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No. 86

EXPORTS OF DEVELOPING COUNTRIES IN THE 1960's

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Exports of Developing Countries in the 1960's*

Benjamin Cohen
Daniel Sisler

A casual perusal of Yale's card catalog indicates seven books dealing with international trade and economic development, published between 1958 and 1968.¹ The question then arises--is there really anything left worth saying on the topic? These earlier studies rely on data prior to the early 1960's. We feel that recently available statistics for the 1960's provide new insights on the subject.

I. Introduction

At the first United Nations Conference on Trade and Development in 1964, Raul Prebisch stated that the export earnings of the less developed countries (LDCs) would not grow by six percent per year in the 1960s unless the rich countries adopted new trade policies. He argued that if export earnings did not grow at this rate, the real gross national product of the LDCs would not increase at the annual rate of five percent, the minimum target set by the United Nations General Assembly for the decade of the Sixties.

Despite supporting statements by experts and speeches by world leaders, none of Prebisch's major suggestions was adopted with the exception of the initiation

*Nancy Girard and Jaroslav Smiesny assisted in assembling the trade data for this paper. Cohen's research was supported by National Science Foundation Grant G52804. The authors are completely responsible for the content of this paper.

¹Gottfried Haberler, International Trade and Economic Development (Cairo: National Bank of Egypt, 1959); Jacob Viner, International Trade and Economic Development (Glencoe, Illinois: Free Press, 1962); Harry G. Johnson, International Trade and Economic Growth (London: Allen and Unwin, 1958); Paul D. Zook, Economic Development and International Trade: A Perspective (Southern Methodist University Press, 1959); Gerald M. Meier, International Trade and Development (New York: Harper and Row, 1963); Dudley Seers, International Trade and Development (Addis Abba, 1965); James D. Therberge, ed., Economics of Trade and Development (New York: Wiley, 1968).

of the International Grains Agreement in 1967, renewal of the International Coffee Agreement in 1968, and signing of the International Sugar Agreement in 1969. Yet the export performance of the developing countries improved sharply in the 1960s. For the LDCs as a group, export earnings rose by about six percent per annum during the decade and it appears that their real G.N.P. grew by the minimum target of five percent per year. As shown in Table 1, the exports of countries whose foreign exchange earnings are not mainly from petroleum grew by 5.9 percent per year in the 1960s as compared with 2.1 percent in the 1950s. In the 1960s the export earnings of each major region grew by more than four percent per annum and in all regions exports rose more rapidly in the decade of the Sixties than during the Fifties. The export earnings of developing countries in Asia actually fell during the 1950s while the growth of Latin American exports was sluggish. This latter point may explain the strong Latin American interest in tariff preferences first articulated during the Fifties but still heard today.

The export earnings of the major oil producing LDCs grew at about the same annual rate, 7.2 percent, in both decades. There were significant changes among countries--Libya's exports grew rapidly, while the growth in exports of Venezuela and the middle eastern oil countries decelerated.

Those who are concerned with the gap between the rich and poor nations will focus on the fact that the developing countries' share of world trade continued to decline in the 1960s. The LDCs accounted for 20 percent of world trade in 1967-68 as compared with 24 percent in 1959-60 and 29 percent in 1951-52.

Some will also wonder about changes in the prices of goods imported by the developing countries. Average import prices by the LDCs declined by one percent per year between 1951-52 and 1959-60. This may be compared with an annual increase

Table I
Exports (fob)

	<u>1951-52</u> (1)	<u>1959-60</u> (2)	<u>1967-68</u> (3)	Annual Percentage Change	
				<u>1950's</u> (4)	<u>1960's</u> (5)
<u>annual average, \$million</u>					
<u>Developing Countries</u>					
<u>Latin America</u> ¹	7,760	9,200	13,195	2.1	4.6
Oil producers ²	2,248	3,360	3,928	5.1	1.9
Other ¹	5,512	5,840	9,267	.7	5.9
<u>Africa</u>	3,520	4,490	8,405	3.1	8.2
Oil producers ³	13	12	1,527	-1.0	82.2
Other	3,507	4,478	6,878	3.1	5.5
<u>Middle East</u>	2,535	4,670	8,895	7.9	8.4
Oil producers ⁴	1,429	3,127	6,061	10.3	8.6
Other	1,106	1,543	2,834	4.2	7.9
<u>Asia</u>	8,038	7,552	10,625	- . 8	4.3
Oil producers ⁵	93	95	86	.3	-1.2
Other	7,945	7,457	10,539	- . 8	4.4
<u>Total above</u>	21,853	25,912	41,120	2.1	5.9
Oil producers	3,783	6,594	11,602	7.2	7.3
Other	18,070	19,318	29,518	.8	5.4
<u>World</u> ⁶	74,713	107,186	201,518	4.6	8.2

¹Excludes Cuba.

²Venezuela, Netherlands Antilles, Trinidad.

³Libya.

⁴Iran, Iraq, Kuwait, Saudi Arabia.

⁵Brunei.

⁶Excludes mainland China, Cuba, USSR, Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Rumania.

SOURCES: Various issues of International Financial Statistics.

of .4 percent between 1959-60 and 1967-68.¹ Combining these changes in import prices and export earnings, the purchasing power of all developing countries' exports grew about 75 percent more rapidly in the 1960s than in the 1950s. Perhaps more important, the purchasing power of the non-petroleum LDCs increased almost three times as rapidly in the 1960s as in the decade of the Fifties.

Three reasons, one from the standpoint of demand, and two related to supply, might be put forward to explain the improvement of LDC export earnings. A study by the UNCTAD secretariat states that, "The acceleration of LDC export earnings is attributable mainly to the stepping up of business activity in the developed market economies to levels exceeding those suggested by historical trends."² This report also concluded that the income elasticity of demand of developed countries for imports from LDCs remained fairly constant: being 1.19 in the 1950s and 1.20 for the 1960-65 period.

As shown in Table II, combined real G.N.P. for all the OECD nations excluding Japan grew at an annual rate of 4.7 percent from 1960-68 as compared to 3.8 percent for 1950-60. According to this argument, the more rapid growth of real G.N.P. in the rich countries led to an expansion in the quantity of traditional LDC exports demanded by the industrial countries. This type of analysis does not take into account the impact of commodity price changes or product diversification on the level of export earnings. The argument also ignores changes in relative prices between the rich and poor nations.

From the standpoint of supply, there are two alternative explanations for the faster growth of LDC exports during the 1960s. First, the developing countries might have become more competitive exporters of their traditional products in the

¹Data from International Financial Statistics.

²Trade Prospects and Capital Needs of Developing Countries (New York: United Nations, 1968), p. 15.

Table II

Gross National Product in Constant
1967 Prices

	<u>1950</u>	<u>1960</u>	<u>1968</u>	<u>Annual Percentage Change</u>	
	\$ billion			<u>1950's</u>	<u>1960's</u>
European OECD	268	426	609	4.7	4.5
of which EEC	143	250	365	5.7	4.8
U.K.	69	90	115	2.7	3.1
U.S.	417	572	829	3.2	4.7
Canada	27	40	60	4.0	5.2
Total above	712	1,038	1,498	3.8	4.7
Japan	29 ¹	59	130	9.3	10.4

¹1952.

SOURCE: Gross National Product (Agency for International Development),
April 1969.

world market or secondly the LDCs might have initiated exports of new commodities.

The next section of this paper will assess the relative importance of these explanations. In Section III, we discuss in greater detail world trade in agricultural commodities, and in Section IV LDC exports of manufactures will be considered.

II. Trends in Major Markets

In an attempt to gain insights into what products and markets contributed most to the rapid acceleration in LDC export earnings Tables II-VII were prepared. The tables present the value of imports for thirty-three commodities by five major trading areas: European Economic Community (EEC), Japan, USSR, United Kingdom, and United States. For convenience these areas will be referred to as countries or nations in this paper. Imports are shown for 1959-60 and 1967-68 from the world, and from the LDCs. The LDCs are defined as Latin America,¹ Africa excluding the Union of South Africa, the Middle East, and Asia excluding Japan and mainland China. The import statistics in tables III-VII are fob for the U.S. and the USSR, and cif for Japan, the U.K., and the EEC.²

The degree of commodity detail--should grains be divided into wheat, corn, and rice--is a matter of judgment and somewhat arbitrary. We have divided the thirty-three commodities into three groups: mineral fuels, twenty-six other primary products, and six manufactures. The definition of manufactured products is, as negotiators of tariff preferences have discovered, somewhat arbitrary. For example, in this paper jute fabric and jute are considered a manufactured product rather than a primary agricultural export. This decision was based on the fact that 1967-68 jute fabric accounted for nearly two-thirds of the value of the commodity group. As shown in Appendix Table A, we used SITC numbers as the basis for determining products or groupings except for USSR data where we relied on judgment concerning the comparability of commodity coverage.

The thirty-three commodities included account for the majority of imports from LDCs by the five industrial nations, ranging in 1967-68 from 78 percent in the case of the USSR to 90 percent for the EEC.

¹Note that in Table I Cuba was omitted from Latin America.

²For the EEC imports from the world exclude intra-EEC trade.

Table III

	Imports by EEC, cif				Annual Percentage Change	
	1959-60		1967-68		World	LDC's
	World	LDC's	World	LDC's	World	LDC's
	Annual average, \$ million					
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Mineral Fuels</u>	2,580.3	1,900.3	5,767.4	4,844.0	10.6	12.4
<u>Other Primary</u>						
<u>Agricultural</u>						
alcoholic and non-alcoholic beverages	298.0	261.5	184.5	95.9	-5.8	-13.4
cocoa	214.5	211.3	257.0	248.4	1.4	2.0
coffee	510.1	494.1	685.8	678.3	3.8	4.0
corn	239.7	129.1	584.7	212.9	11.7	6.5
cotton	637.3	326.7	596.8	338.4	-.8	2.2
crude animal and vegetable materials	143.2	62.3	255.2	96.3	7.5	5.6
dairy products	224.8	24.9	138.6	3.4	-5.8	-22.1
feeding stuffs	221.2	146.0	672.2	309.2	14.9	9.8
fruits and vegetables	755.6	429.1	1,384.1	747.4	7.9	7.2
hides	230.4	93.1	262.7	89.8	1.7	-.5
livestock	179.4	0	275.7	1.2	5.5	--
meat	261.3	75.7	567.0	155.5	10.2	9.4
oilseeds	525.5	313.0	749.4	311.8	4.5	-.1
rice	37.9	22.6	51.6	17.3	4.0	-3.3
rubber	382.1	286.5	266.6	174.1	-4.4	-6.0
sugar	116.3	106.5	114.5	88.4	-.2	-2.3
tea	25.6	24.3	42.7	37.0	6.6	5.4
tobacco	200.9	61.7	310.9	71.2	5.6	1.8
vegetable oils	289.0	190.7	310.7	196.6	.9	.4
wheat	250.0	42.9	283.0	40.3	1.6	-.8
wool	549.5	74.7	459.5	54.6	-2.2	-3.8
Total agricultural	6,292.3	3,377.3	68,453.2	4,018.0	3.8	2.2

Table III (continued)

	Imports by EEC, cif				Annual Percentage Change	
	1959-60		1967-68		World	LDC's
	World ¹	LDC's	World	LDC's		
	Annual average, \$ million				(5)	(6)
(1)	(2)	(3)	(4)			
<u>Non-agricultural</u>						
copper	606.3	399.7	1,253.3	843.0	9.5	9.8
fish	152.5	30.2	316.5	48.9	9.6	6.2
iron ore	377.2	165.8	605.1	335.9	6.1	9.2
tin	642.0	25.8	79.5	63.8	-23.1	12.0
wood	654.5	164.5	967.3	307.0	5.0	8.1
Total non-agricultural	2,432.5	786.0	3,221.7	1,598.6	3.6	9.3
<u>Total other primary</u>	8,724.8	4,163.3	11,674.9	5,616.6	3.7	3.8
<u>Manufactures</u>						
clothing	70.9	15.2	291.1	88.1	19.3	24.6
cotton fabrics	56.7	2.8	87.0	13.7	5.5	22.0
footwear	15.8	2.1	49.2	11.0	15.2	23.0
jute fabrics and jute	66.6	64.5	84.1	82.0	3.0	3.0
pearls and precious stones	192.8	30.0	449.4	102.6	11.2	16.6
veneer	37.0	3.6	57.9	14.5	5.8	19.0
Total manufactures	439.8	118.2	1,018.7	311.9	11.1	12.9
<u>Total above</u>	11,744.9	6,181.8	18,461.0	10,772.5	5.8	7.2
<u>Other commodities</u>	7,097.0	1,942.8	13,700.5	1,257.6	8.6	-5.3
<u>Total imports</u>	18,841.9	8,124.6	32,161.5	12,030.1	6.9	5.0

¹Excluding intra-EEC trade.

Sources: Various issues of statistics of Foreign Trade, Series C (OECD).

Table IV

Imports by Japan, cif

	1959-60		1967-68		Annual Percentage Change	
	World	LDC's	World	LDC's	World	LDC's
	annual average, \$ million					
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Mineral fuels</u>	649.5	455.4	2,457.2	1,821.2	18.1	18.9
<u>Other Primary</u>						
<u>Agricultural</u>						
Alcoholic and non-alcoholic beverages	2.1	.1	9.0	0	19.1	--
Cocoa	9.7	6.8	40.5	29.5	19.6	20.0
Coffee	8.3	8.0	32.5	27.4	18.6	16.6
Corn	67.2	40.4	289.4	86.5	20.5	10.0
Cotton	393.4	233.9	476.8	281.9	2.5	2.4
Crude animal and vegetable materials	19.8	12.5	63.8	30.3	15.8	11.7
Dairy products	12.5	0	59.2	0	21.4	0
Feeding stuff	13.2	5.4	82.0	27.3	25.4	19.7
Fruits and vegetables	28.5	19.4	212.8	150.1	28.5	29.0
Hides	40.8	11.5	74.4	8.2	-7.8	-4.1
Livestock	4.7	0	10.9	1.2	11.1	--
Meat	9.3	2.4	97.3	20.3	34.0	31.0
Oilseeds	175.1	48.4	417.2	71.4	11.5	5.0
Rice	28.6	27.1	56.2	29.6	11.1	1.1
Rubber	159.4	127.9	131.8	98.4	-2.4	-3.3
Sugar	117.2	106.5	194.2	117.8	6.2	1.3
Tea	2.1	2.1	7.7	6.3	17.6	14.7
Tobacco	13.9	0	53.8	6.1	18.4	--
Vegetable oils	6.9	3.5	9.6	6.0	4.2	7.0
Wheat	168.7	0	298.5	0	7.4	0
Wool	236.0	14.9	362.1	13.6	-5.5	-1.1
Total agricultural	1,517.5	671.0	2,979.7	1,011.9	8.8	5.2

Table IV (continued)

	Imports by Japan, cif					
	1959-60		1967-68		Annual Percentage Change	
	World	LDC's	World	LDC's	World	LDC's
	annual average, \$ million					
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Non-agricultural</u>						
Copper	28.8	9.9	328.5	227.6	36.0	48.0
Fish	3.1	1.9	138.1	88.4	62.0	63.0
Iron ore	180.0	151.5	775.9	495.2	20.0	16.0
Tin	24.1	21.8	66.4	64.2	13.5	14.4
Wood	<u>155.1</u>	<u>111.6</u>	<u>1,052.2</u>	<u>452.2</u>	<u>27.1</u>	<u>19.1</u>
Total non-agricultural	391.1	296.7	2,361.1	1,327.6	25.0	21.0
Total other primary	1,908.6	967.7	5,340.8	2,339.5	13.7	11.7
<u>Manufactures</u>						
Clothing	1.3	0	19.9	7.1	41.0	--
Cotton fabrics	.6	0	8.8	2.7	40.0	--
Footwear	.1	0	2.6	0	50.0	--
Jute fabrics and jute	10.4	10.4	22.8	22.8	10.3	10.3
Pearls and precious stones	4.6	.8	77.3	35.2	42.0	63.0
Veneer	<u>.2</u>	<u>0</u>	<u>43.7</u>	<u>3.3</u>	<u>96.0</u>	<u>--</u>
Total manufactures	17.2	11.2	175.1	71.1	34.0	26.0
<u>Total above</u>	2,575.3	1,434.3	7,973.1	4,231.8	15.1	14.5
<u>Other commodities</u>	1,470.3	245.6	4,352.1	681.4	14.5	13.6
<u>Total Imports</u>	4,045.6	1,679.9	12,325.2	4,913.2	15.0	14.4

Sources: 1959-60 Japan: Annual Returns of Foreign Trade (Ministry of Finance).
1967-68 Various issues of Statistics of Foreign Trade, Series C (OECD).

Table V

	Imports by Soviet Union, fob				Annual Percentage Change	
	1959-60		1967-68		World	LDC's
	World	LDC's	World	LDC's	World	LDC's
	annual average, \$ million					
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Mineral fuels</u>	20.7	0	48.1	1.3	11.1	--
<u>Other Primary</u>						
<u>Agricultural</u>						
Alcoholic and non-alcoholic beverages	19.4	0	145.0	15.6	28.5	--
Cocoa	33.5	32.8	51.8	50.4	5.6	5.5
Coffee	13.1	11.7	22.5	22.5	7.1	8.5
Corn	0	0	17.0	9.6	--	--
Cotton	171.9	127.7	115.8	110.8	-4.9	-1.8
Crude animal and vegetable materials	21.3	4.0	14.6	5.2	-4.6	3.4
Dairy products ¹	2.9	2.9	1.9	0	-14.7	--
Feeding stuff	0	0	0	0	0	0
Fruits and vegetables	84.3	21.6	219.5	71.0	12.7	16.0
Hides	58.9	36.3	91.4	49.7	5.7	4.0
Livestock	25.5	20.3	22.4	21.2	-1.6	.6
Meat	42.9	1.0	38.0	0	-1.5	-2.2
Oilseeds	64.4	3.0	10.0	9.6	-20.6	15.5
Rice	75.5	6.6	56.8	51.9	-3.5	29.5
Rubber	162.5	147.9	117.9	117.9	-3.9	-2.8
Sugar	55.6	55.6	286.3	286.3	19.5	19.5
Tea	35.0	18.7	29.9	29.9	-2.0	6.1
Tobacco	70.2	3.2	81.8	7.2	1.9	10.7
Vegetable oils	30.4	4.2	20.3	16.2	5.2	18.0
Wheat	11.4	1.9	112.5	1.6	33.0	-1.6
Wool	104.9	58.4	98.9	52.5	-1.3	-1.3
Total agricultural	1,083.6	557.8	1,554.3	929.1	4.6	6.6

¹Butter only.

Table V (continued)

	Imports by Soviet Union, fob				Annual Percentage Change	
	1959-60		1967-68		World	LDC's
	World	LDC's	World	LDC's	World	LDC's
	annual average, \$ million					
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Non-agricultural</u>						
Copper	73.0	34.7	0	0	--	--
Fish	20.1	1.2	14.3	3.1	-4.1	12.6
Iron ore	0	0	n.a.	3.8	--	--
Tin	38.3	.1	20.0	4.7	-7.8	63.0
Wood	39.4	0	25.8	4.1	-5.1	--
Total non-agricultural	170.8	36.0	60.1	15.7	-12.3	-9.8
Total other primary	1,254.4	593.8	1,614.4	944.8	3.2	6.0
<u>Manufactures</u>						
Clothing	310.2	8.8	603.0	30.6	8.7	16.9
Cotton fabrics	60.2	0	44.1	11.9	-3.8	--
Footwear	133.5	3.3	298.6	11.7	10.6	17.0
Jute fabrics and jute	4.7	4.7	9.4	9.4	8.9	8.9
Pearls and precious stones	0	0	0	0	0	0
Veneer	6.0	.2	1.2	0	9.1	--
Total manufactures	514.6	17.0	956.3	63.6	8.0	17.9
<u>Total above</u>	1,789.7	610.8	2,618.8	1,009.7	4.9	6.5
<u>Other commodities</u>	3,561.8	82.3	6,355.3	288.7	7.5	17.0
<u>Total Imports</u>	5,351.5	693.1	8,974.1	1,298.4	6.7	8.2

Sources: Vneshniaia Torgovlia SSR (The Foreign Trade of the USSR) (Ministry of Foreign Trade.)

Table VI

	Imports by United Kingdom, cif				Annual Percentage Change	
	1959-60		1967-68		World	LDC's
	World	LDC's	World	LDC's	World	LDC's
	annual average, \$ million					
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Mineral fuels</u>	1,331.5	1,160.8	2,089.5	1,532.4	5.8	3.5
<u>Other Primary</u>						
<u>Agricultural</u>						
Alcoholic and non-alcoholic beverages	110.8	3.2	179.6	12.1	6.2	18.1
Cocoa	100.6	79.6	81.7	63.1	-2.5	-3.3
Coffee	41.7	37.2	68.8	56.4	6.5	5.3
Corn	178.3	21.3	223.3	17.0	2.9	-2.8
Cotton	198.6	110.9	129.1	73.5	-5.2	-5.0
Crude animal and vegetable materials	105.9	36.3	128.0	35.1	2.4	-.4
Dairy products	509.3	14.9	524.8	4.1	.4	-14.7
Feeding stuff	175.6	116.9	187.3	73.7	.8	-5.6
Fruits and vegetables	386.2	143.6	870.1	211.2	10.7	5.0
Hides	60.7	17.2	44.8	10.3	-3.8	-6.3
Livestock	88.6	0	137.8	0	5.7	0
Meat	929.2	204.5	992.4	136.7	.8	-4.9
Oilseeds	159.0	101.9	100.3	41.2	-5.6	-10.7
Rice	11.1	2.7	21.4	2.6	8.5	-.5
Rubber	199.0	164.9	119.6	82.1	-6.2	-8.3
Sugar	231.3	133.0	264.3	184.0	1.9	4.7
Tea	320.9	312.7	278.7	270.2	-1.8	-1.8
Tobacco	259.5	97.8	252.2	56.0	-.3	-6.7
Vegetable oils	97.4	80.3	109.8	72.9	1.5	-1.2
Wheat	298.5	23.9	285.7	9.5	-.6	-10.9
Wool	394.5	58.1	256.7	70.1	-5.2	2.4
Total agricultural	4,856.7	1,760.9	5,256.4	1,481.8	1.0	-2.2

Table VI (continued)

Imports by United Kingdom, cif

	1959-60		1967-68		Annual Percentage Change	
	World	LDC's	World	LDC's	World	LDC's
	annual average,		\$ million			
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Non-agricultural</u>						
Copper	338.5	233.1	532.5	319.9	5.8	4.0
Fish	140.9	1.3	185.5	8.4	3.5	26.0
Iron ore	220.6	97.5	196.7	68.9	-1.4	-4.2
Tin	4.0	1.6	28.9	26.2	28.0	41.8
Wood	460.7	62.9	541.4	76.9	2.0	2.5
Total non-agricultural	1,164.7	396.4	1,485.0	500.3	3.1	3.4
Total other primary	6,021.4	2,157.3	6,741.4	1,982.1	1.4	-1.1
<u>Manufactures</u>						
Clothing	43.3	37.0	240.9	110.8	23.9	14.7
Cotton fabrics	139.9	63.6	157.9	77.4	1.5	2.5
Footwear	43.1	10.6	76.3	22.0	7.4	9.6
Jute fabrics and jute	56.9	55.9	56.5	52.3	- .1	- .8
Pearls and precious stones	n.a.	n.a.	656.2	162.7	--	--
Veneer	121.4	10.6	182.2	22.8	1.8	10.0
Total manufactures	404.6	177.7	1,370.0	448.0	16.5	12.3
<u>Total above</u>	7,757.5	3,495.8	10,200.9	3,962.5	3.5	1.6
<u>Other commodities</u>	4,207.7	483.8	8,136.1	633.4	8.6	3.4
<u>Total Imports</u>	11,965.2	3,979.6	18,337.0	4,595.9	5.5	1.8

Sources: same as Table 3.

Table VII

	Imports by United States, fob				Annual Percentage Change	
	1959-60		1967-68		World	LDC's
	World	LDC's	World	LDC's	World	LDC's
	annual average, \$ million					
(1)	(2)	(3)	(4)	(5)	(6)	
<u>Mineral fuels</u>	1,570.5	1,437.8	2,389.4	1,729.3	5.4	2.3
<u>Other Primary</u>						
<u>Agricultural</u>						
Alcoholic and non-alcoholic beverages	264.4	2.7	577.4	6.7	10.3	12.0
Cocoa	178.6	163.0	168.9	153.0	- .7	- .8
Coffee	1,058.9	1,058.3	1,080.0	1,072.0	.2	.2
Corn	1.8	1.7	2.2	1.4	2.5	-2.4
Cotton	34.4	28.9	31.2	28.8	-5.8	- .1
Crude animal and vegetable materials	114.4	53.7	180.1	79.0	5.8	4.9
Dairy products	33.4	1.6	74.7	2.3	10.6	4.6
Feeding stuffs	32.6	14.1	103.2	65.1	15.5	21.0
Fruits and vegetables	304.8	206.9	604.2	435.6	8.9	9.7
Hides	78.9	40.0	69.9	37.0	-1.5	-1.0
Livestock	72.5	33.7	96.8	51.6	3.7	4.9
Meat	361.1	75.6	695.8	146.5	8.5	8.6
Oilseeds	72.7	68.7	66.3	59.6	-1.2	-1.8
Rice	1.7	0	0	0	--	0
Rubber	360.7	354.5	211.2	186.2	-6.5	-7.7
Sugar	545.4	535.7	665.0	611.9	2.5	1.7
Tea	54.2	49.1	59.4	50.4	1.2	.3
Tobacco	113.7	31.9	155.1	25.1	4.0	-2.9
Vegetable oils	77.1	51.0	122.3	94.5	5.3	8.0
Wheat	12.2	0	1.0	0	--	--
Wool	191.1	83.8	136.0	28.8	-4.1	-12.5
Total agricultural	3,964.5	2,854.9	5,101.7	3,135.5	3.2	1.2

Imports by United States, fob

	1959-60		1967-68		Annual Percentage Change	
	<u>World</u>	<u>LDC's</u>	<u>World</u>	<u>LDC's</u>	<u>World</u>	<u>LDC's</u>
	annual average, \$ million					
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Non-agricultural</u>						
Copper	210.8	46.4	755.7	440.3	17.3	32.0
Fish	306.8	79.6	576.1	204.9	8.2	12.5
Iron ore	317.1	198.4	449.2	151.3	4.4	-3.4
Tin	95.6	61.1	175.3	166.7	7.9	13.3
Wood	<u>370.2</u>	<u>35.9</u>	<u>509.6</u>	<u>43.3</u>	<u>4.1</u>	<u>2.1</u>
Total non-agricultural	1,300.5	421.4	2,465.9	1,006.5	8.3	11.5
<u>Total other primary</u>	5,265.0	3,276.3	7,567.6	4,142.0	4.6	3.0
<u>Manufactures</u>						
Clothing	272.9	83.9	748.0	335.4	13.5	18.9
Cotton fabrics	80.9	19.7	143.3	68.1	7.4	16.8
Footwear	117.7	8.6	325.7	33.5	13.6	18.5
Jute fabrics and jute	101.1	88.9	193.6	187.9	8.5	9.9
Pearls and precious stones	194.8	26.8	483.9	119.5	12.0	21.0
Veneer	<u>140.5</u>	<u>23.3</u>	<u>252.2</u>	<u>118.4</u>	<u>7.6</u>	<u>23.0</u>
Total manufactures	907.9	251.2	2,146.7	862.8	11.3	16.7
<u>Total above</u>	7,743.4	4,965.3	12,103.7	6,734.1	5.8	3.9
<u>Other commodities</u>	7,076.2	979.5	17,861.1	1,640.2	12.3	6.6
<u>Total Imports</u>	14,819.6	5,944.8	29,964.8	8,374.3	9.2	4.3

Source: same as Table 3.

The analysis ends with 1968 data because it was the latest year for which statistics were available and we begin with 1959, because a decade seemed a convenient time period.

In 1967-68 the EEC was the largest market for total sales by the LDCs, followed by the U.S., Japan, the U.K., and the USSR. This ranking in terms of size of market is identical if one considers only the twenty-six primary products excluding mineral fuel.

Where trends in imports are being considered the fact that some nations report imports cif and others fob does not lead to any distortion; however, for purposes of aggregation it is desirable to put all data on a common basis. We converted the cif data for the EEC, Japan, and the U.K. to an fob equivalent by assuming that the ratio of imports fob to imports cif for each commodity was equal to the ratio for all imports in 1967. This assumption gave the following conversion factors:

	ratio of imports fob to imports cif	
	world	LDCs
EEC	.979	.954
Japan	.961	.973
U.K.	.951	.950

SOURCE: Computed from trade data in Direction of International Trade, 1962-67.

Applying these conversions to the data in Tables IV, V, and VI makes it possible to summarize total imports by commodity as shown in Table VIII. In 1967-68 the five industrial nations imported commodities valued at \$30.3 billion fob from the developing nations, or about 74 percent of total LDC exports.

Table VIII

Imports, fob, by EEC, Japan, UK, US, and USSR

	1959-60		1967-68		Annual Percentage Change	
	World	LDC's	World	LDC's	World	LDC's
	annual average, \$ million					
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Mineral fuels</u>	6,007.8	4,796.6	12,432.3	9,579.6	9.5	9.0
<u>Other Primary</u>						
<u>Agricultural</u>						
Alcoholic and non-alcoholic beverages	682.9	255.3	1,082.4	125.3	5.9	-8.5
Cocoa	527.1	479.6	588.9	529.0	1.4	1.2
Coffee	1,619.1	1,584.5	1,870.5	1,821.9	1.8	1.8
Corn	470.7	184.4	1,082.1	314.5	11.0	6.9
Cotton	1,397.2	801.3	1,312.3	854.2	- .8	.8
Crude animal and vegetable materials	395.6	163.8	627.5	238.9	5.9	4.8
Dairy products	752.7	42.5	768.3	9.4	.3	-9.5
Feeding stuff	428.9	269.8	1,018.2	456.7	11.4	6.8
Fruits and vegetables	1,523.5	793.2	3,210.7	1,566.2	9.8	8.9
Hides	460.3	192.6	532.6	190.2	1.8	- .2
Livestock	362.4	54.0	530.6	75.1	4.9	4.2
Meat	1,552.4	345.4	2,326.2	444.6	5.2	3.2
Oilseeds	971.1	514.2	1,306.3	475.3	3.8	-1.0
Rice	152.4	57.2	181.7	99.7	2.2	7.2
Rubber	1,239.7	1,056.8	830.5	643.9	-4.9	-6.0
Sugar	1,047.5	922.9	1,502.3	1,271.9	4.6	4.1
Tea	421.5	390.1	403.5	378.4	- .5	- .4
Tobacco	640.8	186.9	832.8	159.3	2.6	-2.0
Vegetable oils	489.6	316.8	560.4	373.4	1.4	1.4
Wheat	714.4	65.5	949.2	49.0	3.6	-3.6
Wool	1,436.0	283.2	1,276.9	213.2	-1.5	-3.5
Total agricultural	17,285.8	8,960.0	22,793.9	10,290.1	3.5	1.7

Table VIII (continued)

	Imports, fob, by EEC, Japan, UK, US, and USSR				Annual Percentage Change	
	1959-60		1967-68		World	LDC's
	World	LDC's	World	LDC's		
	annual average, \$ million					
(1)	(2)	(3)	(4)	(5)	(6)	
<u>Non-agricultural</u>						
Copper	1,227.0	693.4	2,804.8	1,769.9	10.9	12.4
Fish	613.2	112.6	1,209.4	348.7	8.9	16.1
Iron ore	1,069.2	596.6	1,974.3	1,022.8	8.0	7.0
Tin	789.4	105.5	364.4	319.7	-9.2	14.9
Wood	1,637.6	361.2	3,008.5	853.4	7.9	11.4
Total non-agricultural	5,336.4	1,869.3	9,361.4	4,314.5	7.3	11.0
Total other primary	22,622.2	10,829.3	32,155.3	14,604.6	4.5	3.8
<u>Manufactures</u>						
Clothing	694.9	142.4	1,884.2	562.2	13.3	18.7
Cotton fabrics	330.2	82.8	431.3	169.2	3.4	9.3
Footwear	307.8	24.0	747.6	76.6	11.7	15.6
Jute fabrics and jute	235.2	218.3	361.1	347.3	5.5	6.0
Pearls and precious stones	388.0	56.2	1,622.2	406.2	19.6	28.0
Veneer	298.4	37.0	525.4	157.1	7.3	19.8
Total manufactures	2,254.5	560.7	5,571.8	1,718.6	12.0	15.0
Total above	30,884.5	16,186.6	50,159.4	25,902.8	6.6	6.1
Other commodities	22,999.5	3,617.3	49,548.6	4,393.2	10.1	2.5
Total Imports	53,884.0	19,803.9	99,708.0	30,296.0	8.0	5.5

Sources: Tables 3-7

LDC exports of the listed manufactured goods--footwear, cotton fabrics, veneer, clothing, jute fabrics, pearls and precious stones--grew at the extraordinary rate of 15 percent per year during the decade. It is true that they grew from a relatively low base; however, during the 1960s annual LDC exports of these manufactured goods to the industrial nations increased by more than \$1.1 billion. In striking contrast, the five industrial nations increased their imports of the twenty-six primary products by only 3.8 percent per annum during the decade. Fish was the only primary product which exhibited a growth rate as great as the average for all manufactured products. Imports from LDCs of several primary commodities (wood, tin, copper, and fish) grew by more than 10 percent per annum. Imports from LDCs of nine commodities (dairy products, wheat, beverages, tea, rubber, wool, hides, oilseeds, and tobacco) actually declined in value during the 1960s. It is of interest to note that industrial nation imports of primary products from the world declined for only five products (tea, tin, rubber, cotton, and wool). For each of these commodities except for wool, LDC exports account for more than 65 percent of imports by the industrial nations.

Among the industrial nations there is considerable variation in the rate of growth of primary product imports from the LDCs. The statistics summarized below support the UNCTAD contention that the rapid economic growth of rich nations triggered increased demand for exports of the developing nations. It will be observed that the industrial nations having the most rapid growth rate in real GNP also showed the greatest annual increase in imports of primary products from the developing countries. Excluding the Soviet Union for which we do not have current data concerning G.N.P., the growth rate in G.N.P. of the four nations ranks perfectly with the growth rate of their imports of primary products from LDCs.

<u>Nation</u>	<u>Annual Percentage Change in GNP, 1960-68</u>	<u>Annual Percentage Change in Imports of 26 Primary Products from LDCs, 1959/60-1967/68</u>
Japan	10.4	11.7
EEC	4.8	3.8
U.S.	4.7	3.0
U.K.	3.1	-1.1

There was also variation among the five nations with regard to individual commodity imports. For example, while the Soviet Union increased its cocoa imports at an annual rate of 5.5 percent, U.S. imports of cocoa fell by .8 percent per year during the decade. Variations such as these are in large measure attributable to differences in the relative level and growth rate of per capita income among the industrial nations and, in the case of the USSR, to changes in government policy towards consumption of "luxury" goods.

The changing importance of the five markets for various commodities raises the question of how well the LDCs were able to adjust to the rapid changes of the 1960s. Those who feel the stagnation of LDC exports is due mainly to stagnant world demand,¹ would expect the LDCs to have little difficulty in responding to shifts in world demand. Those who feel that inelastic export supply explains poor LDC export performance would expect them to respond less rapidly than the industrial nations to shifts in world demand.

In order to test these two alternative views, we examined the change in the LDC share of total imports of each commodity in each of the five industrial nations. As one might expect, the LDCs increased their share for some commodities in some markets and saw their share decline for other commodities in other markets. We projected hypothetical 1967-68 imports from LDCs for each commodity in the five markets on the assumption that the LDCs maintained their 1959-60 share of 1967-68 imports in each market. These projected imports are compared with actual imports

¹ Absolute in the 1950s and relative in the 1960s.

from LDCs for each commodity in Table IX. A positive value¹ indicates that the LDCs' market share declined during the decade. In the USSR and U.S. imports of primary products from the LDCs grew more rapidly than did imports from the world. Declining market shares for LDCs were observed in the EEC, Japan, and U.K.

If the LDCs had maintained their 1959-60 share for each of the 26 primary products in each of the five countries, 1967-68 sales to these industrial nations would have been \$919 million higher, or 6.3 percent above the actual level. This finding confirms the results of Cohen's earlier study in which it was estimated that for 23 primary products (excluding mineral fuels) imported by Canada, the United States, and Western Europe, imports from LDCs in 1962-64 would have been 8 to 9 percent higher if the LDCs had maintained their 1952-54 share of total imports for each commodity.²

It might be hypothesized that if developing countries were experiencing supply difficulties, their share of industrial country imports would fall most rapidly for those commodities where import demand was growing fastest. A simple non-parametric rank correlation was employed to test the validity of this proposition. The 26 primary products were ranked by (a) the annual rate of growth in imports from the world by all industrial countries and (b) the magnitude of gains or losses attributable to whether or not LDCs retained their 1959-60 share of industrial country imports in 1967-68. For example, in (b) the top ranked commodity was copper, where developing countries improved on projected imports by \$357 million as a result of increasing their market share; on the other end of the array, LDC exporters of wood lost over \$234 million as the result of erosion of their market share.

¹Positive in that the projected value of exports exceeded the actual value of 1967-68 exports.

²Benjamin I. Cohen, "The Less-Developed Countries' Exports of Primary Products," Economic Journal, 78 (June 1968), p. 342.

Table IX

Projected Imports, fob, Minus Actual Imports
from Developing Countries, 1967-68

	<u>EEC</u>	<u>Japan</u>	<u>UK</u>	<u>US</u>	<u>USSR</u>	<u>Total</u>
	annual average, \$ million					
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Mineral fuels</u>	-567.2	-95.4	275.0	459.4	-1.3	70.5
<u>Other Primary</u>						
<u>Agricultural</u>						
Alcoholic and non-alcoholic beverages	62.9	.4	- 6.7	.2	-15.6	41.2
Cocoa	4.5	- 1.1	1.5	1.2	.3	6.4
Coffee	-13.3	3.7	4.5	6.9	- 2.4	- .6
Corn	97.4	84.9	9.1	.6	0	192.0
Cotton	-78.3	1.5	- 1.3	- 2.7	-24.8	-105.6
Crude animal and vegetable materials	14.0	9.9	8.4	5.2	- 2.5	35.0
Dairy products	11.5	0	10.6	1.2	1.9	25.2
Feeding stuffs	128.2	6.3	48.4	-20.4	n.a.	162.5
Fruits and vegetables	36.3	- 4.9	106.4	-26.0	-14.8	97.0
Hides	15.6	12.4	2.2	- 1.6	6.6	35.2
Livestock	- 1.1	- 1.2	0	- 6.6	- 3.4	-12.3
Meat	8.2	4.3	77.6	- 5.3	.9	85.7
Oilseeds	128.0	42.8	22.0	3.1	- 9.1	186.8
Rice	12.9	23.0	2.5	0	-46.9	- 8.5
Rubber	24.7	7.2	16.1	21.4	-10.4	59.0
Sugar	15.7	57.1	-30.3	42.1	0	84.6
Tea	3.3	1.3	1.1	3.4	-14.0	- 4.9
Tobacco	23.1	- 5.9	37.0	17.9	- 3.5	68.6
Vegetable oils	8.0	- 1.1	16.7	-13.7	-13.4	- 3.5
Wheat	7.9	0	12.7	0	17.2	37.8
Wool	7.7	9.1	-30.7	30.8	2.6	19.5
Total agricultural	517.2	249.7	307.8	57.7	-131.3	1,001.1

Table IX (continued)

Projected Imports, fob, Minus Actual Imports from Developing Countries, 1967-68						
annual average, \$ million						
	<u>EEC</u>	<u>Japan</u>	<u>UK</u>	<u>US</u>	<u>USSR</u>	<u>Total</u>
	annual average, \$ million					
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Non-agricultural</u>						
Copper	-16.5	-112.0	44.5	-273.3	n.a.	-357.3
Fish	13.1	- 6.4	- 6.4	- 55.1	-2.2	- 57.0
Iron ore	-66.9	153.5	17.0	129.9	n.a.	233.5
Tin	-57.9	- 4.2	-14.0	- 54.7	-4.2	-135.0
Wood	-60.9	296.2	- 3.1	6.0	-4.1	234.1
Total non-agricultural	-189.1	327.1	38.0	-247.2	-10.5	- 81.7
<u>Total other primary</u>	328.1	576.8	345.8	-189.5	-141.8	919.4
<u>Manufactures</u>						
Clothing	-24.4	- 6.9	90.4	-107.3	-13.5	-61.7
Cotton fabrics	- 8.9	- 2.6	- 5.3	- 33.1	-11.9	-61.8
Footwear	- 4.3	0	- 3.0	- 9.7	- 5.3	-22.3
Jute fabrics and jute	- .6	0	3.0	- 17.9	0	-15.5
Pearls and precious stones	-31.0	- 20.7	n.a.	- 52.7	n.a.	-104.4
Veneer	- 8.5	- 3.2	- 6.6	- 76.5	.4	-94.4
Total manufactures	-77.7	- 33.4	78.5	-297.2	-30.3	-360.1
<u>Total above</u>	-316.8	448.0	699.3	-27.3	-173.4	629.8

Sources: Tables 3-7.

The correlation coefficient between (a) and (b) was minus .44. The negative coefficient indicates that for commodities where the rate of industrial country imports from the world was most rapid, LDCs experienced the largest losses as the result of not maintaining their market share.¹ The test was repeated for the 21 primary products classified as agricultural. The negative correlation increased to .60, clearly significant at the 99 percent level. Rice and cotton were the only agricultural commodities where the industrial nations increased their imports from the developing countries more rapidly than from the world. With the exception of iron ore and wood, supply difficulties were mainly in the agricultural sector.

¹The rankings were made on the basis of the absolute dollar gap between actual and projected LDC exports for each commodity. This procedure could have distorted results in that a commodity with small absolute exports would be unlikely to rank either high or low in spite of a significant change in the LDCs' share. To compensate for this, the test was repeated with the absolute dollar gap "normalized" by representing it as a percentage of the actual 1959-60 world imports. The results of this test were not significantly different from those employing the absolute gap values.

III

AGRICULTURAL EXPORTS

Historically sales of food and agricultural raw materials have provided the bulk of LDC export earnings. Yates estimated that in 1913 export earnings from agricultural products accounted for about 68 percent of total export earnings of the countries of Latin America, Africa, and Asia, excluding Japan.¹ At the close of the Korean War, agriculture's share of export earnings of the same countries had fallen to 48 percent. The declining relative importance of agricultural products accelerated during the 1960's. Between 1959-60 and 1967-68, LDC sales of the 21 agricultural commodities to the industrial countries grew from \$8,960 million to \$10,290 million. This modest increase amounted to an annual growth rate, on an fob basis, of 1.7 percent. This is less than one-third the growth rate of total LDC exports to industrial nations. At the beginning of the decade, the included agricultural commodities accounted for 45.2 percent of total LDC exports to the five industrial nations. By the end of the decade, this percentage had fallen to 34.0.

In 1967-68 the United States imported agricultural products valued at more than \$3.1 billion from developing countries. LDC sales of agricultural commodities to the U.S. rose by \$281 million during the 1960's. Large gains were recorded by meat, fruits, and vegetables--"luxury foods" with relatively high income elasticities. Despite the inroads of substitutes and protective quotas, imports of raw jute and sugar also rose significantly. Soviet Union imports of agricultural commodities from the developing countries rose by \$371 million during the decade; however, approximately \$231 million of this increase was Cuban sugar, mainly for reexport to Eastern European countries. Japan has emerged as a major market for the agricultural exports of developing nations.

¹P. Lamartine Yates, Forty Years of Foreign Trade (London: George Allen & Unwin Ltd., 1959).

At the close of the decade Japan was importing over \$1.0 billion per year of agricultural products from LDC's, a \$341 million increase from 1959-60. Traditional ties and lower transportation costs make the Japanese market more accessible than Europe or North America to the developing nations of Asia. Japanese imports of fruits and vegetables, meat, tropical beverages, and corn from developing countries all grew by at least 10 percent annually. On the negative side of the ledger, Japan has historically been a major importer of rice. In 1969 Japan had significant surpluses of rice and imports fell to an insignificant level. Confronted with burdensome surpluses of rice, Japan is meeting its aid commitments to Korea and Indonesia with rice priced well below the world level.

Despite increased levels of protection by the EEC and higher levels of internal production, the Community increased its agricultural imports from LDC's by \$641 million between 1959-60 and 1967-68. With rising levels of per capita income, consumption of both red and poultry meat increased in the EEC, and LDC exports of meat and live animals to the EEC more than doubled during the decade. In addition, their exports of corn and feeding stuff to the Community rose sharply. Consumption of meat in the EEC should continue to rise; however, the recently initiated subsidies to encourage the feeding of wheat produced within the EEC have already dampened Community imports of feed grains both from developed and developing countries.

Imports of LDC agricultural commodities by the U.K. fell by \$279 million during the decade. This decline would appear to be the result of three forces: the relatively slow growth of national income in the U.K., a conscious choice to increase self-sufficiency in food production, and competition from synthetics. While it cannot be said that the U.K. economy was stagnant, since real GNP grew

by 3.1 percent annually during the sixties, this rate of growth was considerably slower than the growth rate in the other industrial nations.¹ For several years, both political parties in the U.K. have advocated increased self sufficiency in agriculture. The Economic Development Committee for Agriculture was instituted to formulate a policy of import savings. The Ministry of Agriculture has followed a plan to increase home production and has agreed to pursue policies to cut back imports of agricultural products to save about \$400 million annually by 1972-73.

There were large increases in LDC export earnings from particular agricultural commodities. Perhaps the best performance was registered by fruits and vegetables. The industrial nations increased their imports of fruits and vegetables from the developing nations by 8.9 percent annually during the study period. LDC receipts from the sales of fruits and vegetables rose by \$773 million during the decade. This commodity group accounted for more than 58 percent of the total dollar increase in LDC agricultural export earnings. It is of significance that LDC exports of processed fruits and vegetables increased by only \$78 million while the industrial nations increased their imports of processed fruits and vegetables from the world by more than \$263 million. It would appear that developing countries are not taking advantage of the opportunity available to earn foreign exchange through local food preservation.

As was noted earlier, during the 1960's the industrial countries increased their imports of agricultural commodities from the world far more rapidly than they increased agricultural imports from developing countries. If the LDC's had maintained their 1959-60 share of industrial country imports, their 1967-68 export earnings would have been \$1,001 million higher than the actual level.

¹See Table II for relative growth rates.

This loss amounts to 9.7 percent of the value of 1967-68 imports of agricultural commodities from LDC's by the industrial nations. For the 19 agricultural commodities in Cohen's analysis LDC losses by not maintaining market shares were similarly 9.7 percent of actual 1962-64 agricultural imports by industrial nations.¹ They sustained a loss of \$308 million in the U.K. market and \$517 million in the EEC market. These losses in annual sales represent the usurpation of a part of the LDC market share by imports from industrial countries. For example, the U.K. increased its imports of fruits and vegetables from the LDC's by 5.0 percent annually; however, imports from the world increased by 10.7 percent. This translates into a loss of market share amounting to \$106 million per year by 1967-68. In the case of the EEC market, the largest losses resulted from failure to retain market shares of oilseeds, feeding stuff, and corn. The erosion of the LDC market share in Japan amounted to \$250 million. The bulk of this loss may be accounted for by corn, sugar, and oilseeds imported from the United States and Australia. In the U.S. and U.S.S.R. markets, the developing countries have improved on their 1959-60 position for agricultural commodities in the aggregate, but for some products they have failed to keep pace with import demand.

It seems clear that in several commodities (for example fruits, vegetables, meat, corn, feeding stuff, oilseeds, beverages, and tobacco) developing countries have not kept pace with the import demand of industrial nations. The constraint is a combination of production capability and in some instances the ability to organize an efficient marketing system and maintain competitive quality. Policies pursued by some LDC's have also curtailed the flow of their export earnings. Overvalued exchange rates, heavy export taxes, taxes on vital agricultural

¹Cohen, op. cit., p. 342.

inputs, and a preoccupation with industrialization and import substitution have been harmful to the agricultural sector and its ability to export.

A variety of factors have been suggested as contributing to the stagnant nature of LDC export earnings from agricultural products. Two are most frequently cited: competition from synthetics and the protectionist practices adopted by developed industrial countries. We felt that five of the agricultural commodities--rubber, cotton, jute, wool, and hides--confronted important competition from synthetics. Total imports of these five commodities by the industrial countries from LDC's fell by an annual rate of 1.6 percent during the decade of the 1960's. The data indicate that wool imports from LDC's declined during the 1960's, although, surprisingly, LDC exports of cotton, jute and jute fabrics rose. Imports of rubber declined in all of the industrial countries and annual LDC sales of rubber fell by more than \$413 million by the end of the decade.

To developing countries the most onerous force contributing to the slow growth of agricultural export earnings are the agricultural policies adopted by the industrial nations and the resultant barriers to international trade. Sugar is the commodity most frequently cited when reference is made to the way in which trade barriers distort the operation of comparative advantage. Recently Raquibuzzaman estimated that if there were completely free trade in sugar, the export earnings of developing countries would increase by \$947 million annually.¹ It may be argued that with the exception of sugar, the products enjoying the highest level of protection in industrial countries are not major exports of developing nations. This is not entirely true; several LDC's export meat, tobacco, cereal grains, wool, copra, palm oil, peanuts, and cotton, all of which meet significant trade barriers. In several cases raw products are allowed to enter at relatively low rates; however, the imposition of excise

¹Raquibuzzaman, M., unpublished Ph.D. dissertation, Cornell University, 1970.

taxes curtails demand. Also, tariff restrictions are often high on processed or semi-processed agricultural commodities; thereby denying developing countries the opportunity to earn the value added by initial processing.

Sixteen agricultural commodities exported by LDC's compete directly with temperate country producers and confront tariff or quota barriers in one or more of the five industrial nations.¹ The total value of LDC exports of these commodities to the five industrial countries rose by 3.0 percent during the decade as compared with a growth rate of 1.7 percent for all agricultural products.

Agricultural tariffs are a valid explanation of the slow growth of LDC export earnings only if trade barriers increased during the decade. Import statistics of the EEC and the U.K. afford an opportunity to examine the performance of an economy and increased agricultural protectionism as determinants of agricultural imports. Between 1959-60 and 1967-68 the GNP of the EEC grew at an annual rate of 4.8 percent per year while the growth rate in the U.K. was 3.1 percent. Agricultural trade barriers were relatively constant in the U.K., while in the EEC they rose sharply as a result of adoption of the variable levy system and initiation of the Common Agricultural Policy (CAP). Table X contrasts the EEC tariffs before and after adoption of the CAP for 10 commodities. It should be noted that the higher tariff on corn may imply a lower effective tariff for meat even though the nominal tariff on meat went from 19 percent to 52.1 percent.

The rank correlation test was used to determine if there was any significant relationship between the rate of growth of EEC imports from the world for a particular commodity and the increase in nominal tariff protection during the decade. Results of the test indicated no statistically significant correlation.

¹meat, livestock, dairy products, wheat, rice, sugar, fruit and vegetables, beverages, cotton, wool, hides, corn, feeding stuff, oilseeds, vegetable oils, and tobacco.

Table X

Comparison of Pre-CAP and Post-CAP Level of Import Protection
for Agriculture in the European Economic Community*

Commodity	Pre-CAP (percent)	Post-CAP (percent)
Dairy Products	18.6	137.3
Wheat	13.5	72.4
Corn	13.5	72.4
Meat	19.0	52.1
Livestock	14.4	48.5
Sugar	75.8	41.9
Beverages	21.6	37.7
Tobacco	35.5	22.9
Fruits and Vegetables	15.0	15.0
Vegetable Oil	8.3	9.5

*Data for pre-CAP protection (1959) taken from report by Committee on Economic Development, Trade Negotiations for a Better Free World Economy, p. 79. Post-CAP protection estimated from unpublished data from the Office of the Special Representative for Trade Negotiations, Executive Office of the President, Washington, D.C.

Source: H.B. Malmgren and D.L. Schlechty, "Technology and Neo-Mercantilism in International Agricultural Trade," American Journal of Agricultural Economics, December, 1969, pp. 1326.

In an attempt to determine the relative importance of the increased EEC tariffs on imports an additional computation was made. For the 6 products for which EEC tariffs rose most markedly, EEC imports from the world grew by 4.3 percent annually while U.K. imports of the same commodities grew by only 1.3 percent. Attention should also be drawn to the fact that during the 1960's total EEC imports of agricultural products grew at a more rapid rate than did agricultural imports by the United States. The higher EEC tariffs were not initiated until the 1967-68 crop year and their full impact may not be manifest in the available data. The results of this analysis appear to indicate that the growth of an economy is a more important determinant of its level of agricultural imports than the level of tariffs.

There is little likelihood that export earnings of developing countries will increase as the result of industrial nations' reducing the level of protection afforded farm products. Developed countries are committed to farm programs which are directly dependent upon control of international trade. Meaningful reductions in trade barriers are possible only if nations are willing to alter their farm programs from an emphasis on price supports to income transfer measures which are not tied to agricultural production.

We have examined the pattern of agricultural exports by the developing countries as a whole. This amalgum of countries shares a single common characteristic--relatively low levels of per capita income. The developing countries encompass an enormous range of population densities, soils, climates, sizes of land holdings, and natural resource endowments. Agriculture, unlike many other activities, is a biological business closely tied to its environment. While employment in farming and agricultural exports dominate in many developing countries, it does not necessarily follow that their comparative advantage lies in

agricultural activities.

As a direct result of the "green revolution" and of favorable weather, many countries which a few years ago were major importers of food grains are approaching self sufficiency in wheat and rice. They must now decide on the future direction of their agricultural sectors. Should they compete aggressively for world wheat and rice markets or divert resources to the production of other agricultural commodities? Becoming self sufficient in food grains is quite different from gearing to enter the world market. Traditional exporters have the capacity to meet world grade standards, but newcomers would need substantial investments in milling equipment, graders, and storage facilities prior to entering the world rice and wheat markets on a competitive basis.

The comparative advantage of many developing countries lies with commodities which have a high labor component. One possible pathway to economic development would involve the simultaneous shift from agricultural commodities where technical improvements have reduced the labor component to agricultural and industrial products which are labor intensive. Taiwan is an example of a country which followed this route during the decade of the 1960's. Statistics showing the trends in Taiwanese export earnings from various commodities presented in Table XI are illuminating. Two traditional export crops, rice and sugar, accounted for 77.7 percent of total export earnings in 1952. By 1969 these commodities contributed only 4.6 percent of total exports. Exports of fresh fruits and vegetables, preserved fruits and vegetables, and canned asparagus and mushrooms were negligible in 1952; however, in 1969 they totalled one third of agricultural exports and approximately ten percent of all Taiwanese exports. Non-agricultural products, mainly wood, plywood, and manufactured goods rose by more than \$756 million, accounting for 69 percent of total export earnings in 1969.

Table XI
Exports of Selected Agricultural Commodities
from Taiwan, 1952 through 1969

Crop	1952	1958	1969
	(in millions \$US)		
Rice	23.2	13.9	4.2
Sugar	69.7	48.3	46.4
Tea	5.7	11.7	13.6
Citronella	2.4	1.7	2.1
Bananas	6.6	57.2	59.2
Other fruits (fresh)	.7	5.2	6.9
Canned Pineapple	2.0	19.0	20.7
Fruits, preserved	.2	9.1	11.3
Vegetables (fresh)	.2	6.8	6.0
Canned Mushrooms	----	30.7	32.3
Canned Asparagus	----	33.1	31.6
Vegetables, preserved	----	11.3	15.9
<hr/>			
Total agricultural exports	113.8	317.0	349.3
Non-agricultural exports	5.7	524.8	761.3
Total exports	119.5	841.8	1,110.6
Agricultural exports as % of Total exports	95	38	31

Source: 1952 data are from the Taiwan Statistical Data Book, 1968 data from CIED Executive Yearbook, Foreign Exchange Statistics, 1968, Foreign Exchange Department, Bank of Taiwan, and 1969 data are from same as 1968 and Foreign Exchange Department, Central Bank of China.

Taiwan provides an example of how agricultural production and exports can be adjusted to compensate for changed supply and world demand conditions. At the beginning of the 1950s there was a distinct need to increase foreign exchange earnings, and the outlook for traditional agricultural exports was not encouraging. The world tea market was unpromising, and Taiwan was a high cost sugar producer. Emigration from mainland China had greatly expanded the domestic demand for rice. The reduced availability of rice for export, resulting from rapidly increased internal demand, is not unique to Taiwan. The loss of LDC market shares, discussed earlier in this section, is due in part to the rapid rise in domestic demand for agricultural products, which still have a relatively high income elasticity of demand in most developing countries.

These forces, coupled with rising land pressure and the distinct seasonality in the use of agricultural labor, provided for altered agricultural production. The sugar industry was revitalized by planting new strains of cane and closing inefficient crushing mills. Specialty crops, which are both labor and land intensive, were introduced. A large share of the output was processed and became competitive in world markets.

Taiwan's sugar refineries and pineapple canning facilities are government owned, and available evidence suggests that a majority of food processing firms are owned by nationals. "Export processing zones" have been established in Taiwan for certain manufactures. A foreign firm can bring component parts into these enclaves and employ cheap local labor to assemble industrial products for reexport. A long list of agricultural products, notably rubber, coffee, sugar, cotton and other fibers are also transported internationally for processing. Two questions then arise: why is the food processing done in Taiwan, and why are food processing facilities domestically owned?

The answer to the first of these questions is relatively straightforward.

Foods such as the fruits and vegetables processed in Taiwan are bulky and perishable, making it uneconomic to transport them any significant distance prior to canning or freezing. Even in the United States and Europe, where well developed transportation facilities exist, food processing is located near the point of production and is not moved to other areas enjoying lower labor costs.

The answer to the second question, concerning why multinational firms are not engaged in processing foods within Taiwan, is more mercurial. Several factors provide at least a partial explanation. The technology of food processing is not complex, nor is it covered by important patents. The cost of constructing and operating a plant of efficient size is not prohibitive. The often prohibitive barriers to entry imposed by technology or capital do not, therefore, preclude a domestically owned firm from entering food processing.

Where multinational firms are processing agricultural products, they are typically also engaged in production of the raw product. Plantation operations such as rubber, bananas, tea, coconuts, and to some degree cocoa, sugar, coffee, and beef are dependent upon low cost land used extensively. Where land costs are high and where land constitutes a major part of total production expenditures, such as in vegetables and some fruits, the processing firm has less incentive to engage in agricultural production. Farmers who have inherited land, or seen its price appreciate slowly, tend to view it as a consumption item as well as a productive resource. Typically, farmers who wish to continue in production do not continuously evaluate the opportunity cost of capital invested in their land and are willing to produce even if returns to land are very low. Unless a processing firm can realize considerable cost savings through economies of scale or other advantages--such as control over quality, or delivery timing--they have little incentive

to tie up capital in land. Taiwanese food processing plants need not be integrated backwards to be competitive.

We may conclude that the value added by the production and processing of foods in Taiwan is based on their unique characteristics: perishability, requirements for fertile high valued land, and few barriers to entering processing. A word of caution is in order. There may be significant barriers to entry at the marketing level. A large part of Taiwan's exports of canned and processed foods go to Japan where food marketing chains are not well established. Mushrooms and other specialty items which entered the European and American markets did not meet significant obstacles since their dollar value was not great, nor were they in competition with well-established branded lines. However, the route to the super market shelf for such products as soups, ketchup, and similar items may not be as free of obstacles.

IV. Industrial Exports

Despite the failure of the rich countries to grant any new tariff preferences to the LDCs during the 1960s, LDC exports of manufactures grew by about 13 percent per year between 1960 and 1968, reaching \$6.9 billion in 1968.¹ Imports of the six manufactures we examined grew somewhat faster during the 1960s than the average manufacture. The rest of this section poses some questions about LDC exports of manufactures without supplying much evidence for answers.

By analogy with the historical development of the presently developed countries, one can argue that the ability to sell manufactures in world markets is an indication that a nation is no longer "underdeveloped." This belief probably assumes that the composition of a nation's exports reflects the composition of its domestic output; Linder, for example, develops the theory that a country exports a manufactured item only when it has domestic consumption of the item.² In recent years a new phenomenon has occurred: LDCs exporting manufactured commodities which are not sold domestically. This phenomenon is related to the expansion of the "multinational" firm. Scattered evidence suggests that a large fraction of the exports of manufactures from LDCs are accounted for by such firms. For example, between 1957 and 1966 Latin American exports of manufactures rose from \$709 million to \$1,613 million and subsidiaries of U.S. firms accounted for 65 percent of this increase of \$804 million.³ Casual observation suggests a large fraction of the manufactured exports of Korea and Taiwan are by companies that are closely linked--the link ranging from wholly owned subsidiaries to technical agreements--with foreign firms.

¹International Trade 1968 (Geneva: GATT, 1969), pp. 233-35. GATT defines manufactures as SITC sections 5-8, excluding non-ferrous metals (SITC 68).

²Staffan B. Linder, An Essay on Trade and Transformation (New York: John Wiley and Sons, Inc., 1961).

³The Effects of United States and Other Foreign Investment in Latin America (New York: The Council for Latin America, Inc., 1970), p. 29. We owe this reference to Raymond Vernon.

The foreign firm provides information about potential foreign customers to the local business and "guarantees" the local commodity to the foreign buyer; the foreign firm may also supply production technology and managerial ability and improve the local firm's credit rating with local lenders. The direct provision of funds may be the least important contribution of the foreign firm.

The LDC supplies cheap labor. Some economists have argued that historically cheap labor was really expensive labor because it was unskilled and undisciplined.¹ Modern production techniques now allow workers to learn quickly and, at least in some LDCs, women are docile. For example, an American firm reports that it took two weeks less time to train Korean girls to assemble semi-conductors and transistors than to teach American girls the same job; this firm estimates that its production costs in Korea are one-tenth of production costs in its plant in Arizona. Korean girls work 60-66 hours per week in a plywood factory alleged to be the world's largest (with annual exports of \$30 million), in conditions a reporter described as reeking of formalin fumes and filled with sawdust.² This situation seems inconsistent with the Korean government's statement that "no female...is authorized to engage in any form of labor considered detrimental to the public good or harmful to a person's health.... Standard working hours, which may not be exceeded, are 48 hours a week."³ Such conditions are, however, consistent with early Japanese experience.⁴

¹See, for example, Alexander Gerschenkron, "Economic Backwardness in Historical Perspective," Bert Hoselitz, ed., The Progress of Underdeveloped Areas (Chicago: University of Chicago Press, 1952).

²New York Times (May 12, 1970), p. 57.

³Korea: A Market for Your Investment (Korea Exchange Bank, 1968), p. 37.

⁴Henry Rosovsky, Capital Formation in Japan 1868-1940 (The Free Press of Glencoe, 1961), pp. 102-104.

There is now evidence that a government can so affect domestic price relationships through taxes, subsidies, and licenses that it can greatly stimulate domestic production at the expense of imports and that such import replacement may lead to a situation where a firm makes profits in domestic currency at the same time its value added is negative when both its inputs and output are valued in world prices.¹ Such a situation can occur even when most of a particular plant's output is exported if, for example, export incentives take the form of allowing a multi-product firm to import raw materials equal in value to a large fraction of the value of its exports and to use some of these imports to produce other products which are sold in a highly protected domestic market. We do not know how much value added is contributed by the manufactured exports of, say, Taiwan or Korea.

Even when the industrial exports represent positive value added, firms that concentrate on exports may become "enclaves," and there is, of course, a large literature on this subject.² Some claim that much of the LDCs lack of development

¹See references and discussion in Benjamin I. Cohen, "The Use of Effective Tariffs," Journal of Political Economy (forthcoming).

²For example, H.W. Singer, "The Distribution of Gains Between Investing and Borrowing Countries," American Economic Review, 40 (May 1950), pp. 473-485 and Hla Myint, "The 'Classical Theory' of International Trade and the Underdeveloped Countries," Economic Journal, 68 (June 1968), pp. 317-337; both are reprinted in Readings in International Economics, eds. Caves and Johnson (Homewood, Illinois: Richard D. Irwin, Inc., 1968). See also Raymond Vernon, "Foreign-owned Enterprise in the Developing Countries," Public Policy, 15 (1966), pp. 361-380, Gunnar Myrdal, An International Economy, Problems and Prospects (New York: Harper and Brothers, 1956) and Stephen Hymer and Stephen Resnick, "International Trade and Uneven Development," (Economic Growth Center Discussion Paper No. 83, January 1970). Various writers stress different factors in explaining the development of these enclaves. Myint deals with the lack of a domestic transport system and of a smoothly operating market mechanism in the LDC; Myrdal says (p. 100) "that the course of events took this 'colonial' character was not mainly due either to the designs of those who provided the capital and built the economic enclaves, or to the intentional policies of their governments. It was much more the natural outcome of the unhampered working of the contemporary market forces." Hymer and Resnick stress (p. 15) the deliberate policy of the governments of the colonial powers, "as Europe formulated a single strategic conception for the development of the world economy and planned a new division of labor."

over the last century is due to such enclaves in the exportation of primary products. Others--such as Myint and Vernon--suggest foreign investment was better for the LDC than no investment. The enclaves paid low wages, failed to introduce a technology that might be better suited to domestic conditions than the one used in North America or Europe, and did not initiate in the poor country the mysterious process by which continuous increases in productivity are achieved in the rich nations. While the present foreign firms now tend to pay their workers more than they could earn elsewhere, it is not yet clear that the foreign firm is modifying its production techniques--which presume scarce labor and abundant capital--or is teaching its local workers and managers the tricks of continuous productivity growth. A firm that exports almost all its output may also affect the rest of the economy through its purchase of inputs and reinvestment of its earnings in other activities. Vernon suggests, however, that international firms investing in LDCs in order to sell in world markets are likely to choose those products that have few of these links with the rest of the economy.¹ Japan is the major historical example of a country which successfully utilized its large supply of cheap labor to become competitive in world markets for manufactures, but Japan did not allow foreign firms to control its development. There is little contemporary evidence either on the extent of the links between those manufacturing firms concentrating on export and the rest of the economy or on whether these links differ for foreign firms and domestic firms.

The Pearson Commission says "the growth rates of individual developing countries since 1950 correlate better with their export performance than with any

¹Vernon seems to apply his hypothesis to foreign firms in LDCs that produce for both the domestic market and for export. Raymond Vernon, "International Investment and International Trade in the Product Cycle," Quarterly Journal of Economics, 80 (May 1966), pp. 190-207.

other single economic indicator."¹ In the past growing exports both reflected economic growth and contributed to it. Having noted this historical relationship, policymakers in both the rich countries and the LDCs may seek to promote LDC exports at almost any cost, thereby destroying their link with economic growth.

¹Partners in Development, Report of the Commission on International Development (New York: Praeger, 1969), p. 45.

Table A

<u>Commodity</u>	<u>SITC Number</u>	
	<u>1959-60</u>	<u>1967-68</u>
Mineral fuels	31	32-35
Alcoholic and non-alcoholic beverages	11	11
Cocoa	072	072
Coffee	071	071
Corn	044	044
Cotton	263	263
Crude animal and vegetable materials	29	29
Dairy products	02	02
Feeding stuffs	08	08
Fruits and vegetables	05	05
Hides	211	211
Livestock	00	00
Meat	01	01
Oilseeds	221	221
Rice	042	042
Rubber	23	23
Sugar	061	061
Tea	074	074
Tobacco	121	121
Vegetable oils	412	421 and 422
Wheat	041	041
Wool	262.1 and 262.2	262.1 and 262.2
Copper	682	682
Fish	03	03
Iron ore	281	281
Tin	687.1	687.1
Wood	24	24
Clothing	841	841
Cotton fabrics	652	652
Footwear	85	85
Jute fabrics and jute	264 and 263.04	264 and 653.04
Pearls and precious stones	672	667
Veneer	631	631