Volume Title: Foreign Trade Regimes and Economic Development: Colombia

Volume Author/Editor: Carlos F. Diaz-Alejandro

Volume Publisher: NBER

Volume ISBN: 0-87014-509-6

Volume URL: http://www.nber.org/books/diaz76-1

Publication Date: 1976

Chapter Title: Minor Merchandise Exports

Chapter Author: Carlos F. Diaz-Alejandro

Chapter URL: http://www.nber.org/chapters/c4040

Chapter pages in book: (p. 33 - 79)

Chapter 2

Minor Merchandise Exports

It was seen in the previous chapter that coffee exports enjoy an effective exchange rate which is about half that applicable to minor exports. But while this situation suggests a roughly similar gap in the average domestic resource costs of the two types of activity, the long-run growth prospects of coffee exports have appeared dim throughout most of the postwar period, making the expansion of minor exports a key policy target.

The transition from heavy reliance on a low-cost staple with obvious comparative advantage but limited growth prospects to more diversified, costly, and dynamic export earnings has been long and difficult, as documented in Chapter 1. The discontinuity in average domestic resource costs between coffee and minor exports reinforced export pessimism on both demand and supply grounds. Nevertheless, it has been clear for many years that growth of Colombia's current exchange earnings would have to be faster than was likely to be achieved from coffee exports alone if her economy was to attain a sustainable GDP expansion of, say, 6 per cent per year. Import substitution, under Colombian and postwar world circumstances, was insufficient by itself to sustain such growth consistently, much less efficiently. A more diversified and prosperous outlook for current exchange earnings was also necessary in order to decrease reliance on concessional capital inflows, and create for Colombia the option of tapping world private capital markets on commercial terms.

In this chapter, I will first describe the commodity composition of minor exports and their geographical destination and other characteristics so as to draw up a rough typology of these very heterogeneous goods. Next, I will

33

discuss policy instruments used to encourage minor exports. I will then attempt to explain why the efforts to expand and diversify Colombian exports have been successful, giving particular attention to the role played by effective exchange rate policy; in doing so, I will be building on the substantial work of others.[1] Ideally I would like to be able to account for the annual growth rate of about 10 per cent per year in recorded (or registered) minor exports between 1948–50 and 1970–72, as well as for deviations around that trend. I will explore possible differences between the economic characteristics of minor exports to LAFTA and those to the rest of the world. Finally, I will discuss the outlook for nontraditional exports, and take a preliminary look at their role in achieving Colombian development targets.

AN OVER-ALL VIEW

During 1948–50, coffee represented 75 per cent of Colombia's noncontraband merchandise exports, with crude petroleum accounting for an additional 16 per cent. As may be seen in Table 2-1, these figures were virtually unchanged from 1957 to 1959. By 1970–72, however, minor recorded exports had reached 34 per cent of the total while the coffee share had slipped to 60 per cent. The expansion in the dollar value of minor exports between 1957–59 and 1970–72 accounts for 84 per cent of the total increase in recorded exports between those two dates.

A glance at Table 2-1 indicates that the expansion of recorded minor exports has been quite irregular, particularly during the earlier years when the base was small. Changes in world prices and variations in the contraband flow could induce enormous percentage changes in the dollar value of recorded minor exports. The point emerges more clearly from the following tabulation, showing the number of years in which the year-to-year percentage changes were registered:

	Number of Years		
Year-to-Year Percentage Change in Value of Recorded Minor Exports	*Whole Period*	*1949–60*	*1961–72*
More than 40 per cent	3	3	0
From 20 to 40 per cent	4	0	4
From 10 to 20 per cent	8	3	5
From 0 to 10 per cent	2	0	2
From −10 to 0 per cent	2	1	1
Less than −10 per cent	5	5	0
Total	24	12	12

TABLE 2-1

Colombian Merchandise Exports, f.o.b., 1948–72
(millions of current U.S. dollars; trade returns)

	Total Recorded Merchandise Exports	Recorded Coffee Exports	Recorded Crude Petroleum Exports	Recorded "Minor" Exports	Nonrecorded Merchandise Exports
1948	306.6	225.2	45.1	36.3	n.a.
1949	335.2	242.3	58.2	34.7	n.a.
1950	393.6	306.4	64.8	22.4	n.a.
1951	483.8	359.4	73.5	50.9	n.a.
1952	483.0	379.9	71.5	31.6	n.a.
1953	605.5	492.3	76.3	36.9	n.a.
1954	669.1	550.2	75.8	43.1	2.4
1955	596.7	487.4	61.5	47.8	8.6
1956	551.7	413.1	71.2	67.4	70.6
1957	511.1	390.1	72.3	48.7	78.8
1958	460.7	354.7	65.1	40.9	66.4
1959	473.0	363.4	73.3	36.3	69.0
1960	464.6	333.5	80.0	51.1	55.0
1961	434.8	307.9	68.2	58.7	35.0
1962	463.2	331.8	60.6	70.8	35.0
1963	446.7	303.0	77.2	66.5	25.0
1964	548.1	394.2	75.0	78.9	35.0
1965	539.1	343.9	88.2	107.0	40.0
1966	507.6	328.3	70.6	108.7	42.0
1967	509.9	321.5	61.2	127.2	43.0
1968	558.3	351.4	36.3	170.6	40.0
1969	607.4	343.9	56.7	206.8	43.0
1970	735.6	466.9	58.6	210.1	63.0
1971	686.0	399.7	51.2	235.1	63.0
1972	742.9	430.4	30.8	281.7	63.0

n.a. = not available.
SOURCE: IMF-IFS, various issues, and IMF-BOPY, various issues. Note that the latter publication contains corrections for timing and valuation when coffee exports as shown in trade returns are incorporated into the balance-of-payments accounts. The timing correction arises from changes in coffee stocks held abroad by Colombian institutions. Other minor discrepancies remain between data shown in this table and those in later ones and in the text because of the timing of revisions. See text for explanation of nonrecorded merchandise exports. The 1972 data are preliminary.

While the diversification and larger base of minor exports during the 1960s and early 1970s yielded year-to-year changes less disparate in their total value, a considerable spread remained. During the more recent period one may note four major export surges, each preceded by declines or stagnation in the export level: 1960–62; 1964–65; 1967–69; and 1971–72.

The ample opportunities which Colombian geography provides for smuggling goods into the country will be noted in Chapter 3. Overvalued exchange rates, export taxes, and prohibitions, as well as export quotas on some commodities, such as coffee, and old-fashioned criminal activities, as with emeralds, have provided the incentives for smuggling goods out of the country (nonrecorded or unregistered merchandise exports). It is common knowledge that every year considerable amounts of unregistered cattle, textiles, coffee, and other goods cross the border from Colombia to Venezuela and Ecuador. Colombian emeralds find their way to European and Japanese markets in mysterious ways. Estimates of the value of such trade are naturally gross. Unusual external events, such as the Venezuelan boom of 1956–58, as well as changes in domestic policies, lead to variations in the level of smuggling, but only the rough outlines of those fluctuations have been estimated. The last column of Table 2-1 presents the most reputable of those calculations, found in the *Balance of Payments Yearbook* of the IMF and covering all commodities. According to those figures, nonregistered exports reached 14 per cent of the value of registered exports from 1956 to 1960, and declined to 8 per cent during 1969–71.

Most nonregistered exports can be classified as minor, as may be seen in the last column of Table 2-2. Thus, during 1957–59 more minor exports seem to have left Colombia unrecorded than recorded. While not too much weight should be placed on smuggling estimates, it does appear that a small part of the expansion in registered minor exports observed between 1957–59 and 1969–71 took place at the expense of smuggling. Adding up registered and unregistered minor exports, one obtains a growth rate of 8.6 per cent per year from 1957–59 to 1969–71. This rate, while not as spectacular as the rate of 14.7 per cent per year obtained for registered minor exports alone, is still remarkable. In particular, while the surge observed for registered minor exports during 1960–62 may represent to an important extent the replacement of smuggling by legal exports, post-1963 advances cannot be questioned on those grounds. The combined series for all minor exports shows an average annual growth rate of 17.4 per cent between 1963 and 1971.

TYPES OF MINOR EXPORTS

Colombian minor exports comprise a diversified group of commodities. The five largest minor export items during 1970 (cotton, bananas, live animals,

TABLE 2-2

Colombian Minor Exports, f.o.b., 1950–71
(millions of current U.S. dollars)

	Recorded Tobacco, Sugar, Cotton, and Fresh Fruit (mainly bananas)			Recorded Other Minor Exports			
	Non-LAFTA Countries	All Countries	LAFTA Countries	Non-LAFTA Countries	All Countries	LAFTA Countries	Nonrecorded Minor Exports
1950		10.6			12.2		n.a.
1951		10.8			40.1		n.a.
1952		10.9			20.7		n.a.
1953		14.1			22.8		n.a.
1954		15.7			27.4		2.4
1955		19.0			28.8		8.6
1956		31.7			36.9		16.0
1957	29.4		—	11.5		5.2	60.0
1958	17.5		—	18.2		4.0	55.0
1959	15.9		—	18.8		3.8	55.0
1960	28.8		—	17.9		5.6	45.0
1961	33.0		0.9	18.1		6.2	25.0
1962	38.6		0.9	24.5		6.6	25.0
1963	34.3		1.1	25.6		5.4	15.0
1964	31.1		0.4	37.1		10.2	25.0
1965	41.5		0.2	48.1		17.2	12.0
1966	36.8		0.2	44.7		25.9	13.0
1967	57.1		0.7	48.7		19.8	28.0
1968	68.0		5.6	72.0		24.7	30.0
1969	73.5		2.1	96.7		34.6	33.0
1970	72.8		1.9	90.2		45.2	53.0
1971	n.a.		n.a.	n.a.		n.a.	59.0

n.a. = not available.
Source: Basic data obtained from DANE-ADCE, various issues; also UNFAO-TY, various issues; and as in Table 2-1 for nonrecorded minor exports. DANE-ADCE is published with a considerable lag; minor inconsistencies with the sources of Table 2-1 also exist.

sugar, and fuel oil) accounted for less than half of registered minor exports. During the 1960s new items were constantly added to the list, which by now includes such varied products as gold, paper and cardboard, meat, tobacco, wood, shoes, seafood, glass, oilseed cakes, chemicals, furs, cement, hides, precious stones, tires, books, fresh-cut flowers, and dog toys. It should be noted that many minor exports, including some of the largest, are hardly "nontraditional": during the nineteenth century tobacco was a major export item, and cotton was also exported during the U.S. Civil War. Foreign-run plantations grew and exported bananas since early in this century, often under dismal conditions which more than once led to bloodshed. A more precise idea of recent minor export diversification is given by the following tabulation, showing the number of SITC three-digit categories having the indicated export values in U.S. dollars:

	1960	*1964*	*1968*	*1970*
More than $5 mill.	3	4	6	9
Between $1 mill. and $5 mill.	6	12	22	24
Between $0.5 mill. and $1 mill.	1	9	9	12
Between $0.1 mill. and $0.5 mill.	10	20	46	47

Both tables 2-3 and 2-4 also show the diversification of minor exports, the former from 1957 through 1970, and the latter in greater detail for 1970. A look at these tables suggests that various minor exports are likely to have different domestic supply price elasticities as well as different input requirements. As indicated in tables 2-2 and 2-4, the destination of minor exports, as between LAFTA and non-LAFTA countries, fluctuates sharply from item to item. Foreign demand income elasticities will also vary as between, say, textiles and meat.

Somewhat loose but convenient and complementary classification schemes are used in tables 2-2, 2-3, and 2-4, and can be summarized as follows:

	Share in Registered Minor Exports		*Average Annual Growth Rate from 1957–59 to 1968–70*
	1957–59	*1968–70*	
Bananas, cotton, sugar, tobacco	50.6%	38.1% ·	11.8%
Manufactured goods[2]	34.2	41.0	17.1
Miscellaneous minor exports	15.2	20.9	18.6
Total	100.0	100.0	15.2
Non-LAFTA	89.5	80.6	14.1
LAFTA	10.5	19.4	21.8
Total	100.0	100.0	15.2

Four important primary products, which made up half of minor exports during the late 1950s, still accounted for nearly 40 per cent of those exports in 1968–70. In spite of their primary-product label, their dollar value grew at an impressive annual rate. Since both manufactured goods and the miscellaneous category are far from homogenous in their economic characteristics, regardless of what classification is followed, a closer look at each of the three subgroups is in order.

Bananas, Cotton, Sugar, and Tobacco (BCST).

It is sometimes asserted that before a developing country can expand its exports and diversify away from its traditional staple, it must go through a

TABLE 2-3

Registered Minor Colombian Merchandise Exports, f.o.b., 1957–70
(millions of current U.S. dollars)

SITC Number and Category	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957
0 Food and live animals excl. coffee	70.4	63.1	53.5	45.3	41.3	40.1	18.6	22.4	20.9	21.1	15.4	15.5	16.1	26.9
051 Fresh fruits and nuts (bananas)	18.2	19.9	24.7	25.0	20.0	18.6	12.4	13.3	10.7	14.1	13.7	13.9	15.5	26.2
061 Sugar and honey	14.8	15.6	15.9	12.9	9.1	7.8	3.3	5.5	7.4	5.2	0	0	0	0.3
Other	37.4	27.6	12.9	7.4	12.2	13.7	2.9	3.6	2.8	1.8	1.7	1.6	0.6	0.4
1 Beverages and tobacco	7.2	7.3	4.9	4.4	5.6	7.2	9.5	7.3	5.7	4.1	2.4	2.0	2.0	2.9
12.1 Tobacco, unmfrd.	7.2	7.3	4.9	4.4	5.6	7.2	9.4	7.2	5.7	4.0	2.4	2.0	2.0	2.9
Other	0	0	0	0	0	0	0.1	0.1	0	0.1	0	0	0	0
2 Crude materials, inedible, excl. fuels	46.8	45.9	38.7	21.6	8.4	15.7	13.2	13.9	19.2	13.9	15.8	2.8	2.6	3.2
26.3 Cotton	34.5	32.8	28.1	15.5	2.3	8.1	6.4	9.5	15.8	10.6	12.7	0	0	0
Other	12.3	13.1	10.6	6.1	6.1	7.6	6.8	4.4	3.4	3.3	3.1	2.8	2.6	3.2
3 Mineral fuels, lubricants, etc., excl. crude petroleum	14.6	20.3	14.4	13.5	9.7	7.9	7.9	4.6	7.4	6.0	7.8	8.9	10.1	5.0
4 Animal and veg. oils and fats	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0
5 Chemicals	8.7	10.0	8.6	4.7	6.6	6.1	4.4	2.4	2.7	1.4	1.3	1.0	1.0	0.8
6 Mfrd. goods classified by material	42.2	49.1	40.9	31.4	30.2	24.1	19.6	11.3	10.0	6.3	3.4	4.4	3.9	4.0
7 Machinery and transport equip.	5.6	5.1	4.2	3.4	3.6	2.0	1.9	1.7	1.1	2.0	2.1	1.0	0.5	0.8
8 Misc. mfrd. articles	6.3	5.5	4.6	1.8	2.2	2.6	1.8	0.8	0.5	0.4	0.2	0.3	0.3	0.5
9 Commodities and transactions, n.e.s.	8.4	0.6	0.6	0.1	0	1.0	1.9	2.1	3.1	3.2	3.9	2.6	3.2	1.9
Total	210.1	206.9	170.3	126.3	107.6	107.0	78.8	66.3	70.6	58.2	52.3	38.5	39.6	46.0
Summary of main groups														
Fruits, sugar, tobacco, cotton	74.7	75.6	73.6	57.8	37.0	41.7	31.5	35.5	39.6	33.9	28.8	15.9	17.5	29.4
Mfrd. goods (3, 5, 6, 7, and 8)	77.4	90.6	72.7	54.8	52.3	42.7	35.6	20.8	21.7	16.1	14.8	15.6	15.8	11.1
Misc. minor	58.1	40.7	24.0	13.7	18.3	22.6	11.7	10.0	9.3	8.2	8.7	7.0	6.3	5.5

Source: Basic data obtained from DANE-ADCE, various issues, and UN-YOITS, various issues.

TABLE 2-4

LAFTA Share of Colombian Minor Exports by SITC Categories, 1970

		Registered Minor Exports	
	SITC Number and Category	Millions of U.S. Dollars	Per Cent Shipped to LAFTA
001	Live animals	$17.41	90.0%
011	Fresh meat	4.72	5.3
031	Fresh fish	4.83	0
051	Fresh fruits and nuts (mainly bananas)	18.21	0.5
061	Sugar and honey	14.78	0
081	Animal products	6.25	34.8
(0-other)	Other food and live animals	4.23	55.8
121	Tobacco, unmanufactured	7.17	0.3
(1-other)	Other beverages and tobacco	0.05	6.1
263	Cotton	34.55	5.1
266	Synthetic fibers	3.75	92.8
(2-other)	Other crude materials, inedible, excluding fuels	8.53	6.7
(3-other)	Other mineral fuels, lubricants, etc., excluding crude petroleum	14.58	12.7
4	Animal and vegetable oils and fats	0.04	0
513	Inorganic chemical products	2.43	61.4
514	Other inorganic chemicals	0.60	93.9
541	Medical and pharmaceutical products	2.68	75.8
581	Plastics, cellulose, resins	1.02	69.5
(5-other)	Other chemicals	1.96	44.8
61	Leather, skins, and their manufactures	5.67	2.9
62	Rubber manufactures, n.e.s.	1.29	82.6
63	Wood and cork manufactures	1.95	0.8
64	Paper and manufactured paper products	1.37	56.3
651	Threads and spun fibers	4.18	8.3
652	Cotton textiles	7.51	8.6
(65-other)	Other textile yarn and fabrics	1.02	24.5
661	Cement and construction materials	3.55	40.8
665	Manufactures of glass	3.16	13.1
667	Pearls and precious stones	3.55	0.5
(66-other)	Other nonmetallic and mineral manufactures, n.e.s.	1.49	29.6
67	Iron and steel	0.42	72.0
68	Nonferrous metals	4.42	3.8
69	Manufactures of metals, n.e.s.	2.58	55.5
7	Machinery and transport equipment	5.58	58.9
841	Clothing	1.10	11.2
851	Shoes	0.74	0.3
892	Printing	2.23	58.5
(8-other)	Other miscellaneous manufactured articles	2.20	45.8
9	Commodities and transactions, n.e.s.	8.37	0.1
	Total	210.14	22.4

TABLE 2-4 (*concluded*)

| | Registered Minor Exports | |
| | Millions of U.S. Dollars | Per Cent Shipped to LAFTA |
SITC Number and Category		
Summary of main groups		
Fruits, sugar, tobacco, cotton	74.71	2.5
Manufactured goods (3-other, 5, 6, 7, and 8)	77.26	26.8
Miscellaneous minor	58.18	42.1

Source: DANE-ADCE (1970).

process of import-substituting industrialization. Clearly, industrialization was not a precondition for expanding Colombian BCST exports from annual levels of $11 million during 1950–52 to $21 million during 1957–59 and $75 million during 1968–70. The expansion of BCST exports between the last two dates accounted for 35 per cent of the total increase in registered minor exports. Cotton alone was responsible for 21 per cent of that expansion, with sugar providing another 10 per cent. Import substitution in bananas, sugar, or tobacco was not a preliminary step to exporting; for cotton, however, the postwar story is different, as will be seen below.

Comparative advantage for these four commodities is rooted in the availability of Colombian natural resources, working within a certain range of labor and transport costs. By themselves, of course, these factors do not explain the level of BCST exports actually achieved during the postwar period nor their growth rate.

The relatively standardized nature of the items in the BCST group makes it possible to develop not only dollar-value time series but also both export quantity and unit-value series. These figures, presented in Table 2-5, show that the rapid growth in the dollar value of BCST exports between 1957–59 and 1968–70 was based on an expansion in their physical volume (averaging 15.5 per cent per year), with unit dollar prices declining between those two dates. It can also be seen that during the same interval, domestic output of these crops grew at a significantly lower rate than the quantity of exports (8.3 per cent vs. 15.5 per cent).

The behavior of the BCST export unit value series is interesting. One may note, first of all, its instability, which for 1957–70 has been about as great as that for coffee, although the BCST index comprises four different commodities. The average year-to-year change in coffee prices, disregarding signs, was 8.8 per cent; in the BCST unit value index, it was 8.7 per cent. During the difficult years of 1958 and 1959 both coffee and BCST prices plunged, and the crisis in the second half of 1966 was aggravated by the simultaneous deteriora-

TABLE 2-5

**Value, Quantity, Price, and Production Indices for Bananas, Cotton,
Sugar, and Tobacco (BCST), 1950–70**
(averages for 1957–69 = 100)

	Exports			Physical Quantity of Domestic Production
	Dollar Value	Quantity	Unit Value	
1950	26.6	n.a.	n.a.	35.7
1951	27.1	n.a.	n.a.	38.4
1952	27.4	n.a.	n.a.	39.5
1953	35.4	n.a.	n.a.	51.5
1954	39.4	n.a.	n.a.	59.7
1955	47.7	n.a.	n.a.	60.2
1956	79.6	n.a.	n.a.	61.6
1957	73.7	40.8	180.6	54.7
1958	43.9	37.0	118.8	57.8
1959	39.9	42.8	93.3	81.7
1960	72.3	75.0	96.5	87.4
1961	85.2	90.6	94.1	90.8
1962	91.1	88.2	103.2	90.4
1963	88.8	83.3	106.6	91.4
1964	79.1	73.7	107.3	84.7
1965	104.7	101.4	103.3	95.3
1966	92.9	109.7	84.6	115.8
1967	145.2	161.2	90.1	132.9
1968	185.1	202.6	91.3	160.2
1969	189.9	193.8	98.0	156.9
1970	187.7	193.8	96.8	147.3

n.a. = not available.

SOURCE: Export quantity and value data for each of the commodities obtained from DANE-ADCE, various issues. Domestic output for each of the commodities obtained from the national accounts. The composite index for the whole group was obtained by using the following weights, based on the percentage share of each of the commodities in their total export value (in dollars) during 1957–69: bananas (fruit), 44.04; cotton, 27.40; sugar, 16.02; and tobacco, 12.54. The same weights were used to obtain the export and domestic production quantity indices. The export unit-value index was obtained using the export value and quantity indices. The method of calculating the export quantities does not take account of possible quality changes in the four products. The banana index includes a small quantity of other fruits.

tion of coffee and BCST prices, the former slight and the latter severe. On the whole, however, and fortunately for Colombia, the correlation between changes in dollar coffee prices and those in the BCST export unit value index is far from perfect ($R = +0.43$) through 1970. It may be too much to expect that diversification will take place into commodities whose prices are negatively correlated. Colombia has at least moved into other primary products which do not systematically follow the gyrations of coffee markets.

For BCST, exports represent an important outlet for domestic production; yet they account for a very small share in total world BCST exports. The following tabulation shows these relations in about 1965–69:[3]

	Exports as Per Cent of Domestic Production	Colombian Exports as Per Cent of World Exports
Bananas	90.1	6.2
Cotton	31.3	0.8
Sugar	22.5	0.8
Tobacco	26.9	1.2

The share of production exported every year has fluctuated considerably, particularly for cotton and sugar. As supplying the local market receives first priority, exports bear the brunt of poor crops (which have triggered export prohibitions in some cases) and become the key outlet for bountiful ones. In the case of bananas output has been particularly vulnerable to pests and hurricanes, but the other three crops also show fluctuations associated with primary production.

The small shares which Colombian BCST exports have in world markets do not necessarily imply very high price elasticities in the foreign demand for these goods. For one thing, bananas, cotton, sugar, and tobacco are hardly homogeneous products in world markets. Colombian tobacco is far from a perfect substitute for the Cuban leaf, for example. Secondly, "the world market" is a fragmented one, and exports to country A may not be substituted for by exports to country B. The clearest example of this was the pre-1974

TABLE 2-6

Cotton in Postwar Colombia, 1948–52 to 1966–69
(annual averages in thousands of metric tons)

	Production	Imports	Exports	Apparent Domestic Consumption
1948–52	8	17	0	25
1953–55	25	8	0	33
1958–59	50	9	0	59
1960–61	73	1	20	54
1962–65	71	4	18	57
1966–69	109	2	35	76

SOURCE: UNFAO-PY and UNFAO-TY, various issues. Data for 1956–57 not available.

sugar market, in which Colombia was subjected to export quotas imposed by the United States as well as by the International Sugar Agreement and also encountered discriminatory barriers in European and other countries. It should also be noted that the Colombian market shares, though small, have been tending to grow, and that part of such expansion was due to unique events (the embargo against Cuba, for example). Nevertheless, while foreign demand for BCST may not be perfectly price-elastic, the small Colombian market shares do provide support for the view that during the period under study foreign demand for Colombian exports has been rather price-elastic and that at least for the next few years, given the likely increases in Colombian output, there is little ground for "elasticity pessimism" regarding BCST exports. In circumstances under which a given commodity bumps one year against foreign-imposed (demand) quotas and the next year is subject to export prohibitions and supply quotas, it is difficult to be more precise about the shape of the idealized foreign demand schedule.

One may add that almost the whole of BCST exports are to countries outside the LAFTA preferential trading bloc, as shown in Table 2-2, in sharp contrast to the other registered minor exports. Therefore, the foreign exchange they earn is in an important sense more valuable than that earned from exports to LAFTA, under the reasonable assumptions that "reciprocity" will be more narrowly enforced with LAFTA, and that such commerce will involve some trade diversion.

Another characteristic of the BCST group is that, besides being subject to influences emanating from foreign trade policy, it has benefited from special agricultural policies, which regulate its internal prices and provide subsidized credit. The case of cotton is perhaps the most dramatic example of the payoff to such ad hoc, crop-specific programs. As shown in Table 2-6, during the postwar years Colombia passed from being a net importer to a net exporter of

that commodity within a short period of time. During the 1950s cotton growers (mainly large-scale growers, it may be noted) received generous tax conces- sions as well as credit and price support from an institute designed exclusively to promote that crop. Such policies have continued, raising not only output but also yields. (While Colombia became an important cotton exporter during the 1960s, competing exports from some traditional sources, such as Mexico, stagnated.) Sugar and bananas have also benefited greatly from special gov- ernment credit programs.

The production of BCST crops is overwhelmingly in Colombian hands. Foreign ownership in the production of bananas existed until a few years ago; now foreign participation is limited to marketing. In cotton, sugar, and tobacco both production and marketing, as in the case of coffee, are largely Colombian. The expansion of BCST exports, therefore, can hardly be cred- ited to any special foreign presence in the production or sale of these commod- ities.

The BCST crops are grown at several points well spread out within the country: sugar comes mainly from the Cauca Valley and bananas from the Gulf of Urabá, while cotton is increasingly grown on the Atlantic coast.

Manufactured Exports.

Colombian manufactured exports have gone from an annual average of $10 million during 1957–59 to $80 million during 1968–70. That expansion accounted for 43 per cent of the total growth in registered minor exports between these dates. By 1968 the share of all Colombian exports in SITC categories 5, 6, 7, and 8 was larger than the corresponding figure for New Zealand.

As shown in Table 2-4, it would be a mistake to assume that all these exports are made up of labor-intensive commodities: the list includes not only cotton textiles, shoes, and near handicrafts, but also fuel oil, chemicals, and cement. As will be seen below, some aspects of Colombian export promotion policy may in fact encourage the latter type more than the former. The variety and heterogeneity of manufactured exports highlighted in Table 2-4 also helps explain the difficulty of obtaining export quantity and unit value indices, as was done in the case of BCST. For the years shown, characterized by a relatively stable world dollar price level, such a lack of quantity indices does not represent a serious problem. For more recent years, for which disaggre- gated data are not yet available, the problem seems more severe, and it is to be hoped that Colombian statistical authorities will develop quantity and price indices for the chief types of minor exports.

A rough analytical classification of all manufactured exports could be as follows:

1. Those which involve some slight processing of primary products. These are mostly included under SITC categories 0, 1, and 2; so they are excluded from our definition of manufactures. Examples are refined sugar and oilseed cakes.
2. Capital-intensive commodities, sold sporadically in competitive world markets. These are exports designed to use up planned or unplanned excess capacity. They are sold at marginal cost ("dumped") by plants whose output is, over the long run, expected to go mainly (say, 95 per cent and above) to the local market. Examples are exports of some chemicals, cement, glass, and petroleum products.
3. Capital-intensive commodities, whose plants have been designed to sell a good share of their output (say 5 to 30 per cent) within the LAFTA area, taking advantage of tariff preferences. This category is expected to gain in importance. Examples are petrochemicals and automobile parts.
4. Labor-intensive commodities, or parts of final products, sold at world prices.

This classification, of course, could be further refined, especially with the help of product-cyclé concepts. Sporadic dumping of capital-intensive exports within LAFTA as well as in world markets can occur, as reported for some petrochemical exports to Mexico. Labor-intensive commodities may be sold from plants totally or partially devoted to the export market (the former are still rare). Neither the line between "labor-intensive" and other goods or processes nor that between manufactures and primary products is a sharp one. To give one example combining both ambiguities: about half the value of exports of cotton textiles ("manufactures") is made up of raw cotton ("primary product"), and it is not clear whether cotton spinning and weaving are more or less labor-intensive than the growing of cotton. Finally, some exports of manufactures are close complements of primary-product exports; for example, cardboard exported as banana boxes. Others, although capital-intensive, may exploit locational advantages, for example, cement exports from the Colombian Atlantic coast. It is not possible, at this stage, to classify Colombian manufactured exports according to the categories outlined above. But the discussion at least should alert us to the possibility of spontaneous or policy-induced "Leontief paradoxes."

Colombian manufactured exports represent a small fraction of both domestic manufactured production and world trade in manufactured goods. With few exceptions, local plants seldom have planned to export, as a regular business, more than 10 per cent of their output. Some enterprises are cautiously moving into higher ranges (textiles, for example), and there are a handful of small plants which ship 100 per cent of their production abroad (e.g., some leather-processing near handicrafts and clothing plants located in

the Barranquilla bonded free-trade facilities). There are few manufactures for which Colombian exports have more than a tiny fraction of world trade. Nevertheless, in textiles Colombia faces U.S. and European import quotas, and in cement Colombian exports have some influence within the Caribbean and Gulf of Mexico markets. On the whole, it appears that Colombia has just begun to tap foreign market possibilities for her manufactures, both inside and outside the LAFTA region. Elasticity pessimism seems even less justified for manufactures than for BCST exports.

As shown in Table 2-4, LAFTA members take the larger share of Colombian exports such as synthetic fibers, rubber tires, pharmaceuticals, machinery and transport equipment, and plastics, which appear to be capital- or import-intensive, or both (the reason for the latter will be seen below). On the other hand, cotton textiles and leather and wood manufactures are primarily sold to the rest of the world. In a later section of this chapter, I will further explore systematic differences between LAFTA and non-LAFTA exports.

While the exact degree of direct foreign investment in Colombian manufactured exports is not known, the sample data presented in Chapter 6 indicate that during 1970 companies that were at least 50 per cent foreign owned represented no less than 27 per cent of all Colombian manufactured exports. It is doubtful whether the exact percentage went above 35. Two Colombian-owned corporations (COLTEJER and FABRICATO) dominate textile exports, and it appears that most firms exporting leather products and clothing are also Colombian owned. Foreign participation looms larger in chemicals, glass, rubber tires, and paper. As of 1972, foreign-owned assembly-type operations hooked into multinational businesses ("export platforms") were rare, and their exports from bonded free-trade zones were also modest. On the whole, the expansion of Colombian manufactured exports appears to owe little so far to the specific talents of export-oriented foreign investors.

As in the case of BCST crops, manufactured exports come from several points within Colombia. The geographical advantages of the Atlantic coast cities of Cartagena and Barranquilla, however, may make them dominant exporting centers if exporting continues to grow in importance in the planning of new industrial plants.

Miscellaneous Minor Exports.

Besides manufactured and BCST exports there is a residual category made up mainly of primary products. It contains some items, such as flowers, live animals, meat, and lumber, that have remarkable growth potential because of a combination of favorable world markets and a fairly elastic domestic supply. In some cases, as with meat and cattle on the hoof, border

trade (or nonrecorded exports) has been important for many years. The diversified Colombian geography seems capable of generating a generous supply of a wide variety of these miscellaneous exports, from live tropical fish to less exotic beans and shrimp, for which the Colombian share in world markets remains small. Comparing 1957–59 with 1968–70, the miscellaneous category accounts for 22 per cent of the increase in all minor exports. This type of export appears to be mostly Colombian owned, but other generalizations are difficult. Flowers, for example, are quite labor-intensive, but beef cattle require much land and relatively little labor.

A CLOSER LOOK AT THE CUSTOMERS FOR COLOMBIAN EXPORTS

Besides the appearance of LAFTA and of its subregion, the Andean Common Market, there have been other significant changes during the 1960s and early 1970s in the importance of the different customers for Colombian exports. The United States share in all recorded Colombian exports dropped from 70 per cent during 1957–58 to 40 per cent during 1967–69 and to 35 per cent during 1970–72. That for the (unenlarged) European Common Market rose from 13 to 24 per cent between 1957–58 and 1967–69, and then dipped to 22 per cent during 1970–72. The absolute average annual dollar value of Colombian exports to the United States, in fact, declined by a remarkable one-third between 1957–58 and 1967–69. The LAFTA share in all recorded exports, in spite of sharp increases from 1 per cent to 7 per cent and then to 9 per cent, remained modest. By 1970–72 the Andean group alone accounted for 7 per cent of all Colombian exports.

The increased geographical diversification of Colombian exports has not come about only as a result of greater product diversification. It may be seen in Table 2-7 that a marked diversification in markets for coffee occurred between 1957–58 and 1967–69, with the United States losing almost half of its still dominant share. A similar trend has been registered for BCST exports, with the European Common Market losing a large chunk of its leading share. In spite of large increases in their absolute level, the geographical spread in non-BCST minor exports changed surprisingly little between the two periods shown. Both the U.S. and LAFTA shares rose, but not by much. European and Japanese markets for these nontraditional exports have remained on the whole flabby relative to the purchases of more traditional primary products (coffee and BCST).

These trends emerge more clearly in Table 2-8, which focuses on geographical shares of the net increments of annual exports between 1957–58 and

TABLE 2-7

Geographical Distribution of Colombian Exports, 1957–58 and 1967–69
(percentages of total recorded exports in each commodity category)

	1967–69 Exports				1957–58 Exports			
	Coffee	Oil	BCST	Non-BCST Minor	Coffee	Oil	BCST	Non-BCST Minor
United States	44.4	54.9	17.2	35.4	81.1	40.7	8.7	31.4
Canada	1.3	0	0.6	3.1	1.8	0	0	0.5
United Kingdom	0.7	9.6	15.4	1.5	0.2	6.0	0	13.9
Japan	1.5	0	3.9	1.6	0.2	0	0	0.1
European Common Market	27.9	1.4	43.6	9.0	11.3	4.3	75.0	7.1
Other industrial Western European	6.9	0	4.8	3.7	3.4	0.2	14.4	0.2
Other nonsocialist European	10.5	2.6	5.1	1.1	1.6	0	0	0.1
Andean Common Market	0	8.5	2.7	16.7	0	0.2	0	13.9
Other LAFTA	1.1	0	1.4	10.0	0	1.0	0	9.9
Central American Common Market	0	0	0	4.2	0	0	0.1	6.1
Other Western Hemisphere	0	23.0	0.7	12.5	0	47.7	0	16.9
Socialist	5.5	0	3.2	0.1	0.3	0	0.1	0
Others	0.2	0	1.5	1.3	0.2	0	1.7	0

BCST = bananas, cotton, sugar, and tobacco.
SOURCE: DANE-ADCE, various issues.

TABLE 2-8

Geographical Distribution of the Increment in the Average Annual Dollar Value of Colombian Exports Between 1957–58 and 1967–69

(percentages of total increment in each commodity category)

	All Registered Exports	All Registered Minor Exports	BCST	Non-BCST Registered Minor Exports
United States	−155.4	31.0	21.6	36.3
Canada	1.8	2.7	0.9	3.7
United Kingdom	15.9	7.5	23.4	−1.6
Japan	11.7	3.4	5.8	2.0
European Common Market	96.9	16.0	27.5	9.4
Other industrial Western European	19.3	2.9	−0.1	4.6
Other nonsocialist European	49.2	3.6	7.7	1.3
Andean Common Market	27.5	12.5	4.0	17.4
Other LAFTA	16.4	· 7.1	2.2	10.0
Central American Common Market	4.1	2.4	−0.1	3.8
Other Western Hemisphere	−17.4	7.6 ·	1.1	11.4
Socialist	27.7	1.8	4.7	0.2
Others	2.4	1.5·	1.4	1.6

BCST = bananas, coffee, sugar, and tobacco.
SOURCE: Basic data as in Table 2-7.

1967–69. Besides the changes already noted for all exports, the growing importance of the markets in "Other nonsocialist Europe" (with Spain as the key country) and in socialist countries is worth noting. In both cases the major export was coffee, sold under bilateral arrangements that were steadily but mildly criticized by the IMF and others. These arrangements together with the LAFTA and Andean pacts were the major Colombian departures from multilateral rules of the game for trade. The bilateral pacts, of course, limited the convertibility of export proceeds. By 1971 bilateral payments agreements had dwindled to those with the Democratic Republic of Germany, Hungary, Poland, Spain, Rumania, Bulgaria, and Yugoslavia. In 1958 there had been bilateral agreements also with Denmark, Ecuador, Finland, France, and Czechoslovakia.

The concentration of the expansion of non-BCST minor exports within the Americas emerges clearly from Table 2-8. The share of that increase going to the sheltered LAFTA zone was 27 per cent. The Caribbean and Central American areas, where Colombia has to meet competition from the rest of the world without the shelter of preferential treatment, accounted for an additional 15 per cent. The United States and Canada picked up another 40 per

cent of the increase in non-BCST minor exports, leaving only about 17 per cent of the increment for the rest of the world. In contrast with this pattern, the Americas absorbed only 30 per cent of the expansion of BCST exports.

POLICY VARIABLES INFLUENCING MINOR EXPORTS

We can now turn to an examination of the most important variables manipulated by Colombian authorities in their search for larger minor exports. They include the exchange rate, export subsidies and taxes, drawbacks on import taxes, membership in preferential trade agreements, subsidized credits, and other subsidized facilities.

The Effective Exchange Rate.

Before the reforms of March 1967, "the effective exchange rate applied to minor exports" was often a blurry concept, subject to frequent changes. A quantification attempt, which becomes more robust as more recent years are approached, is presented in Table 2-9. It involves, first, the nominal exchange rate given for most merchandise exports except coffee and petroleum. Frequently during the 1950s and early 1960s this rate was *not* applicable to exports of gold, bananas, raw hides, precious stones, and a few other goods, or to manufactured exports having more than a given percentage of imported inputs. The rate was allowed to float freely during some periods, as during 1959, when it coincided with the free rate applicable to most capital account transactions. At other times, it was pegged at a level different from that applicable to coffee and imports, as during 1963. Since June 1968 it has corresponded to the basic certificate exchange rate, which with minor exceptions, such as petroleum, applies to nearly all current and capital account transactions.

The more notable features of the fiscal system as it affects new exporters are summarized in the second column of Table 2-9. The emergency measures taken after the overthrow of General Rojas Pinilla in 1957 included export taxes: 15 per cent during the third quarter of 1957 and 2 per cent subsequently through the first quarter of 1961 for most minor exports. These taxes were justified as part of the austerity package aimed at working off short-term foreign debts accumulated under the previous government.

Starting effectively in June 1961, it was assumed on the basis of Law 81 of December 22, 1960, that export profits were as much as 40 per cent of gross exports, and presumed export profits were allowed to be excluded from taxable profits. Not included in the benefits of this law, besides coffee and

TABLE 2-9

Exchange Rate Applied to Most Registered Minor Colombian Exports, 1949–72

		Basic Rate (pesos per U.S. dol.)	Subsidies Via Tax System (per cent[a])	Wholesale Price Index: Colombian Deflated by U.S. (1963 = 100)	PPP-EER Applied to Most Minor Exports (1963 prices)
1949		3.02	—	34.9	8.65
1950		3.12	—	38.0	8.20
1951		2.53	—	36.7	6.89
1952		2.92	—	37.1	7.86
1953	I	3.55	—	38.7	9.17
	II	3.41	—	39.8	8.57
	III	3.48	—	40.9	8.52
	IV	3.43	—	40.9	8.39
1954	I	3.53	—	41.9	8.42
	II	3.46	—	43.6	7.93
	III	3.45	—	43.0	8.02
	IV	3.50	—	41.9	8.35
1955	I	3.50	—	43.0	8.14
	II	3.85	—	43.0	8.95
	III	4.05	—	43.6	9.29
	IV	4.04	—	43.6	9.26
1956	I	4.28	—	44.7	9.58
	II	4.67	—	45.8	10.19
	III	4.82	—	46.9	10.28
	IV	6.05	—	48.5	12.49
1957	I	6.34	—	49.0	12.94
	II	6.23	—	54.1	11.52
	III	4.95	− 15	57.6	7.31
	IV	5.23	− 2	58.6	8.76
1958	I	5.92	− 2	60.0	9.67
	II	6.10	− 2	63.0	9.49
	III	6.10	− 2	64.0	9.34
	IV	6.10	− 2	66.0	9.06
1959	I	7.42	− 2	66.3	10.96
	II	8.00	− 2	69.3	11.31
	III	7.74	− 2	70.3	10.80
	IV	6.93	− 2	71.0	9.56
1960	I	6.81	− 2	71.0	9.39
	II	6.82	− 2	72.0	9.28
	III	6.92	− 2	72.0	9.42

TABLE 2-9 (*continued*)

		Basic Rate (pesos per U.S. dol.)	Subsidies Via Tax System (per cent[a])	Wholesale Price Index: Colombian Deflated by U.S. (1963 = 100)	PPP-EER Applied to Most Minor Exports (1963 prices)
	IV	7.12	−2	73.0	9.56
1961	I	7.55	−2	74.3	9.97
	II	8.23	—	78.0	10.55
	III	8.63	14	78.0	12.62
	IV	8.77	14	78.0	12.82
1962	I	8.80	14	78.0	12.86
	II	8.91	14	79.0	12.86
	III	8.61	14	79.0	12.43
	IV	10.22	14	80.0	14.56
1963	I	10.09	14	90.0	12.78
	II	9.99	14	101.0	11.28
	III	9.99	14	103.0	11.06
	IV	9.99	14	107.0	10.64
1964	I	9.99	14	112.0	10.17
	II	9.98	14	119.0	9.56
	III	9.98	14	119.0	9.56
	IV	11.74	14	119.0	11.24
1965	I	13.57	14	118.8	13.02
	II	16.63	14	122.6	15.47
	III	13.50	14	124.3	12.38
	IV	13.50	14	132.0	11.66
1966	I	13.50	14	136.2	11.30
	II	13.50	14	142.9	10.77
	III	13.50	14	142.5	10.80
	IV	13.50	14	145.3	10.59
1967	I	13.50	14	147.5	10.43
	II	14.02	18	150.1	11.02
	III	14.86	18	151.7	11.56
	IV	15.54	18	153.5	11.95
1968	I	15.84	18	153.8	12.15
	II	16.14	18	157.3	12.11
	III	16.39	18	157.0	12.32
	IV	16.73	18	156.7	12.60
1969	I	16.96	18	157.1	12.74
	II	17.19	18	160.0	12.68
	III	17.45	18	160.9	12.80

TABLE 2-9 (*concluded*)

		Basic Rate (pesos per U.S. dol.)	Subsidies Via Tax System (per cent[a])	Wholesale Price Index: Colombian Deflated by U.S. (1963 = 100)	PPP-EER Applied to Most Minor Exports (1963 prices)
	IV	17.69	18	163.7	12.75
1970	I	18.00	18	162.8	13.04
	II	18.30	18	167.1	12.92
	III	18.56	18	166.7	13.14
	IV	18.92	19	169.3	13.30
1971	I	19.29	19	171.7	13.37
	II	19.69	19	175.7	13.34
	III	20.14	19	178.5	13.43
	IV	20.64	19	182.8	13.44
1972	I	21.16	20	183.8	13.81
	II	21.66	20	188.7	13.78
	III	22.10	20	192.4	13.78
	IV	22.54	20	198.1	13.66

SOURCE: Basic rates applied to most minor exports were obtained from IMF-IFS and IMF-AROER, various issues. It should be noted that, especially during the 1950s, minor exports were seldom treated as a homogeneous category. Export taxes (see note a, below) were also obtained from IMF-AROER.

Subsidies via the tax system are estimates of the average impact of an allowance for income tax deductions for exporters, effective from the third quarter of 1961 through the first quarter of 1967, plus the tax-exempt CAT granted to minor exporters from the second quarter of 1967 through 1972. Both subsidies affected companies differently depending on their particular tax situation and bracket; an average tax rate of 30–35 per cent can be assumed in computing the net subsidy. On the other hand, the CAT is a negotiable instrument which when first introduced could be used in lieu of cash to pay taxes up to one year from issue. The redemption date was reduced to nine months in October 1970. Late in 1971, the redemption date for CATs was further reduced from nine to three months for manufactured products and from nine to six months for all other eligible exports. Thus, the exact present value of CATs has fluctuated with these changes in redemption dates as well as with fluctuations in interest rates. Discounts of 18–20 per cent can be assumed. Depending on their own specific circumstances, companies could choose to hold or sell their CATs. The net subsidy shown in the table, therefore, represents a rough average.

Wholesale prices for Colombia and the United States obtained from IMF-IFS.

a. Minus sign signifies export tax.

petroleum, were bananas, precious metals, and hides. If a marginal income tax of around 35 per cent is assumed for exporting corporations, the *average* (taxable-equivalent) subsidy amounts to about 14 per cent. Note that the bigger the corporation and, presumably, the higher its marginal tax rate, the larger the subsidy. Firms making little or no profit could not benefit from this measure.

Articles 166 through 171 of Law 444 of March 22, 1967, replaced the fiscal incentive of Law 81 with the neater device of tax certificates given to exporters of goods other than coffee, petroleum and its by-products, and raw cattle hides. These certificates (CATs) amounted to 15 per cent of the f.o.b. value of exports and could be used to pay income, sales, and import taxes. Originally, they could not be used for these purposes at face value until one year after they were issued, but the owner could sell them freely to others, at the discount indicated by short-term interest rates. Redemption dates for CATs were lowered in 1970 and 1971. CATs were tax exempt. While under previous tax exemption an exporter had to have a given level of profits from other activities before he could benefit from the system, CATs can be readily converted into cash by any exporter, regardless of his tax status. On balance, the tax-exempt status of CATs more than offsets their discount, yielding an average taxable-equivalent subsidy of around 18 to 20 per cent.[4]

Once account is taken of differential price trends in Colombia vis-à-vis the rest of the world, the purchasing-power-parity-adjusted effective exchange rate (PPP-EER) applied to most minor exports can be estimated. The calculations shown in Table 2-9 simply compare Colombian and U.S. wholesale prices, a method which, although rough, provides a fairly accurate picture of the major trends in the real effective exchange rate for the period shown. Given the growing Colombian trade diversification and the post-1971 international monetary order, future calculations of this sort should take into account Colombian exchange rates and differential price movements vis-à-vis several of her major trade partners.[5]

Five features of the computed PPP-EER for minor exports may be briefly considered: average annual levels, year-to-year changes, a more refined instability index, and its differences compared with both the PPP nominal import rate and the PPP-EER for coffee. It may be seen in the first column of Table 2-10 that recent net exchange rates for minor exports exceed those dominant during the 1950s. The upward trend, however, was far from steady until recent years, as can be seen in the second and third columns. The instability measure presented in the latter column uses the average of the absolute value of quarter-to-quarter percentage changes for the four consecutive quarters of a given year. Thus, this column shows that during 1954 the quarter-to-quarter changes in the exchange rate, whether positive or negative, averaged 2.9 per

TABLE 2-10

Effective Purchasing-Power-Parity Exchange Rate (PPP-EER) for Minor Exports, 1953–72

	Annual Levels (pesos per U.S. dol.)	Year-to-Year Changes (per cent)	Index of Instability (per cent)	PPP-EER for Minor Exports	
				Ratio to Aver. PPP Nominal Rate for Imports	Ratio to Coffee PPP-EER
1953	8.66	10.2	.n.a.	1.39	1.74
1954	8.18	−5.5	2.86	1.39	1.73
1955	8.91	8.9	4.15	1.54	1.80
1956	10.64	19.4	8.05	1.97	1.99
1957	10.13	−4.8	17.74	1.41	1.68
1958	9.39	−7.3	4.21	0.84	1.53
1959	10.66	13.5	10.04	1.08	1.97
1960	9.41	−11.7	1.49	1.03	1.62
1961	11.49	22.1	7.83	1.32	1.86
1962	13.18	14.7	5.20	1.52	2.02
1963	11.44	−13.2	7.43	1.27	1.84
1964	10.13	−11.5	7.00	1.32	1.84
1965	13.13	29.6	15.10	1.66	2.52
1966	10.87	−17.2	2.50	1.19	2.20
1967	11.24	3.4	3.31	1.20	2.12
1968	12.30	9.4	1.50	1.19	2.10
1969	12.74	3.6	0.73	1.19	2.13
1970	13.10	2.8	1.53	1.19	2.17
1971	13.40	2.3	0.38	1.18	2.15
1972	13.76	2.7	0.98	1.19	2.29

n.a. = not available.
Source: Basic data obtained from the last column of Table 2-9 and from the sources listed there. See text for explanation of the third column. The purchasing-power-parity average nominal import exchange rate is taken from Table 4-8. The effective purchasing-power-parity coffee exchange rate was obtained as for Table 1-3.

cent, while during 1957 that average rose to a remarkable 17.7 per cent. Besides 1957, other particularly unstable years were 1959 and 1965. One of the key advantages of the crawling peg emerges clearly from this index after 1967.

The fourth column of Table 2-10 presents ratios of the annual minor export rate to the average nominal merchandise import rate, also expressed in 1963 prices. The latter excludes the incidence of duties, controls, and prior deposits on the effective cost of importing; it is simply a purchasing-power-

parity exchange rate, and as such conceptually different from the more complicated effective rate for minor exports to which it is compared. For example, the gap shown for 1968–72 arises mainly from the inclusion of the effective value of the CAT in the export rate. Nevertheless, the data in the fourth column highlight one striking fact: in the years following exchange reform in Colombia, such as 1958, 1963, and 1966, (a) *increases* occurred in the purchasing-power-parity nominal import rate and (b) *declines* occurred in the effective rate applied to minor exports; there was, therefore, (c) a tendency toward unification of those two rates. In other words, the goal of exchange rate unification was pursued at the expense of incentives for minor exports. With the exception of the peculiar circumstances of 1958, however, the effective minor export rate remained above the nominal rate for imports.

Finally, the last column of Table 2-10 shows the politically sensitive and economically revealing gap between the effective rate for minor exports and that for coffee. Since 1966, this gap has remained quite steady, with the coffee rate running at about half the minor export rate in spite of variations in the dollar coffee price. The relative stickiness of this relationship has turned the politically powerful coffee growers into champions of the crawling peg.

The Vallejo Plan.

Since around 1956, and at first motivated by a desire to use excess industrial capacity, the import content of certain exports, mainly manufactured goods, has been exempted (ex ante) from import duties, prior deposits, consular fees, and the need to obtain prior import licenses, subject to some stringent conditions. These now include the signing of an ad hoc contract with the government, clearly specifying the export goods; submission of proof that the imports are being financed according to Law 444; a deposit with customs of a guarantee (from a bank or an insurance company) amounting to twice the corresponding import duties; a guarantee that those imports which have not been used and are on the prohibited list will be re-exported; and a commitment to carry a special set of accounting books for these contracts. Not surprisingly, the major (but not exclusive) users of this "Plan Vallejo," as it has been known in Colombia since 1959, have been large manufacturing firms. More general drawback (ex post) systems are also allowed in principle by Law 444 and its predecessors but have not been implemented in practice, with the exception of the "Plan Vallejo Jr." or reposition provision, which since 1964 has allowed exporters who had used imported inputs and paid duties on them to import the same quantity and quality of merchandise free of duties, prior deposits, and the requirement of obtaining a prior license.

It may be seen in Table 2-11 that a vigorous implementation of the Vallejo Plan started in about 1962, after the system was reformed in 1959. From 1967

TABLE 2-11

Exports and Imports Under the Vallejo Plan, 1960–71
(millions of current U.S. dollars)

	Imports	Exports	Imports as Per Cent of Exports
1960	0.10	0.06 ⎫	
1961	0.20	0.18 ⎬	43
1962	0.17	0.84 ⎭	
1963	2.22	5.80	38
1964	5.08	12.87	39
1965	9.83	26.19	38
1966	12.06	41.69	29
1967	16.97	40.79	42
1968	17.86	51.95	34
1969	13.65	62.80	22
1970	24.70	58.10	43
1971	26.00	64.90	40

SOURCE: INCOMEX, "Análisis Sobre el Desarrollo de los Sistemas Especiales de Importación-Exportación," mimeographed (Bogotá: Banco de la República, 1971). Imports include both raw materials and machinery.

through 1970, Vallejo Plan exports have accounted for about 30 per cent of all minor exports and a dominant share of manufactured exports.

The import content (which includes machinery as well as raw materials) of these exports is substantial, and exceeds the average import content of all Colombian industry, estimated at about 13 per cent.[6] The alert reader will have noted that the joint impact of the CAT plus the Vallejo Plan can have not only a significant incentive effect, far exceeding the sum of the impacts of each scheme in isolation, but also one biased in favor of import-intensive exports. Take a simple example of a product with an import content of 40 per cent. The effective protection for exports of that product, excluding transaction costs involved in using the Vallejo Plan are:

Assumed world sales price	$100
Plus effective CAT (about 18 per cent)	118
Minus world purchases ($40); equals value added at domestic prices	78
Value added at world prices	60
Effective protection	30 per cent

This effective protection of 30 per cent may be compared with that which would result if neither the CAT nor the Vallejo Plan existed and if the average domestic price for imported inputs were raised by import restrictions to 30 per cent above the world market price. In that case, effective protection would be *minus* 20 per cent, or a swing of fifty percentage points. Clearly, activities with lower import components will receive lower effective protection for their exports and their swing will be less, ceteris paribus.

Whether the effective protection applicable to manufactured exports is higher or lower than the rates that can be calculated for the share of the output sold in the domestic market will depend on the corresponding domestic prices for output and inputs (both reflecting import restrictions without exemptions).

Table 2-12 contains some (partial) estimates of the differential incentives given for a sample of 105 manufactured products, depending on whether they were sold in Colombia or were exported and on whether the several export incentive schemes are taken into account. On the import side, however, only tariffs are included, on the assumption that they equal the difference between domestic and foreign prices. This is, of course, not true for many products, either because the tariff contains "water" or because of import controls. So the table serves primarily to illustrate (very rough) orders of magnitude for the differences among columns for the same product, rather than differences in treatment among products in the same column. In the third column, account is taken of the effective CAT and the Vallejo Plan.

It may be seen that while the export promotion schemes did not equalize the tariff-intended effective protection between exports and domestic sales, they narrowed the gap relative to a situation without export promotion schemes. Indeed, in the sample of 105 products, there were 18 for which the figures in the third column were higher than those in the first. The data in the table again show that the combined effect of a CAT based on sales value plus exemption of duties on imported inputs was quite powerful, in many cases clearly offsetting the negative effect of overvaluation on the peso prices of exports relative to nontradable goods, even when the former prices remain unfavorable compared with those of import-competing goods.[7]

Although the combined effect of the CAT plus the Vallejo Plan did discriminate among activities, the spread of the figures in the third column is smaller than that of the first. This indicates that variations in tariffs on outputs (or on finished products) were greater than those on inputs.

LAFTA and the Andean Group.

Depending on one's viewpoint, these associations can be regarded as part of the Colombian export-promotion package or as extensions of import-

TABLE 2-12

Effective Protection Yielded by Tariffs and Export Promotion Schemes, About 1970, for 105 Products

(per cent; figures in parentheses show number of products included in each category)

		For Export	
	For Sale in Colombia	Without Promotion Schemes	With Promotion Schemes
Foodstuffs, tobacco, and beverages (8)	198	−91	43
Textiles (5)	267	−34	43
Clothing (7)	387	−52	40
Wood and wood products (6)	120	−71	38
Paper and paper products (7)	133	−67	47
Printing and publishing (3)	79	−7	27
Leather and leather products (6)	203	−149	58
Rubber and rubber products (2)	59	−36	47
Chemicals and petrochemicals (14)	49	−27	37
Stone, earth, and clay products (7)	97	−9	25
Metals and metal products (19)	101	−39	40
Nonelectrical tools and machinery (6)	33	−17	27
Electrical products and machinery (4)	57	−52	52
Transport equipment (6)	59	−30	38
Others (5)	149	−48	42
Total (105)	130	−48	39

SOURCE: Data summarized from unpublished calculations of Gonzalo Giraldo, Planning Department, Colombia. The sample of 105 manufactured products was selected as representative of actual or potential exports within the Andean Common Market, of which Colombia is a member. In the calculation of effective protection, only tariffs and export promotion schemes were taken into account (see text). Input coefficients actually observed in Colombia were used; imports of capital goods were excluded. An effective CAT of 20 per cent was assumed, a figure which may be regarded as somewhat high for 1970. Special regimes exempting some imports from duties were disregarded for this calculation.

substitution efforts. It is not yet clear whether trade creation or trade diversion will predominate in the Colombian dealings with these preferential trade associations, but exports to LAFTA appear to differ, on balance, from those to the rest of the world.

For exports to LAFTA, the incentive effects of the CAT plus the Vallejo

Plan can reach high levels, in some cases possibly detrimental to the Colombian economy. This can be shown by going back to the simple example presented earlier. Suppose, in addition to the assumptions already made, that some Colombian exports are sold to LAFTA countries at prices 50 per cent above world prices. The calculation of effective protection inclusive of LAFTA margins would now be as follows:

Assumed LAFTA price	$150
Plus effective CAT (18 per cent)	177
Minus world purchases; equals value added at Colombian prices	137
Value added at world prices	60
Effective protection on exports to LAFTA	128 per cent

In other words, if LAFTA protective margins are similar to those Colombia applies vis-à-vis the rest of the (non-LAFTA) world, Colombian producers may actually prefer to sell to LAFTA rather than to the domestic market, as the CAT-Vallejo Plan benefits could easily outweigh transport costs.

It should be emphasized at this point that not all Vallejo Plan exports go to LAFTA (and that not all Vallejo Plan exports involve manufactured goods). From 1967 through 1969, in fact, only 23 per cent of Vallejo Plan exports went to LAFTA, amounting to less than 8 per cent of all registered minor exports. Manufactured exports to LAFTA are sometimes sold under conditions of dumping, bringing their export prices closer to those prevailing in nonpreferential world markets; the benefits to Colombia of this kind of sale, however, are not always clear.

PROEXPO.

Law 444 of 1967 created other export-promotion schemes, centered around a fund (PROEXPO) generously financed by a 1½ per cent tax on the c.i.f. value of all imports. The law (articles 181–202) gave that fund broad powers and great flexibility to engage in export promotion. PROEXPO provides local producers with information on foreign markets and technical advice on transport, packing, quality control, etc., as well as on the production of exportable goods. In a country where "shortage of working capital" is a permanent entrepreneurial complaint, it channels credit under liberal terms to exporting firms; and under special circumstances it can provide equity capital. It also insures against political and other noncommercial export risks, and has helped to prepare a four-year export plan. By means of imaginative domestic advertising, including billboards proclaiming that "Exporting is the best business in Colombia," it tries to develop an "export mentality."[8]

Abroad, PROEXPO also advertises and holds fairs, even sending a Navy ship with Colombian goods around the Caribbean. During 1970, its credit activities amounted to 409 million Colombian pesos plus 6.8 million U.S. dollars.

It is difficult to measure the effect of something like PROEXPO on nontraditional Colombian exports. Some of its activities, in particular its credit operations, are enthusiastically praised by entrepreneurs otherwise starved for cheap working capital. Others, such as its advertising and fairs, have a less clear net value and can easily degenerate into boondoggles. Even less clear and less readily quantified is the value of such an institution in affecting private expectations regarding the firmness of a government's commitment to support export activities.

The PROEXPO credit program is one example of how Colombian authorities have used domestic distortions to give greater leverage to export-promoting schemes; if Colombian capital markets were perfect, there would be little power in that program. Similarly, the potency of the Vallejo Plan would disappear if all non-exchange-rate import restrictions were eliminated. Note that these measures do not always serve simply to offset the harmful effects of other policies on exporting; for some firms they may offer a net gain relative to an idealized pure neoclassical situation.

Other Export-Promotion Policy Instruments.

Especially since 1967, the many instruments of the Colombian government have been increasingly tilted in favor of exporters of products other than coffee or oil. Credit, besides that from PROEXPO or aimed at specific exportable crops, is channeled preferentially, under the more or less explicit tutelage of central-bank authorities, toward exporters. That preference affects not only short-term but also long-term credit provided by several special development funds. The encouragement given to exporters has also stimulated the granting of *foreign* credit to them. Entrepreneurs are notified both formally and informally that the fate of their requests regarding import licenses, release from price controls, or of any other request having to do with any field where public-sector action is important—and there are few where that action is not—will very much depend on their export record. The medals and banners regularly presented by the Colombian President to distinguished exporters, in other words, are not simply moral incentives, for they give recipients some muscle when dealing with the numerous public agencies capable of making the life of businessmen either easy or miserable and profitable or unprofitable.

Finally, there are other export-promoting ideas that are just beginning to be exploited in Colombia to an important degree. One is the creation of areas in the country equipped with adequate export and overhead facilities to which

imports can be brought free of duties and import restrictions, to be used exclusively by exporting firms located there. In 1973 there were two such free zones (*zonas francas*): one in Barranquilla, intended to compete with similar facilities located in Panama, and a more recently built one near Cali (Palmaseca). Others are being considered. Trading houses, particularly useful for marketing exports from small- and medium-scale producers, were rare until a few years ago, but recently several private ones have sprung up. Some international companies, such as Volkswagen, have set up separate organizations to promote exports, not all related to their usual line of business.

THE SUPPLY RESPONSE OF COLOMBIAN MINOR EXPORTS

The export promotion package just described appears to have succeeded in generating a rising dollar value of Colombian minor exports, particularly since 1967. Part of that upward trend may be due to increases in export dollar prices, which, however, to judge from the scanty data available, do not seem to have reached large and sustained proportions until 1972–74. On the whole and for the period under study, it is reasonable to suppose that the observed time series for the value of minor exports trace out mainly quantity movements along, or shifts in, the Colombian supply curve for exports. While world demand for these exports fluctuated about a reasonably steady average price throughout the period under study, there were undoubtedly few products for which world demand in any one year was not close to being perfectly price elastic in the range relevant for Colombia. Nevertheless, in spite of these convenient generalizations, serious problems remain in the estimation of the supply schedule for minor exports.

There are, first of all, the difficulties arising from the heterogeneity of these exports and the lack of quantity indices. It has also been noted that in some years several commodities received special, sui generis treatment, such as bananas, gold, and emeralds. Another set of problems arises from the proliferation of export-promotion policies adopted by Colombia, many difficult to quantify, and from their collinearity.

Related problems arise in the handling of trends during the 1960s and early 1970s which are said to have encouraged the growth of minor exports, such as the rapid growth of world trade and, more relevantly, the creation of LAFTA and the Andean group. Access to a preferential trading arrangement makes it possible for a participating country to sell exports to its partners at prices higher than those in the world market. In exchange, of course, it must buy *their* exports at higher-than-world-market prices. As a result, assessment of the LAFTA and Andean arrangements also is hindered by the previously mentioned lack of quantity indices for most minor exports.

Disaggregation by product and customer might seem to provide a partial answer to these complications. However, it also introduces other problems. Any subcategory of Colombian minor exports is likely to be quite thin during most of the period under study, and thus subject to apparently erratic behavior as a result of particular events, independent of general policy variables. Temporary excess capacity in three or four important plants, for example, could give manufactured exports a boost, while a poor crop could send the quantity of some exports way down.

Whatever the exchange rate and export incentives may be, it can normally be expected that as a country's productive capacity expands, its supply curve for exports will steadily shift to the right. There is thus a case, not based on the expansion of world demand, for including a trend term in regressions intended to explain export supply response. But this procedure, although it yields high R^2s, often results in ambiguous coefficients, because of the strong upward trend of minor exports and of key policy variables such as the effective exchange rate.

The model implicit in supply-response calculations to be shown below, i.e., a perfectly elastic world demand interacting with a supply of exports which in turn reflects the difference between the domestic supply of and demand for exportable goods, involves some conceptualization strain when applied to commodities such as sugar, meat, and cotton. These goods and others are subject among other things to domestic regulations of various sorts (including occasional export quotas). As a result, the quantities of these commodities available for export are determined by other factors in addition to their price and their domestic elasticities of demand and supply.

Because of problems of collinearity and serial correlation,[9] it was decided to estimate supply-response equations, focusing on (a) independent variables mainly related to the effective purchasing-power-parity exchange rate, to see how far it was possible to carry the analysis with just these variables and (b) annual percentage changes of the relevant variables. The impact of changes in the own dollar price of exportables and the influence of several export-promotion programs discussed above were left out. On the other hand, a variable related to exchange-rate instability, usually excluded from supply-response analyses, was introduced, and some exploration of the complicated dynamic path of supply response was carried out.

Regression Results.

The most up-to-date and best results of the approach outlined above are presented in tables 2-13 and 2-14. In the following discussion, I will first highlight the results most favorable to the hypothesis that "the exchange rate matters." This will be followed by an examination of failures in the hypothe-

TABLE 2-13

Regressions for Annual Percentage Changes in Minor Exports, Based on Annual Data for 1955–70 or 1955–72

(t ratios in parentheses)

Regression Number	Constant	Independent Variables Change in the Exchange Rate	Instability of Exchange Rate	Lagged Change in BCST Output	R^2	F Statistic	DW
		Total Dollar Value of Recorded Minor Exports, 1955–72					
(1)	19.92	0.81	–1.85		0.36	4.20	2.04
	(3.34)	(2.50)	(2.16)				
(2)	14.40	0.87	–1.48	0.53	0.47	4.18	2.01
	(6.44)	(2.84)	(1.78)	(1.73)			
		Dollar Value of BCST, 1955–70					
(3)	–9.25	1.13	0.70	1.91	0.61	6.23	2.74
	(0.74)	(2.54)	(0.49)	(3.63)			
		Dollar Value of Non-BCST Recorded Minor Exports, 1955–70					
(4)	25.48	0.59	2.37		0.25	2.19	1.73
	(2.82)	(1.38)	(1.93)				

BCST = bananas, coffee, sugar, and tobacco.
R^2 = coefficient of multiple determination.
DW = Durbin-Watson statistic.
NOTE: For method, see text. The first two regressions have 18 observations, the last two only 16, owing to lack of up-to-date customs data. Basic data obtained from earlier tables in this chapter. Except for the instability index, all values are expressed as year-to-year percentage changes.

sis, including those not shown in the tables, as well as of other remaining problems of interpretation.

THE IMPORTANCE OF THE EXCHANGE RATE

In the regressions based on annual data (Table 2-13), the dependent variables shown include the year-to-year percentage changes in the dollar value of all minor exports and in the value of BCST and non-BCST exports. Because of differences in the availability of data, the regressions cover 1955–72 for all minor exports and 1955–70 for BCST and non-BCST exports. The independent variables are the year-to-year changes in the effective purchasing-power-parity exchange rate for minor exports; the index of instability of the rate; and the lagged year-to-year percentage change in the domestic output of BCST crops. The simple average values for these variables stated in terms of annual percentage changes, except for the instability index, are as follows:

Recorded minor exports (1955–72):	12.7
BCST exports (1955–70):	14.4
Non-BCST minor exports (1955–70):	13.3
Effective exchange rate (1955–72):	3.7
Instability index (1955–72):	5.5
Domestic BCST output, lagged (1955–72):	6.2

The first three regressions in Table 2-13 show clearly significant coefficients for changes in the effective exchange rate, implying supply elasticities between 0.81 and 1.13. These results are similar to those obtained by other researchers (see footnote 1 in this chapter). Two of the equations also indicate clearly that exchange instability is quite harmful to the expansion of minor exports, thus supporting a widespread hunch. In the first regression, for example, the coefficient for instability tells us that a reduction of the average quarterly fluctuation in the effective exchange rate from, say, 6.0 to 4.0 will, ceteris paribus, raise the growth trend of minor exports by 3.7 percentage points. The same equation tells us that to achieve a similar result by just changing the effective exchange rate, it would be necessary to carry out a net effective devaluation of 4.6 per cent *every year*.

The links between export growth, the exchange rate, and its instability literally implied by regression 1, and others, may be clarified by the following example. Suppose the effective exchange rate has been held steady at 10 pesos per U.S. dollar, but that it is then decided to carry it to an *average* of 11 pesos in "Year Two" and to 12 pesos in "Year Three," after which it will again be held steady. The transition takes place entirely in Year Two, when for each of its quarters the exchange rate can be taken as 10.0, 10.6, 11.4 and 12.0 pesos, respectively. Thus, for that year the instability index will average

4.7 per cent, while for all others it will be zero. Under these circumstances, growth rate in minor exports predicted by regression 1 will be: Year One, 19.9 per cent; Year Two, 19.3 per cent; Year Three, 28.0 per cent; and Year Four, 19.9 per cent.

In other words, during Year Two the positive effect of the net devaluation will be more than offset by the negative instability effect; in Year Three there will be no instability to drag down the positive effects of the net devaluation, but by Year Four growth will be back to a long-term trend unaffected by the exchange rate. This is surely but a crude attempt to capture the dynamics of response to net devaluation, but for Colombia it does reflect an important experience, even if it leaves out such matters as thresholds, expectations, and considerations of the exchange-rate level.

Fluctuations in the domestic output of BCST crops (in the short run caused to a large extent by weather), entered with a one-year lag in the regressions of Table 2-13, clearly influence changes in BCST exports, and this with an elasticity near 2.0. Such a value is compatible with the priority given by authorities to the domestic consumption of these commodities and the marginal role assigned to exports.

Although the R^2s in Table 2-13 are not as large as those in regressions using untransformed variables coupled with time trends, serial correlation and collinearity problems plaguing those other versions of supply response seem to have been avoided in my case.

The result that "the exchange rate matters," obtained from annual data, is confirmed by Table 2-14, showing regressions based on quarterly data, but in which, as before, the variables include annual percentage changes in all minor exports and in the effective exchange rate. It has not been possible to disaggregate quarterly minor exports. For exports and the exchange rate, therefore, the percentage change between this year's first quarter and last year's first quarter, and so on, were used. This approach avoids seasonality considerations. The index of instability is defined as before: for a given quarterly observation the index refers to the average fluctuation in the exchange rate during that quarter and the previous three quarters. The average values for 1955I through 1972IV for the variables used in Table 2-14 are 19.5 for recorded minor exports, 4.3 for the effective exchange rate, and 5.6 for the instability index.

The standard deviations of these annual changes based on quarterly data are of course higher than those derived from annual data. For example, the standard deviation of the average percentage change in minor exports is 42.1 using quarterly data and only 19.5 using annual data. Extreme values, caused by exogenous circumstances, affect averages of quarterly data much more than those for annual data.

The supply elasticities estimated in Table 2-14 are close to those obtained

TABLE 2-14

Regressions for Changes in Minor Exports, Based on Quarterly Data for 1955–72

(*t* ratios in parentheses)

Independent Variables	Dependent Variable: Annual Changes in All Recorded Minor Exports		
	1955I Through 1972IV	1955I Through 1963IV	1964I Through 1972IV
Constant	23.32	33.76	19.95
	(3.28)	(2.72)	(2.10)
Changes in the exchange rate	0.95	0.68	1.04
	(3.59)	(2.02)	(2.07)
Instability of exchange rate	−1.42	−2.92	−0.10
	(1.51)	(2.11)	(0.06)
R^2	0.19	0.31	0.13
F statistic	7.98	7.51	2.37
DW	1.60	1.19	1.96
No. of observations	72	36	36

NOTE: For method, see text. Quarterly data on minor exports obtained from IMF-IFS.

in annual regressions and are all significant. The instability index again performs reasonably well, although better for the earlier years. Identical regressions covering 1954I through 1971II give even better results for R^2 and *t*. After 1968, the independent variables show little movement, while export data, particularly the quarterly figures, maintain considerable variability (some of which looks spurious).

Tests were made of the hypothesis that the change in minor exports depends not only on changes in the exchange rate and its instability but also on the *level* of the exchange rate; the results were insignificant in all cases. Another experiment involved using the percentage change in the exchange rate squared, but keeping its original sign, to examine the proposition that large changes in the effective exchange rate cannot be expected to yield correspondingly large changes in minor exports, either because of adjustment lags or for other reasons. Most coefficients in this experiment were insignificant. The best regression covered 1963I through 1971II; as expected, this procedure increased the coefficient for the change in the exchange rate to 1.71

(with a t ratio of 2.8), and resulted in a negative sign for the squared term, which had a coefficient of -0.017 and a t ratio of 1.6. R^2 and the Durbin-Watson statistic rose (slightly) to 0.31 and 1.50, respectively; and the stability coefficient remained insignificant. The 1963–71 regression can be interpreted as yielding an upper estimate for the supply elasticity of minor exports with respect to the exchange rate. Finally, a dummy variable was also introduced in regressions of the type presented in Table 2-14, having a value of 1 whenever the exchange rate change was negative, and zero otherwise. This test of possible asymmetric responses to positive and negative exchange-rate movements yielded no evidence for asymmetry.

Direct experimentation with lagged values for exchange rates, still using quarterly data, yielded clearly positive results in only one case. For the period 1954I–1962IV, the coefficient for changes in the exchange rate lagged one full year was 0.78, with a t statistic of 3.0. The coefficient of the unlagged exchange-rate change *increased* to 0.99, with a t statistic of 3.9. For the instability index the coefficient was -4.01 and the t statistic was 4.2. R^2 rose to 0.57, and the Durbin-Watson statistic, to 1.50. Note that the sum of the two exchange-rate coefficients gives a long-term elasticity practically identical to that obtained for 1963–71 when the squared exchange-rate change was included in that regression.[10]

IMPORTANCE OF OTHER POLICIES

The evidence discussed so far is consistent with the hypothesis that exchange-rate policy, including its stability, considerably influenced minor exports. It does not, however, support the presumption that it is the only policy which has mattered. Note how in all but one of the regressions in tables 2-13 and 2-14 the constant terms are large and significant. The results of regression 1 in Table 2-13, for example, indicate that a perfectly stable effective purchasing-power-parity exchange rate for minor exports, at a level similar to that observed during the period under study, would be consistent with a growth in those exports of about 20 per cent per year, far exceeding growth in the rest of the Colombian economy. With the instability observed, on the average, from 1955 through 1972, the upward trend would still be about 10 per cent per year. An upward creep of 3.7 per cent per year in the real effective exchange rate, always according to the same regression, brings the rate of expansion in minor exports to about the 13 per cent actually observed. Note that given the annual averages for 1955–72, a supply elasticity of about 3.4, or more,[11] would be needed for the changes in the effective exchange rate alone to explain all of the increase in minor exports.

What lies behind the powerful constant terms? First of all, they could be picking up inflationary trends in the world economy, but this cannot account for very much and would be limited to non-BCST exports (BCST dollar prices

have declined on average during 1957–70). The major answer must rely on other direct and indirect export-promotion schemes discussed earlier. Note how the constant term drops in regressions 2 and 3 in Table 2-13 when the lagged change in domestic production of BCST is brought in; these latter changes, as discussed earlier, have been heavily influenced in the long run by credit and other promotional policies of the public sector (and in the short run, of course, by weather).

Unfortunately, the evidence regarding the influence of exchange-rate policy on minor exports is less robust than it appears at first sight. Even in tables 2-13 and 2-14 disaggregation into BCST and non-BCST exports and the use of subperiods decrease the t statistics for some coefficients. Non-BCST minor exports, for example, appear less sensitive to exchange-rate changes, but more sensitive to instability, than BCST exports. It is not obvious why this should be so, a priori. Furthermore, regressions in which the BCST export quantity index (presented earlier in this chapter) was used as the dependent variable yielded insignificant coefficients for exchange-rate variables. Other regressions (not shown) in which the dependent variables (1958–69 only) were changes in dollar values of non-BCST exports to LAFTA and non-LAFTA countries separately, as well as changes in manufactured exports only, yielded insignificant coefficients for all variables except the constant terms.

Other independent variables, for which yearly data were used, also yielded insignificant coefficients. These included changes in domestic industrial output (to test for the influence of *generalized* cyclical excess capacity on non-BCST and manufactured exports);[12] concurrent (i.e., unlagged) changes in the domestic production of BCST; and all lagged variables except BCST output.

Aggregating unregistered with registered minor exports and using annual changes in their combined total as the dependent variable also worsens the results, and yields insignificant coefficients for the independent variables. Together with the insignificant results obtained with most lagged variables, this failure generates some suspicion that at least part of the apparent exchange-rate elasticity of registered minor exports may arise from substitution effects induced by the contrast of the legal exchange rate with the black-market rate, between smuggling and registration, and between one year and another or one quarter and another, according to John Sheahan's results. Especially before 1967, for example, the timing of exports of storable BCST crops could have been influenced by the exchange rate without that implying much for the long-run expansion of those exports.

It can be argued with some force that the exchange rate used in the regressions is more applicable to some minor exports than others. It is not just a matter of neglecting ad hoc exchange regulations for some products; it is also that for minor exports going to LAFTA, account should be taken not only of

the U.S. wholesale price index, but of price levels and exchange rates in Latin American countries as well. Nevertheless, it remains disturbing that the disaggregated results are so much poorer than those for all registered minor exports lumped together.

What to make of this bundle of results? In spite of the shortcomings noted, the hypothesis that exchange-rate policy has been a major influence on the evolution of Colombian minor exports has more evidence to back it up than its extreme opposite. But it is not possible, given the information available, to credit different policy variables with exact shares of the increase in those exports. The untangling of the impact of different policies on export promotion may only be possible, in fact, using cross-sectional data for several countries. Even then, important interaction effects among export-promotion policies in a given country as well as the degree of credibility of these policies among entrepreneurs may be impossible to quantify. For example, by how much does commitment to a crawling peg enhance the credibility of export incentives? Are there discontinuities (or floors and ceilings) for the effects of some variables, depending on the value of others? Will PROEXPO efforts be apparent only if the real net exchange rate is above a certain minimum? And will further increases above that minimum bring fewer additional exports than, say, expanding the benefits of the Vallejo Plan? Will subsidies to selected industries generate foreign exchange at lower domestic resource costs than a more devalued exchange rate? Or avoid generating quasi rents? Alas, neither a priori reasoning nor empirical work appears capable at this point of yielding convincing answers to these questions, at least for Colombia, whose experience with substantial minor exports is, after all, relatively short. Throughout economic history many export booms have shown Schumpeterian patterns difficult to explain fully using solely concepts such as the price elasticity of export supply. The Colombian minor export boom, particularly after 1967, falls into that category.

LAFTA VS. NON-LAFTA MINOR EXPORTS: SOME ECONOMIC CHARACTERISTICS

It was seen earlier that one of the most dynamic components of Colombian minor exports was that destined to LAFTA countries, including the Andean group. On the face of it, preferential tariff treatment abroad must be combined with domestic promotion policies to explain the above-average growth rate of exports to LAFTA. It is of some interest to explore whether there are systematic differences between the economic characteristics of LAFTA and non-LAFTA exports.

Even without the existence of preferential trade arrangements differences

would be expected between Colombian exports to the rest of Latin America and those shipped to, say, the United States and the European Common Market. Whatever the positive theory of trade adopted, whether Heckscher-Ohlin, Linder, product cycle, or almost any other, differences between the predicted commodity composition of those trade flows will emerge. But a first task is to see whether, in fact, the difference is significant.

LAFTA Share and Capital-Labor Ratios.

It was suggested earlier in this chapter that the more capital-intensive a given export item of Colombian manufacture is, the larger will be the LAFTA share in its geographical destination. Colombian capital-labor ratios are not

TABLE 2-15

Regressions Explaining LAFTA Share of Three-Digit SITC Minor Export Items as a Function of the Capital-Labor Ratio

(*t* statistics in parentheses)

	Constant	Logarithm of Capital-Labor Ratio	R^2	F Statistic	No. of Observations
1968					
All export items	− 48.47	9.81 (2.43)	0.06	5.90	100
Export items over $100,000	−59.37	10.22 (2.56)	0.09	6.56	65
1969					
All export items	− 96.39	15.22 (3.68)	0.12	13.53	104
Export items over $100,000	− 128.25	18.07 (3.90)	0.20	15.24	62
1970					
All export items	− 96.27	15.89 (3.80)	0.13	14.43	97
Export items over $100,000	− 129.49	18.83 (4.51)	0.25	20.32	64

SOURCE: See text. The means for the LAFTA shares were as follows:

1968	
All export items	40.8%
Export items over $100,000	33.5
1969	
All export items	42.5
Export items over $100,000	36.1
1970	
All export items	48.7
Export items over $100,000	41.1

available to test this proposition in the necessary detail, so the test can be carried out only if it is assumed that the ranking of activities according to capital-labor ratios is the same in Colombia as in the United States. Furthermore, the test will only refer to direct capital-labor ratios.

Using 1965 capital-labor ratios computed by Gary C. Hufbauer for the United States[13] and LAFTA shares in matching three-digit SITC Colombian exports, primarily of manufactured goods, for 1968, 1969, and 1970, the results presented in Table 2-15 are obtained. While capital intensity is only one of the many variables determining whether a given item is exported to LAFTA or elsewhere, the strong t ratios confirm that there is a significant link between LAFTA shares and capital intensity. It is noteworthy that in Table 2-15 the more recent the year, the stronger is the result.

LAFTA Share and Import Intensity.

Using unpublished data from Planeación, Larry Senger has tried to explain the share of minor export items going to LAFTA, covering both manufactured and nonmanufactured goods, as a function of imports per worker and value added per worker in the sectors generating those exports. Only the direct import, value-added, and labor requirements of the sector were considered. For every year from 1961 through 1968, the coefficient for the logarithm of imports per worker is positive and highly significant, with t statistics between 4.5 and 8.8. Contrary to my earlier results, the coefficients for the logarithm of value added per worker are negative, but with erratic t statistics depending on the year; for 1965, for example, the t statistic is -1.3, but for 1968 it is -2.1. The R^2s range from 0.16 to 0.32, with the number of observations ranging from 104 to 239.[14]

Interpretation of the Results.

The evidence indicating that Colombian minor exports to LAFTA are more capital- or import-intensive than those shipped elsewhere is fairly strong. But the difference in capital intensity could be expected even without the existence of preferential trading arrangements, at least following some trade theories, as the Colombian factor endowment is closer to that of the rest of Latin America than to those of North America and Europe, where most of her non-LAFTA exports go.

Comparing the unit values for LAFTA exports with those for non-LAFTA exports for three-digit SITC minor exports, one obtains the expected result that the former are higher than the latter, on average, for 1968 and 1970. However, the standard deviation is very high, casting doubt on the significance of these averages. The ratio of LAFTA unit values to non-LAFTA ones

for 1968 is 1.87, with a standard deviation of 3.56, and is for 100 SITC three-digit items. The comparable figures for 1970 are 1.33 and 1.16, for 112 items.

When the ratios of LAFTA to non-LAFTA unit values are correlated with the Hufbauer capital-labor ratios used above, very poor results are obtained for every year, whether all items are used or only those values above $100,000. One cannot, therefore, establish a link between high capital-labor ratios and trade diversion by this route. No firm link appears either between the ratios of LAFTA to non-LAFTA unit values and the LAFTA share for each export item.

While the basic explanation of the higher capital intensity of exports to LAFTA remains moot, their higher import intensity would not be expected on a priori grounds, and the most plausible explanation for it rests on the powerful combination of incentives formed by LAFTA preferential margins, the CAT, and the Vallejo Plan.

LAFTA and the Andean group, particularly the latter, seek broad objectives which may even justify some sacrifices in economic efficiency narrowly defined. These preferential arrangements provide Colombia, inter alia, with at least some insurance against a sudden collapse in world trade, such as that of the 1930s. Nevertheless, possible efficiency costs in this area should be monitored and minimized by close examination of the nature of LAFTA trade and by a re-examination of export-promotion schemes.

OUTLOOK FOR MINOR EXPORTS

Whatever its defects, the policy package put together in March 1967 has been consistent with an acceleration in the growth of minor exports. The effects of the greater stability and the higher level of the effective exchange rate, as well as other export-promoting features of Law 444, appear to be still filtering through the economy, strengthening the new ''export mentality'' and triggering fresh learning effects, as the timid imitate those already successful in exporting. If these policies are maintained, including the upward creep in the effective exchange rate, and if the world economy does not suffer a dramatic change in trend, a growth rate in minor exports averaging about 15 per cent can be expected during the next ten years in spite of the expanding base. The diversified list of minor exports should continue to expand; mining projects for nickel, gas, and coal may provide important new entries. It may be added, on the optimistic side, that we have only discussed *merchandise* exports; Colombia has hardly begun to explore her potential in the export of services, of which tourism is an obvious example. Service exports, it may be noted, do not receive CATs.

The recent growth of minor exports has witnessed the simultaneous

strengthening of a lobby favoring the continuation of export-promotion policies, still not as potent as the lobbies of coffee growers and import-competing industries, but growing in distinctiveness and power. That lobby also puts pressure on public officials to remove barriers to exporting involving social overhead facilities, such as harbors, and regulated services, such as transport.

Some may find it strange that no further dismantling of the import control apparatus has been given as a precondition for future minor export expansion. Such dismantling could, of course, serve as an additional impetus, together with other policy changes, but Colombian experience, as well as that of other countries, shows that it is not a sine qua non for export growth. In fact, the achievement of the 15 per cent target will allow continuation of the gradual relaxation of import controls, which has been going on since 1967. This "virtuous circle" of export expansion–import liberalization–more export growth is the opposite of the vicious circle of export contraction–import controls–fewer export incentives which dominated many Latin American economies for about thirty years after the crisis of 1929. In the triggering of the virtuous circle, export expansion, and not import liberalization, is given pride of place; launching a massive import liberalization program without a secure export front can lead to serious setbacks for the whole liberalization effort, as the 1965–66 Colombian experience shows. Indeed, in retrospect such experiments, putting the cart before the horse, appear as risky "chicken games" designed to force the hand of those policymakers reluctant to devalue. The events of November 1966 showed the limitations of that tactic.

Nor is the creation of firms that are wholly devoted to exporting a necessary condition for rapid export growth; a gradual increase in the exported share of many firms from 5 to 10 per cent and then to 20 per cent can give impressive boosts to exchange earnings, and even a constantly rotating group of sporadic exporters can achieve meaningful results.

The last chapter contains detailed speculation on the probable role of minor exports in furthering Colombia's development. Here it will be sufficient to observe that since the long-term prospects for coffee exports as well as for concessional capital inflows are mediocre, the availability of machinery and equipment required for achieving an average growth rate of between 6 and 7 per cent per year during the next ten years will very much depend on achieving a growth in minor exports of about 15 per cent per year to buyers who are either efficient suppliers of capital goods or of freely convertible foreign exchange. Colombian prospects for placing her debt in world capital markets at commercial terms also depend on the outlook for her current-account earnings.

Under a relaxed balance-of-payments position, continuing expansionary fiscal and monetary policies could be instituted. The result would be to mobilize domestic productive resources which in the past too often remained

idle or underutilized because of stop-go macroeconomic management induced by balance-of-payments crises, even when the domestic activities thus penalized were not heavy users of foreign exchange.

What will this scenario imply for the problem of underemployment and the related issue of a skewed income distribution? The achievement of annual growth rates of 15 per cent for minor exports and 7 per cent for GDP will not automatically result in a lower rate of unemployment or a better income distribution in ten years' time. Remember first that the greater availability of foreign exchange will allow an expansion of machinery and equipment imports. How this enlarged flow is spread out and allocated can make the difference between having more capital-intensive activities, perhaps labor-displacing, or having a large number of new labor-absorbing units. Unless import liberalization and other public policies are formulated that specifically avoid giving incentives to the first type of development, faster growth could conceivably lead to more unemployment or underemployment, particularly in rural areas.

Several minor exports, particularly those going to LAFTA, seem to be quite capital-intensive, and also frequently import-intensive. Their rapid expansion will have little impact on the demand for unskilled labor; indeed, some purely import-substituting activities and most home goods (nontradables) are likely to be less capital-intensive. A gradual "fine-tuning" of export incentive schemes could help correct such a situation by changing the incentive structure without necessarily modifying its average level. Steps in this direction could include, for example, the imposition of a uniform tariff on Vallejo Plan imports, compensated for by an increase in the CAT flat rate or in the upward crawl of the exchange rate. Smaller firms and those whose exports have a higher domestic value-added content will benefit; both are likely to be relatively labor-intensive and involve domestic entrepreneurs to a larger degree. The spread in the effective protection generated by export incentives would also be narrowed.[15] The application of these reforms should, of course, be carried out with extreme care, so that healthy export growth will not be cut off in the process of discarding distorted policies. If nothing else, the imperfect state of knowledge regarding the exact impact on minor exports of each of the various promotion policies makes such caution very advisable.

Even with refined and improved export-promotion and import-allocation policies it is unlikely that the twin targets of 15 and 7 per cent growth for minor exports and GDP will improve Colombian income distribution by very much. By 1973 minor exports had reached between 5 and 6 per cent of GDP; their direct and indirect domestic value added was probably between 4 and 5 per cent of GDP. If such value added also grows by 15 per cent per year during the next ten years, and GDP grows at 7 per cent, by the end of that time direct and indirect value added in minor exporting activities will have reached between 8

and 10 per cent of GDP. So even if all the additional exports were labor-intensive, their net impact on the aggregate demand for unskilled labor would remain, at least for the next ten years, modest. Note also that further expansion of primary-product exports, such as meat, cotton, and sugar, can hardly be counted upon to improve land tenure conditions. In fact, the need to promote exports has already been used as an argument against land reform, particularly in the Cauca Valley and along the Atlantic coast. The relatively high share of coffee output produced in small- and medium-sized farms is not a feature duplicated in most new rural exports.

The major contribution of faster export growth and of a foreign trade sector free of the periodic crises so prevalent before 1967 may very well turn out to be that it gives policymakers the opportunity, which they may or may not grasp, to turn their attention away from the basically unnecessary and superficial balance-of-payments hysterics and toward more important and difficult problems, such as raising the welfare of the poorest half of the population within a reasonably short period of time. That task will require policy measures beyond the manipulation of exchange rates, CATs, tariffs, and such.

NOTES

1. The list of those seduced by the hope of explaining the irregular surge of Colombian minor exports is impressive. It includes John Sheahan and Sara Clark, "The Response of Colombian Exports to Variations in Effective Exchange Rates," Research Memorandum 11, mimeographed (Williamstown, Mass.: Williams College Center for Development Economics, June 1967); Antonio Urdinola and Richard Mallon, "Policies to Promote Colombian Exports of Manufactures," Economic Development Reports 75, mimeographed (paper presented at the Harvard Development Advisory Service Conference, Sorrento, Italy, September 1967); José Diego Teigeiro and R. Anthony Elson, "The Export Promotion System and the Growth of Minor Exports in Colombia," IMF *Staff Papers*, July 1973, pp. 419–470; Alberto R. Musalem, "Las Exportaciones Colombianas, 1956–1969," mimeographed (Universidad de los Andes, May 1970); Richard R. Nelson, T. Paul Schultz, and Robert L. Slighton, *Structural Change in a Developing Economy: Colombia's Problems and Prospects* (Princeton, N.J.: Princeton University Press, 1971), especially pp. 210–213; Jonathan W. Eaton, "Effective Devaluation as an Export Incentive in Less Developed Countries" (B.A. thesis, Harvard University, March 1972), Chap. 6.

2. Many definitions have been put forth for manufactured exports; the one used here simply includes SITC categories 3 (except crude petroleum), 5, 6, 7, and 8. This omits synthetic fibers (SITC 266) while including minerals and ores with little refinement.

3. Data obtained from UNFAO-PY and UNFAO-TY, various issues.

4. Richard C. Porter, "The Birth of a Bill Market," Discussion Paper 11, mimeographed (Center for Research on Economic Development, University of Michigan. August 1970), has analyzed in detail the relationships between the marginal tax and discount rates of a given firm and the extent of the export stimulus offered by CAT and its predecessor subsidy scheme. He shows that both CAT and the exemption scheme yield larger export incentives to firms with higher marginal tax rates and lower discount rates (typically larger firms). However, he argues that

relative to the previous tax exemption, the CAT system increased the export stimulus for firms with marginal tax rates *below* 37.5 per cent and reduced it for firms with higher tax rates.

5. As an illustration, it may be noted that the Colombian PPP-EER for minor exports computed with respect to the German mark rose by 78 per cent between 1960 and 1972, while the equivalent rate with respect to the U.S. dollar rose by only 46 per cent. Indices for both effective rates (1960 = 100) were as follows:

	Based on *U.S.* *Dollar*	*Based on* *German* *Mark*		*Based on* *U.S.* *Dollar*	*Based on* *German* *Mark*
1955–59	106	107	1965–69	128	133
1960–64	118	123	1970–72	143	164

6. As noted by my colleague Benjamin I. Cohen, the expansion of import-intensive export activities may soon call for the computation of data for net rather than gross exports, at least for some types of exports, particularly in countries that have gone deeply into export-oriented assembly-type activities with heavy use of imported parts. Part of the addition in import requirements associated with export booms may show up under the service account as trips abroad, and these are likely to multiply, for such reasons (legitimate or spurious) as attendance at fairs, contacts with customers, and searches for new outlets.

7. It can be shown that in a locally monopolized industry selling both at home and abroad, but at different prices, a lowering of import duties can lead to a contraction of exports and an expansion of domestic sales. This apparently paradoxical result, however, is unlikely to have much practical relevance over the long run. The basic argument is developed in an unpublished paper of Gonzalo Giraldo of the Colombian Planning Department. It is similar to the analysis showing that the imposition of a minimum wage can expand employment under conditions of labor monopsony.

8. The advertising is similar to that sponsored sporadically by the Bureau of International Commerce, U.S. Department of Commerce. See, for example, the ad "It took a Texan to cool the Japanese," *Wall Street Journal*, January 26, 1972, p. 11.

9. In earlier work, Durbin-Watson statistics in supply-response regressions were very low. See also Eaton's thesis, mentioned in footnote 1, above.

10. Regressions using untransformed quarterly data, but in logarithmic form and with explicit trend variables, yielded elasticities near 1.0. When trend terms were excluded the elasticities rose to about 2.7 for the whole period. The instability index also performed well in these regressions, and the R^2s were, of course, much higher with trend (around 0.85). The Durbin-Watson statistics, however, were always below 1.0, often less than 0.5. Dummies indicated the presence of significant seasonal factors, particularly a positive factor in the second quarter. As in the work of John Sheahan, referred to in footnote 1, above, the regression coefficients for the lagged exchange rate were insignificant or had the wrong sign.

11. But in ten years' time the increase in minor exports growing at 12.7 per cent per year will be 230.6 per cent. The corresponding figure for an exchange rate growing at 3.7 per cent will be 43.8 per cent. Consequently, while for the annual rates the ratio (elasticity) is 3.4, for the ten-year span it is 5.3.

12. For example, during the difficult year of 1967 industrial output rose by only 3.6 per cent, compared with an average rise of 5.7 per cent for the previous two years. Pure manufactured exports, however, rose by only 4.8 per cent in dollar value during that year, in contrast with an average rise of 21.2 per cent during the previous two years. It is possible that more disaggregated indices of excess capacity would yield better results.

13. See Gary C. Hufbauer, "The Impact of National Characteristics and Technology on the Commodity Composition of Trade in Manufactured Goods," in Raymond Vernon, ed., *The*

Technology Factor in International Trade, Universities–National Bureau Conference 22 (New York: NBER, 1970), pp. 145–231, particularly Table A-2. But see also the comments of Jagdish N. Bhagwati in the same volume, pp. 273–274.

14. See Larry Senger, "General Characteristics, Factor Intensities and Destinations of Minor Colombian Exports" (Senior Essay, Yale University, March 1974), Table VIIIa.

15. These and similar suggestions have been put forth and elaborated by the staff of the Colombian National Planning Department, at least since 1970.