Caribbean, Israel's economy has few sectors which rise above the level of self-sufficiency and many fall below it—this may be explained, to a great extent, by the dependence on relatively large amounts of foreign aid received by the country, a factor which enhances the validity of comparison between the Commonwealth Caribbean and Israel and thus, indirectly, between the Commonwealth Caribbean and the U.S.A.

WHY LINKAGES?

Linkages may be either backward or forward. Hirschman[2] has defined a backward linkage as every non-primary economic activity which will induce attempts to supply through domestic production the inputs needed in that activity. A forward linkage he has defined as every activity that does not, by its nature,

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1 **Draft Third Five-Year Development Plan, 1969 — 1973,** Government of Trinidad and Tobago, Government Printery, 1969

2 **Economic Survey of Jamaica, 1967,** Central Planning Unit, Jamaica

3 'The Input/Output Structure of the American Economy', **Scientific American,** April 1965

4 Demas, W. G., **The Economics of Development of Small Countries, with special reference to the Caribbean,** McGill University Press, Montreal, 1965

1 Leontief, Wassily, 'The Structure of Development', **Scientific American,** September 1963

2 Hirschman, Albert O., **The Strategy of Economic Development,** Yale University Press, 1961

cater exclusively for final demand but will induce attempts to utilize its outputs as inputs into new activities.

If inputs can be imported easily, it is not, at first, obvious why domestic availability of the same inputs should prove to be a greater incentive to economic growth, especially since, as often happens in underdeveloped areas like the Commonwealth Caribbean, the domestically produced goods may be more costly.

In practice certain factors militate in favour of domestic availability :

(1) importing suppresses the development of local entrepreneurial activity;

(2) importing provides jobs in the exporting country, instead of in the importing country. In the case of the Commonwealth Caribbean with unemployment rates in the order of 15 per cent to 20 per cent, this practice would affect adversely job opportunities;

(3) importing is susceptible to balance-of-payments uncertainties and consequently production, largely based on imports, is quite a precarious undertaking;

(4) the local producer of a given product is a most likely propagator, and possibly financer, of the use of that product as inputs into new economic ventures : "domestic availability of a product brings into being active forces that make for its utilization as input in new economic activities".[1]

If we concede that domestic availability of the relevant commodities should logically cause interactivity of industrial sectors within an economy, it should be informative to look at the various sectors of an economy with the aim of appraising the amount and kind of linkage effects that function therein. In this connection, the statistical results of input/output analysis measure the degree and show the direction of interdependence exhibited by any one industry by showing :

(a) the proportion of its total output that does not go to final demand but rather into sales to other industries;

(b) the proportion of its output that represents purchases from other industries.

If we were to divide an economy into sectors composed of different industries rather than into singular industries, there could be interlinking effects within an industrial sector itself that would show up in input/output analysis. For the purposes of this paper, greater merit than this is superfluous.

The actual value of the input/output coefficients in the matrix for a developed country reflects the utilization of technologies far in advance of those in the Commonwealth Caribbean, but the linkages themselves are comparable since the raw materials required for a meat-packing plant, an alumina plant or a flour mill will be the same in India, Brazil, Timbucktu or the Caribbean as it is in either Europe or the U.S.A.

Within the confines of this paper, if Sector A supplies Sector B with inputs, which Sector B processes into outputs that are fed into Sector C as inputs, then :

Sector A is defined as the originating sector;

Sector B as the processing sector; and

Sector C as the consuming sector.

Final demand, or total final demand, or final demand consumption, is taken to mean contributions to personal or household consumption, investment and savings, government purchases, net inventory change, exports and competitive imports.

Linkages within a Developed Continental Economy

The Case of the United States of America

The largest input/output model for the U.S.A. (1958), has eighty-one producing sectors in its matrix. The output of each sector is used as input into another, and in final demand by an ultimate purchaser.

In the main, five sectors constitute basic agricultural activity :

(i) Food and Kindred Products

(ii) Forestry and Fishery Products

(iii) Livestock and Livestock Products

(iv) Miscellaneous Agricultural Products

(v) Lumber and Wood Products, except Containers.

Illustration of specific inter-activities connected with these five sectors is made in Tables 1 to 5; the activities were chosen for the purpose of highlighting :

(a) the value of the inter-activity between the processing sector and the originating sector and between the processing sector and the consuming sector; and

(b) the degree of apparent disparity of operations of interacting sectors.

The result is that the tables show no particular sequence.

Table 1 relates to the sector, "Food and Kindred Products". Overall, this sector is linked with 58 other

[1] Hirschman, Albert O., op. cit. p. 100

sectors providing its input and 45, including itself, absorbing its output.

Seventy-three per cent of the total output of this sector is taken up by final demand consumption which leaves 27 per cent for forward linkage effects. This is relatively poor forward linking, but is expectedly due to the presence of "Household Consumption" as a portion of final demand consumption. In fact, "Household Consumption" absorbs 72 per cent of the gross domestic output of the sector and 99 per cent of all contributions to final demand consumption.

Table 2 relates to the sector "Forestry and Fishery Products". This sector is linked overall with 31 other sectors providing its input and 11, including itself, absorbing its output.

Its contribution to final demand is negative; in fact, 10 per cent of its gross output goes to final demand, with the bulk of its output going into forward linkage transactions.

Table 3 relates to the sector "Livestock and Livestock Products" which is linked overall with 41 other sectors providing its input and 16, including itself, consuming its output.

Of its gross output, 10.2 per cent is contributed to final demand leaving 90 per cent for forward linkages.

Table 4 relates to the sector "Miscellaneous Agricultural Products" which links overall with 42 other sectors providing its input and 20, including itself, consuming its output.

Of the gross output of this sector, 25 per cent goes to final demand consumption with 75 per cent recycled into forward linkage activity.

Table 5 relates to the sector "Lumber and Wood Products, except Containers". Overall this sector is linked with 62 others providing its input and 64, including itself, absorbing its output.

Of the sector's gross output, 62 per cent is consumed in forward inter-sectoral activity.

Linkages within Underdeveloped Economies

The Case of Trinidad and Tobago

Francis[1] has constructed a 13 sector matrix on the Trinidad and Tobago economy from 1962 data. The sectors "Sugar Growing" and "Other Agriculture" constitute the basic agricultural activities in the model. Tables 6 and 7 show specific inter-activities, chosen on the same basis as before, for the above two sectors.

Table 6 relates to the sector "Sugar Growing" which is linked overall with 6 other sectors providing its input and only one, "Sugar Manufacturing" consuming its output.

Of the sector's output, 2.5 per cent goes to final demand, the 97.5 per cent going into its only forward transaction with "Sugar Manufacturing". Although this would appear to be good forward linking, the sub-division of the activity in sugar is misleading. In fact, if "Sugar" were designed to include as a sector, farmers, estates, molasses and sugar, and "Manufacturing" were to be sub-divided (as in the case study on Jamaica which follows) into different parts depending on the nature of the operations, for example, "Manufacturing I" (manufacture of food, drink and tobacco products), then a better appraisal of the linkage effects between Agriculture and Industry could have been had. However, the lack of data for agricultural sectors so defined is a limiting factor.

Table 7 relates to the sector, "Other Agriculture". Overall this sector links with 8 others providing its input and 6, including itself, making demands on its output.

Of the sector's gross output, 81 per cent goes directly into final demand consumption, leaving only 19 per cent for forward linkage effects.

The Case of Jamaica

O'Loughlin[1] has formulated a 21 sector matrix based on 1958 prices for the Jamaican economy. In it, Agriculture has four sub-divisions :

(a) Sugar	—	farmers, estates, factories, rum, molasses, rum bottling
(b) Export Agriculture	—	banana, citrus, coffee, cocoa, pimento, ginger, other export growing and processing. (This sector excludes local consumption of these commodities and includes all distribution.)
(c) Livestock and Fishing	—	poultry, eggs, meat, fish, milk production
(d) Domestic Agriculture	—	the remaining agricultural activities, including domestically consumed export agricultural goods.

Manufacturing also has four sub-divisions :

(a) Manufacturing I	—	food, drink, tobacco manufactures

[1] Francis, A. A., 'A Note on Inter-Industry Relations in the Economy of Trinidad and Tobago, 1962', Central Statistical Office, Trinidad, **Research Papers No. 2, 1965**

[1] O'Loughlin, Carleen, 'Long-term Growth of the Economy of Jamaica', **Social and Economic Studies, Vol. 12, No. 3,** September 1963

(b) Manufacturing II — textiles, fibres, leather

(c) Manufacturing III — heavy industry

(d) Manufacturing IV — miscellaneous.

Tables 8 to 11 show inter-industry transactions between the agricultural sectors and the rest of the economy. These transactions were again selected on the basis given for the U.S. economy.

Table 8 relates to the sector "Sugar" which is linked overall with 13 sectors providing its input and 7 consuming its output.

With 77 per cent of the gross output of the sector used up in final demand, only 23 per cent is absorbed in forward linkages.

Table 9 relates to the sector "Export Agriculture" which is linked with 12 sectors giving its input and 3 consuming its output.

A massive 99.4 per cent of the gross output of this sector goes to final demand leaving next to nothing for forward linkage effects.

Table 10 relates to the sector "Domestic Agriculture". Overall this sector has 11 sectors providing its input and 14 consuming its output.

Of the gross output of this sector 27.1 per cent goes to final demand. With 72.9 per cent going into forward linkage transactions, it appears that this agricultural sector is well integrated with industry, but of the total value going into forward linkages 42 per cent is contributed to the "Distribution" sector, with 9 other sectors together taking the remaining 58 per cent; thus the forward linkage is primarily with what has been called, by convention, an "industrial" sector, rather than with industry proper.

Table 11 relates to the sector "Livestock and Fishing" which links overall with 11 sectors providing its input and 9 making demands on its output.

Of the sector's gross output, 35 per cent is consumed by final demand, with 65 per cent going into forward linkage activity. However, the arguments for "Domestic Agriculture" apply here as well, since of the total value absorbed into forward linkages, 42.5 per cent is taken up by the sector "Distribution" with 4 other sectors combining to absorb the remaining 57.5 per cent.

Isolating the Gaps

Table 12 shows (where possible) the imports for 1965 to 1967 of processed agricultural goods, in excess of $0.5 million annually, into Jamaica and Trinidad and Tobago.

Items (1) and (2) represent forward linkage activity with livestock rearing, with item (3) being the necessary backward linkage. The following comments apply :

(1) The problem of availability of acreages for such a land-consuming activity as livestock rearing is in part resolved by Guyana's 3 million acres[1] of flat and gently sloping pasture land.

(2) The facilities for meat processing and packing exist in Jamaica and Trinidad and Tobago, and are, at present, underutilized.

(3) The inordinate expenditure (see Table 12) on importation of prepared foodstuffs as inputs into feed mills remains a sore spot to the Commonwealth Caribbean observers who note that of every $1.00 worth of locally reared livestock, between 70 cents and 80 cents pay for feed imports. However, the northwest district of Guyana has large acreages of flat, mechanizable agricultural land (3.32 million acres) to grow corn, which represents an average of about 45 per cent of the input to all livestock feeds.

Items (5) and (7) represent further extensions of forward linkage activity with livestock rearing. Whether sufficient input to a milk processing plant for the Commonwealth Caribbean will be regionally accessible depends on the demand for fresh milk as well as on the scale of operations of the farming venture. This latter argument also applies, in kind, to item (10).

Item (4), though not symbolising an accurate statement of the quantity of cotton involved in the 36 odd trade sub-divisions for cotton goods, does represent a substantial expenditure on the various forms of this staple crop of Montserrat. Perhaps it would be necessary first to devote an entire small island to grow the crop before having it processed and woven at, perhaps, one of the already established textile mills in the Commonwealth Caribbean.

Item (6) describes a sorely neglected possibility in the Commonwealth Caribbean. Trinidad and Tobago boasts a Dunlop factory whose rubber is entirely, or almost entirely, from outside the Commonwealth Caribbean region. The feasibility of farming such a crop is a pertinent problem, but whether or not it can be overcome on a regional level in the Commonwealth Caribbean, a gap far in excess of $12.0 million still remains, and is likely to widen with the advent of increased incomes and the subsequent increased demand for motor-cars.

Item (8) is generally in the form of a final good which can command a range of prices depending on the area of skills that is applied to the product. For instance, woods peculiar to the Area, like the purple heart of Guyana and Trinidad and Tobago can command a price of T.T. $7.50 per pound as a custom-built handicraft item on the world market or, on the

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[1] **Caribbean Economic Almanac, 1962, Economic and Business Research Information and Advisory Service, Port-of-Spain, Trinidad.**

other hand, wood like cajuka or sandbox can be made into packaging material at T.T. $2.00 per cubic foot.

Item (9) is the basic backward linkage activity between Agriculture and Industry. In spite of Trinidad and Tobago's fertilizer plant, the country still imports over T.T. $0.5 million per annum, which could mean a lack of diversification of the product as manufactured by the plant. In fact only 15.7 per cent of the weight value (money value, 2.96 per cent) of Jamaica's imports comes from Trinidad and Tobago. Among the Commonwealth Caribbean countries, Trinidad and Tobago seems best suited to fill the import gap by widening the variety of its fertilizers and so facilitating the backward linking of Agriculture and Industry.

Summary

Growing economic systems tend to derive considerable advantage from developing whole families of related industries rather than isolations that depend on foreign trade for supplies and markets. The never-ending process of economic change derives added impetus from intimate contact between seller and buyer—between the maker and potential user of a product.

The evolution of development along these lines is characterized by a levelling off of sectoral superiority, causing weak sectors to grow strong and strong sectors to lose gradually their domineering stature; and if there is any sincerity in the attitudes of the "diversify-economists" in the Region, then an examination of the feasibility of new linkage activities cannot but be beneficial to the Commonwealth Caribbean.

Table 1 *Processing Sector — Food and Kindred Products: U.S.A., 1958*

Per $1,000 output of Processing Sector					
Originating Sector	Value (US $)	Proportion of Total Input (%)	Consuming Sector	Value (US $)	Proportion of Total Output (%)
Livestock and Livestock Products	233	23.3	Food & Kindred Products	166	16.6
Miscellaneous Agricultural Products	75	7.5	Paperboard Containers and Boxes	44	4.4
Transportation & Warehousing	40	4.0	Business Travel, Entertainment and Gifts	31	3.1
Metal Containers	24	2.4	Wholesale & Retail Trade	8	0.8
Paperboard Containers and Boxes	14	1.4	Federal Gov't Enterprises	4	0.4
Glass and Glass Products	10	1.0	Drugs, Cleaning and Toilet Preparations	3	0.3
Non-competitive Imports	24	2.4	Final Demand	729	72.9

Table 2 *Processing Sector — Forestry and Fishery Products: U.S.A., 1958*

Per $1,000 output of Processing Sector					
Originating Sector	Value (US $)	Proportion of Total Input (%)	Consuming Sector	Value (US $)	Proportion of Total Output (%)
Miscellaneous Agricultural Products	143	14.3	Lumber & Wood Products, except Containers	690	69.0
Livestock & Livestock Products	65	6.5	Food & Kindred Products	241	24.1
Food and Kindred Products	22	2.2	Apparel	123	12.3
Miscellaneous Transportation Equipment	18	1.8	Forestry & Fishery Products	14	1.4
Miscellaneous Textile Goods & Floor Covering	10	1.0	Chemicals & Selected Chemical Products	13	1.3
Paperboard Containers & Boxes	8	0.8	Business Travel, Entertainment & Gifts	13	1.3
Non-competitive Imports	—	—	Final Demand	–100	–10.0

Table 3 *Processing Sector — Livestock and Livestock Products: U.S.A., 1958*

Per $1,000 output of Processing Sector					
Originating Sector	Value (US $)	Proportion of Total Input (%)	Consuming Sector	Value (US $)	Proportion of Total Output (%)
Miscellaneous Agricultural Products	253	25.3	Food & Kindred Products	605	60.5
Livestock & Livestock Products	160	16.0	Livestock & Livestock Products	161	16.1
Food & Kindred Products	113	11.3	Miscellaneous Agricultural Products	68	6.8
Transportation and Warehousing	20	2.0	Real Estate & Rental	37	3.7
Agriculture, Forestry and Fishery Services	19	1.9	Agriculture, Forestry & Fishery Services	9	0.9
Business Services	11	1.1	Rubber & Miscellaneous Plastic Products	6	0.6
Non-competitive Imports	0.5	0.05	Final Demand	102	10.2

Processing Sector — Miscellaneous Agricultural Products: U.S.A., 1958

Table 4	Per $1,000 output of Processing Sector				
Originating Sector	Value (US $)	Proportion of Total Input (%)	Consuming Sector	Value (US $)	Proportion of Total Output (%)
Livestock & Livestock Products	74	7.4	Livestock & Livestock Products	274	27.4
Chemicals & Selected Chemical Products	50	5.0	Food & Kindred Products	211	21.1
Petroleum Refining & Related Industries	39	3.9	Real Estate & Rental	60	6.0
Agriculture, Forestry & Fishery Services	38	3.8	Broad & Narrow Fabrics, Yarn & Thread Mills	52	5.2
Farm Machinery & Equipment	8	0.8	Tobacco Manufactures	48	4.8
Rubber & Miscellaneous Plastic Products	7	0.7	Federal Gov't Enterprises	27	2.7
Non-competitive Imports	10	1.0	Final Demand	251	25.1

Table 5 *Processing Sector — Lumber and Wood Products, Except Containers: U.S.A., 1958*

Per $1,000 output of Processing Sector

Originating Sector	Value (US $)	Proportion of Total Input (%)	Consuming Sector	Value (US $)	Proportion of Total Output (%)
Forestry & Fishery Products	99	9.9	Lumber & Wood Products, except Containers	302	30.2
Miscellaneous Agricultural Products	26	2.6	Paper & Allied Products except Containers	83	8.3
Petroleum Refining & Related Industries	10	1.0	Maintenance & Repair Construction	53	5.3
Other Fabricated Metal Products	8	0.8	Household Furniture	52	5.2
Paper & Allied Products, except Containers	7	0.7	Wooden Containers	21	2.1
Plastic & Synthetic Materials	7	0.7	Miscellaneous Furniture & Fixtures	11	1.1
Non-competitive Imports	0.06	0.006	Final Demand	390	39.0

Tabe 6 *Processing Sector — Sugar Growing: Trinidad and Tobago, 1962*

Per $1,000 output of Processing Sector

Originating Sector	Value ($)	Proportion of Total Input (%)	Consuming Sector	Value ($)	Proportion of Total Output (%)
Other Manufacturing	71	7.1	Sugar Manufacturing	975	97.5
Distribution	30	3.0	Final Demand	25	2.5
Transportation	30	3.0			
Public Utilities	9	0.9			
Banks & Financial Institutions	8	0.8			
Services	6	0.6			
Imports	23	2.3			

Table 7 *Processing Sector — Other Agriculture : Trinidad and Tobago, 1962*

Per $1,000 output of Processing Sector					
Originating Sector	Value ($)	Proportion of Total Input (%)	Consuming Sector	Value ($)	Proportion of Total Output (%)
Other Manufacturing	45	4.5	Other Manufacturing	92	9.2
Distribution	37	3.7	Food Manufacturing	87	8.7
Transportation	7	0.7	Construction	6	0.6
Oil	5	0.5	Alcoholic Beverages & Tobacco	5	0.5
Public Utilities	4	0.4	Services	2	0.2
Services	3	0.3	Other Agriculture	1	0.1
Food Manufacturing	3	0.3	Final Demand	808	80.8
Other Agriculture	1	0.1			
Sugar Manufacturing	1	0.1			
Imports	50	5.0			

Table 8 *Processing Sector — Sugar : Jamaica, 1958*

Per $1,000 output of Processing Sector					
Originating Sector	Value ($)	Proportion of Total Input (%)	Consuming Sector	Value ($)	Proportion of Total Output (%)
Construction	134	13.4	Distribution	184	18.4
Transport	90	9.0	Manufacturing I	58	5.8
Services	21	2.1	Services	2	0.2
Manufacturing II	8	0.8	Final Demand	756	75.6
Imports	2	0.2			

Table 9 *Processing Sector — Export Agriculture : Jamaica, 1958*

Per $1,000 output of Processing Sector

Originating Sector	Value ($)	Proportion of Total Input (%)	Consuming Sector	Value ($)	Proportion of Total Output (%)
Distribution	120	12.0	Domestic Agriculture	3	0.3
Transport	78	7.8	Manufacturing I	3	0.3
Construction	53	5.3	Final Demand	994	99.4
Manufacturing II	27	2.7			
Imports	9	0.9			

Table 10 *Processing Sector — Domestic Agriculture : Jamaica, 1958*

Per $1,000 output of Processing Sector

Originating Sector	Value ($)	Proportion of Total Input (%)	Consuming Sector	Value ($)	Proportion of Total Output (%)
Distribution	178	17.8	Distribution	307	30.7
Transport	34	3.4	Manufacturing I	198	19.8
Construction	24	2.4	Manufacturing II	78	7.8
Services	12	1.2	Livestock & Fishing	62	6.2
Imports	—	—	Final Demand	271	27.1

Table 11 *Processing Sector — Livestock and Fishing : Jamaica, 1958*

Per $1,000 output of Processing Sector

Originating Sector	Value ($)	Proportion of Total Input (%)	Consuming Sector	Value ($)	Proportion of Total Output (%)
Distribution	119	11.9	Manufacturing I	332	33.2
Domestic Agriculture	99	9.9	Distribution	275	27.5
Manufacturing I	19	1.9	Services	32	3.2
Manufacturing IV	18	1.8	Manufacturing III	9	0.9
Imports	—	—	Final Demand	350	35.0

Table 12 *Imports[1] of Processed Agricultural Goods: Jamaica and Trinidad and Tobago, 1965 — 1967*

	ITEM	TRINIDAD & TOBAGO			JAMAICA			T. & T. and JAMAICA		
		1965	1966	1967	1965	1966	1967	1965	1966	1967
(1)	Salted Pork	3.5	3.2	2.9	4.1	2.8	n.a.	7.6	6.0	n.a.
		1,383	1,606	1,025	1,690	1,350	n.a.	3,073	2,956	n.a.
(2)	Meat Preparations & Meat—Sausages, etc.)	2.9	3.3	3.2	4.9	4.3	n.a.	7.8	7.6	n.a.
		1,956	2,417	2,260	2,955	3,012	n.a.	4,911	5,429	n.a.
(3)	Prepared Animal Feedstuffs	35.4	31.8	34.5	39.0	53.4	99.9	74.4	85.2	134.4
		4,281	4,135	5,095	4,200	6,100	11,400	8,481	10,235	16,495
(4)	Cotton Goods	4.87	4.74	5.67	8.10	7.12	6.71	12.97	11.86	12.38
		9,088	8,075	8,969	13,321	12,766	12,050	22,409	20,841	21,019
(5)	Leather Goods	1.28	1.28	1.17	1.18	1.59	1.22	2.46	2.87	2.39
		4,989	5,422	4,620	3,624	5,296	4,050	8,613	10,718	8,670
(6)	Rubber Tubes and Tyres (Vehicles)	3.64	3.98	3.78	0.67	0.41	n.a.	4.31	4.39	n.a.
		3,784	3,795	3,546	7,789	8,047	n.a.	11,573	11,842	n.a.
(7)	Milk Stuff (Condensed, Skimmed, Evaporated, etc.)	29.24	28.97	29.11	18.89	19.25	n.a.	48.13	48.22	n.a.
		12,707	12,847	12,979	7,030	7,724	n.a.	19,737	20,571	n.a.
(8)	Wood Manufactures	18.97	15.64	10.91	18.96	14.89	n.a.	37.93	30.53	n.a.
		3,864	3,645	2,710	3,551	2,776	n.a.	7,415	6,421	n.a.
(9)	Manufactured Fertilizers	6,585	5,402	5,257	61,295	62,902	121,500	67,880	68,302	126,757
		767	667	636	7,600	7,700	14,850	8,367	8,367	15,486
(10)	Fruits, Juices, Jams, Marmalades, Soups—Canned)	4.7	5.5	4.9	4.5	2.1	n.a.	9.2	7.6	n.a.
		1,266	1,515	1,368	2,280	1,846	n.a.	3,546	3,361	n.a.

[1] Imports in excess of $0.5 million annually; given in Quantity (million pounds) and Value (thousand dollars) respectively

Source: For Trinidad — Central Statistical Office, **Overseas Trade Reports** for 1965, 1966 and 1967
For Jamaica — Department of Statistics, **External Trade Reports** for 1965, 1966 and 1967;
Trade Statistics Unit, **Annual Bulletins** for 1965, 1966 and 1967

REFERENCES

Central Planning Unit,	**Economic Survey of Jamaica, 1967,** Jamaica.
Demas, W. G.,	**The Economics of Development of Small Countries, with special reference to the Caribbean,** McGill University Press, Montreal, 1965.
Economic and Business Research Information and Advisory Service	**Caribbean Economic Almanac, 1962,** Port-of-Spain.
Francis, A. A.,	'A Note on Inter-Industry Relations in the Economy of Trinidad and Tobago, 1962', Central Statistical Office, **Research Papers,** No. 2, December 1965.
Government of Trinidad and Tobago,	**Draft Third Five-Year Development Plan, 1969–1973,** Government Printery Port-of-Spain, 1969.
Hirschman, Albert O.,	**The Strategy of Economic Development,** Yale University Press, 1961.
Leontief, Wassily,	'The Structure of Development', **Scientific American,** September 1963.
Leontief, Wassily,	'The Input/Output Structure of the American Economy', **Scientific American,** April 1965.
O'Loughlin, Carleen,	'Long-term Growth of the Economy of Jamaica', **Social and Economic Studies,** Vol. 12, No. 3, September 1963.