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: Trade Policies and Colombian Development

Chapter Author: Carlos F. Diaz-Alejandro

Chapter URL: http://www.nber.org/chapters/c4046

Chapter pages in book: (p. 215 - 256)

Chapter 8

Trade Policies and Colombian Development

Anyone who has followed this book so far would expect to find in this last chapter a quantification of the impact of changes in Colombian trade policies on that economy's various development targets in the areas of efficiency, growth, employment, income distribution, stability, and national autonomy. The *direction* of expected changes in the various magnitudes would not be enough; ideally something should also be said about the likely magnitude of the different effects.

No such scientific and credible quantification will be presented here. Two interrelated types of difficulties stand in the way. As for most countries, no simple positive trade theory appears to explain accurately the evolving Colombian trade structure. An inelegant and qualitative eclectic appeal to elements of positive theories of location, "vent-for-surplus," Heckscher-Ohlin, and the product cycle is the best that can be done to explain Colombian trade patterns both with industrialized countries and with other developing countries, particularly those in Latin America. While these positive theories of trade agree on the misty proposition that liberalized trade policies could and are likely to improve the efficiency (and perhaps growth) of a country without monopoly power in international markets, their predictions regarding income distribution and employment effects of trade liberalization are even mistier, especially when they are applied to a world that contains more than two goods and two factors.

A fairly disaggregated quantitative model of the Colombian economy, something which as yet does not exist, could simulate responses to trade policy changes. In this chapter, the kind of information ideally desired will be

listed, and available data will be reviewed. Rough order-of-magnitude estimates of possible effects of trade policies will be made whenever possible.

In Chapter 7 it was shown how after the November 1966 collapse of the ambitious import liberalization program launched in September 1965 a more modest and gradual liberalization process could be said to have started in March 1967. Thus, a review of major economic trends from 1967 through 1973 will be presented first. Then we shall speculate on possible effects of further liberalization on efficiency, growth, income distribution, employment, stability, and national autonomy.

THE RECORD FOR 1967–73

Foreign trade statistics, other partial data, and national accounts, the latter available only through 1972, show a notable change for the better between 1956–67 and 1967–73. But as can be seen in Table 1-1, a good share of that contrast can be explained by the difference in behavior of the key exogenous variable, the dollar coffee price, which after falling at a rate of more than 3 per cent per year from 1956 through 1967, rose by more than 6 per cent per year from 1967 through 1972.[1]

Nevertheless, a comparison of trade data for 1948–56 with those for 1967–72 confirms what is known from previous chapters: the improved performance of recent years is not simply due to exogenous factors. The rise in coffee prices during 1967–72 has been smaller than during 1948–56, while the expansion of registered minor exports has been larger. While in the earlier years the share of minor exports tended to fall, it rose significantly during 1967–72. Furthermore, contrary to what would be expected for magnitudes that start from a small base, the growth rate of minor exports rose between 1956–67 and 1967–72. Undoubtedly, many nontraditional exports benefited from unusually high world prices, particularly during 1972–73, but in most cases such exports had initially responded to inducements originating in domestic policy, which stimulated activities that could so benefit.

The growth rate of real GDP has averaged more than 6 per cent per year from 1967 through 1973, a figure somewhat higher than that for 1948–56,[2] and sharply better, especially in per capita terms, than the average 4.6 per cent registered for 1956–67. All major GDP components listed in Table 1-2 show increases in their growth rate between 1956–67 and 1967–72, and all stand above their respective averages for the whole period from 1950 through 1972. At least for the level of aggregation shown, it does not appear that the higher post-1967 growth is the result of pulling resources *out* of the least productive (measured) activities and putting them into more productive ones; the growth profile thus has a "vent-for-surplus" flavor.[3] It may also be observed that the

post-1967 expansion has a more balanced profile than that for 1950–56. Especially to be noted in Table 1-2 are the lower growth rate for construction and the higher one for primary production. (Construction, however, appears to have boomed during 1973 and early 1974.)

One way to investigate whether a significant change in the pattern of Colombian growth has occurred since 1967 is to examine how well average growth rates since World War II fit the post-1967 experience. This has been done for the output of major activities in agriculture, livestock, and manufacturing, as given in the national accounts, which are available from 1950 through 1972. Each of the output indices (y) for these activities has been fitted with the following regression: $\log y = a + bt_1 + ct_2$.

As before, t_1 denotes a time trend variable going from 1 (for 1950) through 23 (for 1972). The variable t_2 takes values of zero for 1950 through 1966 and values of 18, 19, . . . , 22, 23 for the six years included from 1967 through 1972. The b coefficient will then yield a hypothesized "normal" growth rate for the whole period; the c coefficient will give deviations during 1967–72 modifying such a trend. A plot on a semilogarithmic grid of the logarithm of y against time shows a kink and a change of slope after 1966, with both pre- and post-1966 trends represented as straight lines joining in 1966. If the coefficient c happens to be zero, the graph will show the usual straight line, whose slope yields the single average growth rate. In what follows, when the coefficient c is twice its standard error or more, it will be deemed significant, which of course does not imply necessarily that it is large. The positive or negative deviations can be due to a variety of causes, including policy changes not directly related to the trade and payments system (and to changes in the coverage of national accounts data!). It could also be argued that lack of a significant deviation from trend may result from conflicting influences that cancel each other out. But since a complete model of the Colombian economy is lacking, an obvious first step seems to be to examine the clearest departures from trend, speculating later as to their meaning.

The results of this exercise are presented in tables 8-1 and 8-2. As noted earlier, in recent years there has been a slight pickup in the mediocre growth rate for agriculture and livestock. In Table 8-1, significantly positive 1967–72 deviations from trend appear in garlic and onions, rice, potatoes, plantains, mandioc, horses (!), and "other," both in agriculture and livestock. In the Colombian context this whole group may be characterized as involving predominantly nontradable goods. Major export crops apart from coffee, such as cotton, bananas, cocoa, sugar cane, tobacco, and bovine cattle fail to show significant accelerations in their growth rates during 1967–72. However, the trend growth rates are impressive ones, particularly those for cotton, sugar cane, and bovine cattle. On the whole, it would be difficult to attribute the pickup in the agriculture and livestock growth rate after 1967 to *further* stimuli

TABLE 8-1

Agriculture and Livestock: Average Annual Percentage Growth Rates of Output for 1950–72 and Growth Rate Deviations During 1967–72
(standard errors in parentheses)

	Trend Growth Rate, 1950–72	Deviation from Trend, 1967–72
All agriculture	2.98	0.24
	(0.18)	(0.13)
Sesame	13.25	−3.57*
	(1.91)	(1.40)
Garlic and onions	2.57	2.68*
	(1.21)	(0.89)
Cotton	14.64	−1.76
	(1.51)	(1.11)
Rice	4.77	0.73*
	(0.29)	(0.21)
Bananas for export	1.98	0.69
	(1.03)	(0.75)
Cocoa	4.25	−0.16
	(0.28)	(0.21)
Coffee	2.20	−0.81*
	(0.31)	(0.23)
Sugarcane	6.00	0.41
	(0.40)	(0.30)
Rubber	5.03	1.43
	(1.28)	(0.94)
Barley	4.59	−1.80*
	(0.91)	(0.67)
Copra[a]	11.42	−1.81
	(2.29)	(1.72)
Beans	−1.48	1.53
	(1.17)	(0.85)
Corn	0.66	−0.19
	(0.47)	(0.35)
Potatoes	2.66	1.38*
	(0.78)	(0.57)
Plantains	2.82	0.65*
	(0.14)	(0.10)
Tobacco	4.31	−1.25*
	(0.73)	(0.54)
Wheat	−0.67	−2.46*
	(1.02)	(0.75)

TABLE 8-1 (*concluded*)

	Trend Growth Rate, 1950–72	Deviation from Trend, 1967–72
Mandioc	0.02	4.14*
	(0.43)	(0.31)
Panela (unrefined brown sugar)	5.65	−0.38
	(0.43)	(0.32)
Other agriculture	2.85	1.01*
	(0.19)	(0.14)
All livestock	3.68	0.18
	(0.25)	(0.18)
Bovine cattle	4.42	−0.15
	(0.56)	(0.41)
Pigs	5.05	−0.27
	(1.10)	(0.81)
Sheep	2.44	−1.22
	(1.36)	(1.00)
Goats	2.08	0.55
	(1.51)	(1.11)
Horses	0.87	0.90*
	(0.46)	(0.34)
Other livestock products	3.55	0.49*
	(0.23)	(0.17)

SOURCE: Basic data from BdIR-CN.

*Coefficient for the deviation from trend is twice its standard error or more.

a. Through 1971 only.

arising from the trade policies followed since that year. At best it could be argued that those policies helped sustain continued diversification away from coffee and impressive growth rates in several export-oriented rural activities that otherwise might have been slowed down in their performance, as in the case of some oilseeds of which production had been oriented primarily toward import substitution. Preliminary data for 1973 show that output growth for agriculture and livestock as a whole has remained somewhat above the whole postwar trend, but no sharp break in trend is apparent.

The manufacturing pattern, presented in Table 8-2, is even more difficult to characterize simply. First of all, while in Table 1-2 an increase is shown in the manufacturing growth rate for 1967–72, in contrast with that for the whole period, in Table 8-2, a slowdown is recorded in the 1967–72 growth rate for "modern" manufacturing. The sensitivity of the results to use of the depressed year 1967 as a base (as well as to the relatively slow recovery in

TABLE 8-2

Manufacturing: Average Annual Percentage Growth Rates of Output for 1950–72 and Growth Rate Deviations During 1967–72
(standard errors in parentheses)

	Trend Growth Rate, 1950–72	Deviation from Trend, 1967–72
All manufacturing	6.23	−0.12
	(0.12)	(0.09)
Industrial manufacturing	7.03	−0.23*
	(0.15)	(0.11)
Small-scale industry and handicrafts	3.26	0.09*
	(0.03)	(0.02)
Food processing	5.98	0.89*
	(0.27)	(0.20)
Beverages	4.57	0.21
	(0.26)	(0.19)
Tobacco processing	3.12	0.92*
	(0.25)	(0.19)
Textiles	6.66	−0.63*
	(0.35)	(0.26)
Shoes and clothing	8.28	−0.15
	(0.20)	(0.15)
Wood products and furniture	4.80	−1.10*
	(0.52)	(0.38)
Paper products	10.94	0.39
	(0.32)	(0.23)
Printing and publishing	7.95	−0.65
	(0.48)	(0.35)
Leather processing	4.46	0.03
	(0.29)	(0.21)
Rubber products	8.72	−1.40*
	(0.68)	(0.50)
Chemical products	8.33	−0.70*
	(0.30)	(0.22)
Petroleum and coal derivatives	9.57	−1.03*
	(0.48)	(0.35)
Nonmetallic mineral products	6.32	−0.58*
	(0.34)	(0.25)
Basic metal products	20.78	−5.67*
	(2.38)	(1.74)
Mechanical and metallurgical products	14.65	−2.60*
	(0.43)	(0.32)

SOURCE: Same as for Table 8-1.
*Coefficient for the deviation from trend is twice its standard error or more.

1968) suggests that no great weight can be attached to the apparent change in trend. Furthermore, preliminary data for 1973 indicate above-average manufacturing growth rates. On the whole, once longer time series become available, it will probably not be possible to establish that a significant break occurred in the manufacturing growth rate in about 1967, using the technique of Table 8-2.

That table also shows a complex pattern of acceleration and deceleration in growth rates for manufacturing branches. Counting small-scale industry and handicrafts as a branch, significant declines appear for eight branches, significant increases for three, and no significant changes show up in five branches. Among the eight activities with declining growth rates, several are associated with strong import-substituting efforts, including rubber products, chemicals, and basic metal products; but others, such as textiles, wood products, and furniture, are increasingly linked to manufactured exports. The three manufacturing industries with significant acceleration in their growth rates during 1967–72 are also a mixed bag: small-scale industry and handicrafts, food processing, and tobacco processing. The three sell overwhelmingly to the domestic market, but presumably have sharply different requirements for unskilled and skilled labor and capital. Some indirect information on the latter point is given in Table 8-3. Unfortunately, the categories in tables 8-2 and 8-3 are not exactly alike, and neither source provides information on recent shares of output exported. Nevertheless, from the figures in column 1 of Table 8-3 it may be assumed that activities such as tobacco and food processing have requirements for human and physical capital per unit of output which were not below the manufacturing average.[4]

Application of the technique used in tables 8-1 and 8-2 to the more aggregated national accounts indicates significant post-1967 acceleration in growth rates only for primary production (in spite of deceleration in mining, mainly petroleum), construction, and what is called in Table 1-2 Type-II services. Construction and services, of course, have a very small degree of "tradability." Thus viewed, the post-1967 acceleration in the growth rate of GDP could hardly be said to rest on a reallocation of resources, neither absolute nor relative, from nontradable goods and services into tradable ones.

On the whole, it is difficult to detect a powerful and unambiguous impact of post-1967 trade policies on the 1967–72 growth pattern. But besides the problem of untangling the effects of new trade policies from those of other policies and variables, the 1967–72 period is perhaps too short to allow for structural changes. During that period, for example, the performance of individual manufacturing activities was in many cases more influenced by the long-run import-substitution cycle than by the new export promotion policies, but such a situation, which can be seen in the residuals of several of the trend regressions, could change in the future.

TABLE 8-3

Colombian Manufacturing Activities Ranked by Value Added per Employed Person in 1967
(shares in percentages)

	Value Added per Person (thous. 1967 pesos) (1)	Share of Total Value Added (2)	Share of Total Employment (3)	Col. (2) Minus Col. (3) (4)	Share of Imports in Domestic Market (5)	Share of Exports in Domestic Production (6)
Petroleum and coal products	277.7	3.7	0.7	3.0	8.4	14.9
Tobacco products	185.0	4.0	1.2	2.8	0.2	0
Beverages	135.9	13.5	5.4	8.1	0.7	0
Chemicals other than pharmaceuticals	87.3	5.6	3.5	2.1	36.5	2.2
Pharmaceuticals and related products	87.2	7.7	4.8	2.9	9.3	1.2
Basic metal products	68.7	2.1	1.7	0.4	31.5	0.8
Paper products	64.4	2.5	2.2	0.3	25.9	11.9
Food processing	59.8	15.9	14.4	1.5	0.4	0
Rubber products	56.4	2.5	2.4	0.1	4.5	3.3
Electrical machinery except appliances	54.5	2.2	2.2	0	43.6	1.2
Electrical appliances	49.2	1.0	1.1	−0.1	2.0	0

Other manufacturing	44.2	2.7	3.3	−0.6	19.6	1.3
Textiles	43.4	13.0	16.3	−3.3	2.3	2.5
Printing and publishing	41.7	3.1	4.0	−0.9	7.7	1.2
Leather and products	41.2	1.1	1.4	−0.3	0	9.0
Nonmetallic mineral products	38.1	5.0	7.1	−2.1	3.6	6.0
Metal products	36.1	4.4	6.6	−2.2	10.5	1.9
Motor vehicles	36.0	1.9	2.9	−1.0	37.0	0.5
Mechanical machinery	32.0	1.2	2.0	−0.8	87.0	13.7
Nonelectrical appliances	26.6	0.2	0.3	−0.1	0	0
Wood and products	25.1	1.0	2.1	−1.1	1.3	15.4
Clothing and footwear	23.9	4.2	9.5	−5.3	1.2	0.4
Ceramic products	21.7	0.5	1.3	−0.8	7.5	5.6
Furniture and fixtures	19.8	0.6	1.7	−1.1	1.2	1.1
Transport equipment except motor vehicles	19.8	0.7	1.9	−1.2	80.2	0
All manufacturing	54.4	100.0	100.0	0	15.8	2.3

SOURCE: Basic data are from DANE unpublished estimates, and were obtained from IBRD unpublished documents. See also World Bank, *Economic Growth of Colombia: Problems and Prospects* (Baltimore: Johns Hopkins University Press, 1972), pp. 490–491. "Domestic market" is defined as domestic production plus imports less exports. It may be noted that the definition of manufactured exports excludes slightly processed foodstuffs such as sugar. The IBRD report estimates manufactured exports at $55.6 million in 1967.

The good 1967–73 growth performance may be best explained by the following mechanism. Higher growth rates in foreign-exchange receipts, primarily derived from merchandise exports, allowed the government systematically to follow more expansionary fiscal and monetary policies than had been possible during 1956–67. Such stimuli, and the positive reactions they triggered in private expenditure, led to a higher level of resource utilization almost *across the board* within the Colombian economy. Widespread pockets of underutilized labor, capital, and land were gradually brought into production without any major sector being required to contract so as to release resources for better use elsewhere. The foreign-exchange scarcity of 1956–67 forced fiscal and monetary policies sporadically to apply severe limits on aggregate demand; these restrictions were clumsy in the sense that nearly all sectors suffered, whether or not they were heavy users of foreign exchange.

If this interpretation is correct, recent growth should have been not only higher but also more stable than before 1967. In the following tabulation, simple year-to-year growth rates were taken for 1968–72 and for the previous five years (1963–67), and the means of *absolute* deviations from average growth rates for both periods were compared.

	1963–67	*1968–72*
GDP at constant market prices:		
Average growth rate	4.52%	6.28%
Average absolute deviation	0.99	0.38
Real domestic gross capital formation:		
Average growth rate	3.09	9.37
Average absolute deviation	10.80	7.37
Dollar merchandise imports, c.i.f.:		
Average growth rate	1.85	11.46
Average absolute deviation	24.34	8.07

Deviations around the average growth rate were smaller from 1968 through 1972 not only relative to average growth but also in absolute amounts. A more plentiful supply of foreign exchange since 1967 made possible the elimination of erratic stop-go policies, improving both the growth rate and domestic stability.

The process of bringing into production resources left idle by past stop-go policies has clear limits. Some types of land and of relatively unskilled labor may remain in "surplus" even after the 1967–73 expansion, although it is doubtful that supply is perfectly elastic even in their case. The "venting" of those resources with low opportunity costs via exports will remain a key ingredient for a successful growth policy, but domestic expansion will be sustained by fewer pockets of other underutilized resources than during 1967–73. Investment rates, which did not change much between 1963–67 and 1968–

72, will probably have to increase merely to maintain the recent growth rates. But more on this in the section dealing with trade policies and future growth.

The quality of the available data on 1967–73 changes in income distribution, employment, and degree of foreign ownership and control is poorer than the data I used for the output indices. In spite of this limitation, in the rest of the chapter, an attempt will be made to answer the question, What can we expect, viewing the matter during 1974, from further Colombian trade and exchange liberalization? This will involve reviewing (and some guessing) as to what has actually been happening to key variables during 1967–73. Guessing will also be necessary regarding the future trend of world prices for Colombian staples. If the world prices reached by coffee, cotton, sugar, and all other tradables in 1973 are sustained, the case for further real effective peso devaluations would become quite doubtful, and the ideal liberalization policy (as well as its urgency) would be different from that which would result if it is expected that prices of coffee (and other staples) will collapse as they did in 1956–57.

EVIDENCE ON STATIC EFFICIENCY EFFECTS OF COLOMBIAN TRADE POLICIES: REVIEW AND OUTLOOK

Colombian postwar trade and exchange policies induced static inefficiencies in the sense that some of the foreign exchange saved by import substitution could have been obtained more cheaply, i.e., at lower domestic resource costs, by using in export activities Colombian resources that have low opportunity costs, primarily natural resources of various kinds, and to a lesser extent, unskilled labor. This formulation does not imply that resources not used in those export activities but which "could have been" used, or could have been developed much earlier than they in fact were, found their way into the import-substituting sector. In the Colombian case it is more accurate to regard a good share of these low-opportunity-cost resources as remaining untapped, as with natural resources, or blending into a murky nontradable or "informal" sector. The blocking effect of trade and exchange policies in the vent-for-surplus process will be discussed in the next section, on the assumption that foreign nonpreferential demand for many actual and potential nontraditional Colombian exports is high. Such a key assumption is also made in this section, which will focus on prima facie evidence of static inefficiencies.

In earlier chapters, documentation was provided for the assumption that during the postwar period world demand for Colombia's actual and potential nontraditional exports was highly price-elastic. Such a statement is of course easier to make ex post than ex ante. The process of finding new foreign

markets is much more complex than is implied by the small-country assumption, and it is surrounded by considerable uncertainty both for individual export products and for the whole export drive. Nevertheless, on balance it appears that excessive elasticity pessimism dominated Colombian policy after the Second World War.

As a result, postwar public policy offered, on the whole, greater encouragement to import substitution than to exporting activities. Detailed studies on the exact incidence of such incentives are few, and available only for the more recent years. The most complete is a study carried out by Thomas L. Hutcheson,[5] who used various assumptions and methodologies to calculate effective rates of protection in 1969 for several manufacturing and primary activities. In that study, he relied on comparisons between Colombian and foreign prices for his calculations; his data came predominantly from Colombian producers and consisted of comparisons of their domestic price with their export price.[6]

Some of Hutcheson's major results are presented in Table 8-4. Taking as a yardstick an exchange rate 34 per cent higher than that observed during 1969, Hutcheson argues that any activity listed in Table 8-4 that received less than 34 per cent in effective protection was relatively disfavored, while those receiving more were protected. The 34 per cent devaluation involves a "guesstimate" about the adjustment which would have been necessary to maintain external balance if the protective structure had been removed.

The theoretical and empirical difficulties in this type of calculation are well known. Nevertheless, a major robust conclusion emerges from Hutcheson's results, based on the large variance observed in the protection received by different sectors in 1969. Thus, the generalization that, on average, manufacturing is protected while primary production is not can be supplemented with the generalization that protection varies considerably from industry to industry. Indeed, if comparable data were available, they would almost certainly show that net protection also varies sharply according to size of firm or farm.

Tariffs, import controls, export subsidies, and exchange rates are only part of the state's arsenal of policy instruments. Tax and credit incentives or direct official participation can be of greater importance for some projects. Furthermore, the exact incidence of the whole array of policy instruments can change from year to year, depending on such things as the actual and expected relative price structure being signaled to Colombia from world markets in a given year. Nevertheless, Hutcheson argues that his measures of effective protection are significantly and positively related to growth rates of different industries in the manufacturing sector.[7] He concludes that protection, particularly as measured by the Balassa method, made a difference in the pattern of growth within manufacturing. He argues that the structure of protection has contributed to slow economic growth and increasing unemployment. Propos-

TABLE 8-4

Effective Rates of Protection by Groups of Traded Sectors, 1969
(per cent)

	Balassa Method	Corden Method
Coffee	−45	−45
Mining	−8	−6
Sugar	−23	−19
Primary except coffee and mining	0	1
Food products except sugar	2	11
Beverages	121	103
Tobacco	95	84
Textiles	5	8
Shoes	−22	−10
Clothing	4	13
Wood products	−11	1
Furniture	−25	−11
Paper products	12	14
Leather products	11	16
Rubber products	−31	−26
Chemical products	61	56
Refinery products	−5	4
Nonmetallic mineral products	−8	0
Basic metals	151	39
Metal manufacture	47	43
Nonelectrical machinery	−7	12
Electrical apparatus	[a]	668
Transport equipment	610	319
Diverse industries	117	89
All manufacturing	44	29
All manufacturing except tobacco and beverages	40	25
All manufacturing except sugar	50	33
Primary exports except coffee and mining	18	18
Manufactured exports except sugar	21	21

SOURCE: Adapted from Thomas L. Hutcheson, "Incentives for Industrialization in Colombia" (Ph.D. diss., University of Michigan, 1973), Table 3.5, p. 68.

a. Value added is negative.

ing a policy of uniform protection, he expects that there would be much reshuffling within each sector as specialization occurred, but few cases of outright disappearance of sectors.

Comparison of a few new export activities with some import-substituting industries as they stood in about 1971 also reveals large differences in domes-

tic resource costs (DRCs) between the two groups, on the order of two to one. For example, while exporters of carnations and of some leather products had respective DRCs of 18 and 17 pesos per dollar received, a firm producing specialized textile products and benefiting from prohibitions against competition from imports had DRCs of 36 pesos per dollar.[8] These examples serve a useful pedagogical purpose, but more needs to be said about the prevalence of extremes in DRCs among Colombian sectors producing tradable commodities.

Although the extraordinary expansion of nontraditional exports during 1967–74 was aided by favorable world economic conditions, it has demonstrated that a large number of varied Colombian activities have DRCs no higher than about the exchange rate plus the CAT. By 1973, minor exports had reached between 5 and 6 per cent of GNP, and that placed an upper limit on those lowest-DRC activities. Given an annual growth rate in the dollar value of these exports of about 15 per cent, it is difficult to imagine scenarios for which the share of minor exports in GNP could have been *much* higher than that achieved. The static assumption of almost perfectly elastic world demand for Colombian minor exports implies that much higher shares (even 100 per cent?) of Colombian resources could have been directed into low-DRC minor exports "quickly." However, it can be argued that once uncertainty, costs of obtaining information about foreign markets, and high marginal costs for abrupt changes in production plans are taken into account, it becomes questionable whether expansion rates for minor exports higher than those observed are feasible (or even optimal). By 1970, in fact, minor exports had reached levels close to those foreseen in 1962 by observers who assumed that Colombia would follow "correct" policies during 1962–70.[9]

At the other extreme, the manufacturing activities found by Hutcheson to have the highest effective rates of protection, say 40 per cent and above, account for about one-third of value added in manufacturing at domestic prices, or between 6 and 7 per cent of GNP. A more precise identification of the "horror stories" of import substitution can be given. Prime candidates include the automobile industry, which received government impetus during the late 1960s; petrochemicals and some other chemicals, particularly pharmaceuticals; electrical appliances, such as refrigerators and washing machines; artificial fibers; and some alcoholic beverages, particularly whiskey. Such sectors represent somewhat less than a third of manufacturing value added; what is remarkable is how much of Colombian manufacturing operates near world prices.

On the other hand, as emphasized by Francisco Thoumi, the share of manufacturing investment captured during the last fifteen years by the horror-story industries is an impressive one. It is estimated that between 1962 and 1967 gross investments in petroleum derivatives, including petrochemicals, amounted to one-fourth of all manufacturing investment.[10] David Morawetz

reports that over $100 million was invested in petrochemicals in Colombia in the 1960s, and another $120 million was scheduled to be invested during the 1970s.[11] Such projects have also taken up an important share of the limited pool of highly skilled professionals and workers. One should note, however, that sensible cost- and employment-conscious criticisms of petrochemical investments have been made to look less than farsighted because of the unusual events occurring in world markets during 1973–74. However, substantial direct and indirect commitments to the automobile industry have not yet found a redeeming historical accident.[12]

It may be added that the participation of direct foreign investment in many of the horror-story industries, such as automobiles, pharmaceuticals, and artificial fibers, is large. The horror in those stories involves not just high real costs due to low production runs, unsuitable factor combinations, and other standard reasons, but also untaxed quasi rents or excess profits earned by foreigners, and made possible by the protective system. On its own and in partnership with foreign or local investors, the public Institute of Industrial Development (IFI, Instituto de Fomento Industrial) has also involved its long-term credit facilities in several ill-starred import-substitution schemes, including Forjas de Colombia, making foundry products and rolling equipment, and COLCARRIL, producing railroad cars. IFI participated with Renault in the expansion of the automotive industry, and with public Venezuelan capital in the creation of a large plant for producing caprolactam, a sophisticated petrochemical (Monómeros Colombo-Venezolanos).

The gradual lifting of import restrictions which has taken place since 1967, and which accelerated during 1973 and early 1974 under the pressure of bulging foreign-exchange reserves and extraordinary domestic inflation, has probably removed static inefficiencies involved in excessive precautionary as well as speculative holdings of inventories of importable goods. Such inventories usually involve spare parts, intermediate products, and raw materials, but could also include installed but unused imported machinery and equipment. Interviews with businessmen during 1971 indicated that uncertainties about access to imports led them to carry stocks they regarded as excessive compared with those of, say, Venezuelan businessmen. Musalem[13] has shown that the early stages of import liberalization programs were accompanied by a rush to build up inventories of importable goods, in the expectation that such liberalization efforts would be reversed. So both the level and the fluctuations in inventories were in all likelihood influenced by the import control system, especially before 1967, in a manner conducive to inefficiencies.

A strong a priori case can be made for linking LDC import-licensing policies to generalized excess capacity in industry. But in Colombia such a link appears weak. Thoumi, who did major research on the utilization of fixed industrial capital in Colombia, concluded[14] that capacity utilization in recent

years had been relatively high compared with that in the few other countries for which there is any information. Hours of capacity use are related to long-run structural variables, including management quality, which are influenced by trade policy only indirectly. Stop-go cycles related to the foreign-exchange bottleneck have influenced capacity utilization, particularly during 1956–67, and excess capacity in the horror-story industries can also be found, but no strong general link appears to exist between import licensing as practiced in Colombia and excess capacity. The protective system can, of course, be blamed for excess capacity in the most misguided import-substitution projects, whether because one plant was built with full knowledge that the domestic market could not absorb its full output for many years (and export markets could not be found), or because the combination of extravagant protection and easy entry led to industrial organizations characterized by monopolistic competition, with many plants working at far less than full capacity, as in washing machines and automobiles. It may be noted that "easy entry" was often the result of pressure from foreign interests. If a firm from country X entered a juicy import-substituting industry, the embassy of country Y would complain if its firms were not allowed to share in the spoils.

Although some major import-substitution projects whose efficiency was far from obvious were launched after 1967, in the most recent years the reluctance of the public sector to support similar schemes has been growing. Remember that such attitudes will be reflected not only in the tariff and the management of import controls but also, and often mainly, in the promises made or withheld regarding credit, taxes, and long-term public support. This new ambience in public development offices, including IFI and other public credit agencies, has perhaps been more important for what it has kept from happening than for any tangible achievements.

If extravagant and massive new ventures into import substitution appear on the decline, it remains true that the import control mechanism is still vigorously used for protecting existing (and some new) activities. Even with foreign-exchange reserves reaching $600 million during the first quarter of 1974, import controls remained more restrictive than during January–October 1966. At the beginning of 1974 the free list still accounted for less than half of reimbursable imports. The biases described in Chapter 6 remained, and under the circumstances prevailing in early 1974, it was difficult to make a good economic case for import controls as then administered. Their retention could be justified only in special cases such as those involving dumping, health hazards, and threats to public safety, for which tariffs may be insufficient. Elimination of most import controls should bring about gains in efficiency and competitive pressures, and would probably improve access to imports for medium and small businessmen and for those located outside Bogotá and Medellín. Announcement of a decision to eliminate controls gradually (barring a world

depression), accompanied by measures to be discussed below, should signal an even firmer government commitment to expanding the export sector.

The maintenance of some forms of exchange control may be found necessary, however, less for balance-of-payments reasons than to execute other Colombian policies, such as vigilance over some kinds of capital flows, particularly flows of direct foreign investment. Even for balance-of-payments reasons *standby* controls can be justified in a country like Colombia that is still vulnerable to unexpected changes in a far from stable world economy, and not so rich in policy tools that it can afford to throw away one still widely used in industrialized countries. Whether standby tools can be kept either from getting rusty or from being used by bureaucrats "because they are there" is a moot question which I gladly refer to the wisdom of political scientists. It may also be noted that Colombian trade with nonmarket socialist economies may require some types of trade and exchange control.

By signing the Cartagena Agreement creating the Andean Common Market, Colombia committed herself to a gradual loss of purely national control over her tariffs. A common external Andean tariff is to be agreed upon by 1976 and should be fully implemented by 1980.[15] The common *minimum* external tariff agreed upon in December 1970, and toward which Colombia is already moving, is not very different from the one in effect in Colombia at the start, and could be described as on the whole lower and less varied than prior national tariffs. The hope has been expressed that the eventual common external tariff will be no higher on average than the *minimum* one, whose average is about 50 per cent. The outlook is not clear, but Colombia has been reported as opposed to higher duties.

Ad hoc industrial complementation agreements among Andean countries, under which temporary monopolies will be granted, could also involve Colombia in intra-Andean import-substitution schemes. Some of these could have the effect of rationalizing existing and mostly inefficient industries (e.g., steel), but not all of them would be desirable from an efficiency viewpoint. Progress has been slow in the negotiation of such agreements, which involve laborious and detailed parceling out of plants among countries. It is also reported that Colombia is on guard against the gestation, under these agreements, of white elephants of Andean dimensions.

By 1980, tariffs and controls over most commodity imports into Colombia from the Andean countries should be eliminated. The effect should be to generate some efficiency gains and a salutary competitive pressure on industry. Contrary to a widespread misconception, there is room for trade creation within the Andean group (see note 15). It could be argued that the political solidarity which may develop among the Andean nations could provide effective mechanisms for smoothing adjustment burdens generated by growing trade. Thus, specialization would be encouraged to a larger extent than is

done by trade with the rest of the world, which remains subject to sudden and uncompensated shocks.

If import controls on trade are entirely eliminated and purely Colombian management of import tariffs disappears, exchange-rate policy will become even more important in keeping possible balance-of-payments pressures from leading to inefficient trade policies. The point is reinforced because there is growing recognition of the advisability of revamping the system of export subsidies. As discussed in Chapter 2, the CAT scheme has contributed to the expansion of minor exports, but it shows technical faults generating some inefficiencies and has become increasingly expensive in terms of badly needed tax revenues forgone. Its gradual elimination, compensated by a faster upward crawl in the exchange rate, could leave exporters no worse off, on average, than during early 1974 while providing more uniform incentives and increased tax revenues.[16] It would be desirable to relax import controls, as discussed above, to help offset at least for the long run the upward pressures on the domestic prices of importable goods that would be generated by the proposed exchange-rate policies. Available information makes it difficult to be precise on this point, however, providing a further reason to handle the whole package in gradual steps, at the same time bringing under control the inflationary pressures that existed during the first half of 1974. The gradual elimination of both import controls and export subsidies may reduce frictions and quarrels with both trade partners in the Andean region and those elsewhere.[17]

Since the crawling peg system was adopted, in 1967, most observers sympathetic to import liberalization have felt that the crawl was too slow, citing as ultimate proof the continued need for licensing to repress imports and CAT to stimulate minor exports. High and rising foreign-exchange reserves during 1973 suggested that the degree of peso overvaluation may have been substantially reduced, and it may even be questioned whether overvaluation still exists. But the events of 1973 and early 1974 show the complications of overvaluation calculations: much hinges on what is assumed about the future of coffee and other commodity prices and about detailed elasticities in Colombian trade with different geographical areas. The latter is necessary as the peso followed the U.S. dollar after August 1971 and was therefore devalued with respect to key nondollar currencies. Sustained inflation in industrialized countries, of a type which may not be accurately reflected in wholesale price indices, reduces confidence in purchasing-power-parity calculations such as those presented in chapters 2 and 4.[18] One has to fall back on observation of the trend in foreign-exchange reserves as import controls and the CAT are gradually removed to verify the degree of present and future overvaluation. It also remains to be seen whether the crawling peg will be as successful under accelerating inflation as it was while Colombian inflation was diminishing in the context of a relatively stable world price level.

A removal of export subsidies and import controls compensated for by

exchange-rate adjustments will tend to reduce existing discrimination against service exports, which include tourism and were never eligible for CATs, and in favor of service imports, on which no duties are paid and which have been benefited by overvalued import exchange rates. Service imports include many items that are doubtful candidates for subsidies, such as profit remittances, travel, and remittances to middle- and upper-class children studying abroad.

Adoption of the policy package described above would complete the trend started in 1967, and put Colombia fully into the Bhagwati-Krueger Phase V. The impact of such a step on GNP growth, say over the following ten years, is again difficult to quantify. Note that now we are not taking as a base of comparison the situation that characterized most of the period 1956–67:[19] rigid import controls and stop-go cycles, together with the prospect of further massive import substitution. The question is, How much additional efficiency and growth would result from the suggested steps? Many of the once-and-for-all gains that were to be reaped from post-1967 policies, such as fuller utilization of existing capacity, have already been mostly captured. There remain gains to be realized by a more efficient allocation of investment and other resources, which could offset declines in the growth rate arising from the exhaustion of pockets of resource underutilization. Much depends on how the rest of the world reacts to the expansion of new Colombian exports, and how such a reaction limits possible gains from international specialization. Suppose domestic policy and international circumstances allow resources now engaged in the most inefficient import-substituting activities, amounting to (say) 7 per cent of the GNP, to move toward new export activities during the next ten years. Suppose further that domestic resource costs per dollar earned or saved are on average twice as much in the former as in the latter activity. Those resources, once devoted to exporting, should generate a net gain of 7 per cent of GNP, which may be taken as an upper estimate on potential static gains.

It may be noted that given the conventions and practice of national accounting, some of the static gains may not even be reflected in GNP. Switching a civil servant with a given salary from reviewing license applications to rural teaching will not affect GNP, at least for a long time. Psychic gains and losses in dealing with or wielding bureaucratic power go unrecorded. And so on. But even if possible unrecorded net gains are taken into account, the elimination of import controls should not be expected to revolutionize either the efficiency, the growth, or the style of the Colombian economic system. Note that the comparison is not with an ideal textbook situation, but with what seems likely given world market realities limiting international specialization, and given Colombian political realities limiting the elimination of distortions benefiting one or another special interest. There is little point to supposing that the Colombian export share in GNP could reach Puerto Rican or Hong Kong levels, or that the Colombian economic system could be freer of static distortions than those of Italy or Japan.

TRADE POLICIES, FOREIGN EXCHANGE AVAILABILITY, AND GROWTH

In earlier chapters, I emphasized how balance-of-payments difficulties hampered Colombian growth, particularly during 1956–67. As shown in Table 8-5, gross investment in machinery and equipment, including transport, still relies heavily on imports. During the late 1950s the new steel mill in Paz del Río put a dent in that imported share; the impact of the start of automotive production can also be detected in 1971–72. Throughout, less dramatic and probably more efficient light manufacturing industries have also helped to expand the share of domestically produced machinery and equipment.

After the collapse of dollar coffee prices in the late 1950s, the constant-price share of GNP devoted to gross investment in machinery and equipment fell from an average of 12.6 per cent during 1950–56 to 7.7 per cent during 1957–69. Only during 1970–72 has that share risen in a sustained but unspectacular manner to an average of 8.3 per cent of GNP. While no detailed data are available on investment allocation, it is known that in the 1950s considerable investment was made in social overhead capital and other projects quite intensive in imported machinery and equipment; examples include the already mentioned steel mill and the Atlantic railroad. Thus, the drop in the GNP share devoted to gross investment in machinery and equipment reflects exogenous changes in investment allocation as well as balance-of-payments stringency.

It may be seen in Table 8-6 that investment in construction, its considerable year-to-year fluctuations smoothed in the table, behaved more stably than machinery and equipment capital formation; its direct and indirect import components are much lower than those of the latter category. Note that all the percentages presented in Table 8-6 have been computed from data expressed

TABLE 8-5

Share of Imports in Gross Investment in Machinery and Equipment Including Transport, 1950–54 to 1971–72
(underlying data in constant 1958 prices)

	Share		Share
1950–54	93.7%	1963–66	76.2%
1955–56	93.6	1967–70	73.4
1957–58	84.8	1971–72	67.8
1959–62	82.7		

SOURCE: BdlR-CN.

TABLE 8-6

Gross Capital Formation, 1950–54 to 1971–72
(per cent of GNP at market prices; underlying data in constant 1958 prices)

	Gross Capital Formation	Buildings, Other Construction, and Improvements	Machinery and Other Equipment	Net Change in Inventories
1950–54	22.3	9.3	12.0	1.1
1955–56	25.7	10.9	14.2	0.6
1957–58	20.8	10.0	7.1	3.7
1959–62	20.2	9.8	8.3	2.1
1963–66	19.2	8.6	7.8	2.8
1967–70	19.3	10.3	7.3	1.6
1971–72	20.7	10.1	8.3	2.4

SOURCE: BdlR-CN.

TABLE 8-7

Financing of Gross Capital Formation, 1950–54 to 1971–72
(per cent of GNP at market prices; underlying data in current prices)

	Gross Capital Formation	Private Savings	Public Savings	Net Capital Inflow
1950–54	16.1	11.9	4.1	—
1955–56	18.2	12.0	4.5	1.7
1957–58	19.6	15.7	4.6	−0.7
1959–62	19.9	14.9	3.8	1.2
1963–66	18.8	12.6	3.4	2.8
1967–70	20.9	12.0	6.1	2.8
1971–72	22.1	12.4	5.1	4.6

SOURCE: BdlR-CN.

in constant 1958 prices. It is instructive to compare these figures with those in Table 8-7, where capital formation and its financing are shown, as before, as GNP shares, but with the underlying magnitudes in current prices. While 1950–56 investment ratios in Table 8-6 exceed those of later periods, in Table 8-7 the opposite is recorded.

At an accounting level, the discrepancy is mostly explained by the evolution of the implicit prices of machinery and transport equipment relative to the GNP deflator. As shown in Table 8-8, a remarkable rise in the relative prices of these capital goods occurred after 1955–56; given Colombian depen-

TABLE 8-8

Implicit Price Deflators for Gross Investment, 1950–54 to 1971–72
(divided over implicit price deflator for GNP at market prices; 1958 = 100)

	Buildings, Other Construction, and Improvements	Transport Equipment	Machinery and Other Equipment	Imported Machinery and Equipment
1950–54	97.9	54.7	49.8	47.7
1955–56	96.0	51.8	50.3	48.1
1957–58	97.3	87.4	85.7	84.2
1959–62	110.8	81.9	89.7	85.0
1963–66	118.2	76.2	84.5	80.1
1967–70	117.0	92.6	101.2	101.6
1971–72	117.0	99.8	99.1	106.0

SOURCE: BdlR-CN. As suggested by the 1957–58 row, there was a sharp increase in the relative prices for machinery and equipment between 1957 and 1958.

dence on imports of these goods, such a rise can readily be traced back to a similar increase in the real import exchange rate, as can be seen by comparing the last column of Table 8-8 with data in Table 4-8.[20] After peaking in 1958, both relative prices fell, until new devaluations and the crawling peg brought them back to about their 1958 levels during the late 1960s and early 1970s.

The economic explanation for the sharp rise in the relative prices of machinery and equipment during 1957 and 1958, and their high levels thereafter, is in the deterioration of the balance of payments, which was first triggered by the collapse of dollar coffee prices. Such worsening of Colombian terms of trade meant a loss in the effectiveness of the mechanism through which the country transformed its savings into tangible machinery and equipment. Coffee, at that time the indirect but major supplier of nonconstruction capital goods, suffered an exogenous drop in dollar prices, equivalent to a productivity loss in the machinery and equipment industry in a closed economy. A similar phenomenon has been recorded for another Latin American country, Argentina, but for an earlier period.[21] An increase in the real exchange rate for imports as well as for nontraditional exports may thus be viewed as a way of adjusting to the decline in efficiency of the traditional indirect way of obtaining machinery and equipment, by rationing available foreign exchange more stringently in the short run, and by encouraging recourse to new direct and indirect sources of machinery and equipment in the long run.

While the real evolution of capital formation is best measured at constant prices, the burdens involved in achieving a given savings rate should be

measured at current prices, as in Table 8-7. In an aggregate, ex post sense, it can be seen that the demand for all investment goods was shown to be inelastic by the post-1956 increase in relative prices;[22] a larger share of GNP was saved domestically (except during 1963–66) after the rise in capital goods relative prices than before. The paradoxical increase in national savings at a time of severe balance-of-payments and growth crises during 1957–58 is astonishing. It is noteworthy that national savings during the prosperous years of 1971–72 stood at 17.5 per cent of GNP, substantially below the 20.3 per cent rate achieved during the "blood, sweat, and tears" years of 1957 and 1958. Contrasting all of 1967–72 with 1950–56, the saving and capital inflow rates emerge as follows:

	1950–56	*1967–72*
Private savings	12.0%	12.1%
Public savings	4.2	5.8
Net capital inflow	0.4	3.4
Gross capital formation	16.7	21.3

Increases in the rates of public saving and capital inflow account for almost all of the increase in the current-price rate of capital accumulation.

Even allowing for possible changes in the structure of investment allocation, it would be difficult to credit the 1967–72 acceleration in GNP growth to a higher rate of capital formation. Assuming a one-year average gestation period for investments, and comparing constant-price rates of gross capital formation with GNP growth rates, the marginal capital-output ratio (MCOR) for 1951–55 is 4.08; for 1956–67, 4.81; and for 1968–72, 3.22. The sharp drop in MCORs between 1956–67 and 1968–72 contrasts with the more sluggish evolution of the aggregate investment rate, which for 1950–54 is 22.3 per cent; for 1955–66, 20.9 per cent; and for 1967–71, 19.7 per cent.

Before 1968, there were not only severe restrictions on the importation of capital goods, but also erratic stop-go fiscal and monetary policies, with expansionary binges being followed by restrictive policies. Austerity in fiscal and monetary matters, when applied, did help the balance of payments, but at the cost of slowing GNP expansion and generating excess capacity even in sectors where direct and indirect demand for imported inputs was small, such as construction. Excess capacity during 1956–67 was due not so much to a lack of key imported inputs paralyzing whole factories, but to fiscal and monetary policies which were not *steadily* expansionary because of fear—a well-founded fear—that balance-of-payments problems would result. Selective measures that would have allowed differential expansion depending on import intensity were difficult to implement beyond gross aggregation levels.

As the balance-of-payments situation improved after 1967, fiscal and monetary policy (supported by the crawling peg) could avoid the violence of previous stop-go spasms. But by 1972–73, further encouraged by booming world demand, macro policies may have become overly expansionary, in the sense that they could not be sustained. At any rate, since 1967 excess capacity was steadily put to use, whether or not it relied on imported inputs. Thus, new exports at one end tapped resources that had been less than fully used before, in a vent-for-surplus fashion, while expansive aggregate domestic demand had a similar effect on all nonexporting activities. Without the rising foreign-exchange earnings,[23] however, such a scenario would not have been possible. In other words, given the exogenous dollar coffee price, the implicit 1956–67 "plan" not only contained static inefficiencies but was also internally inconsistent. A GNP growth rate of, say, 6 per cent per year required import values greater than the exchange earnings arising from old and new exports. And given Colombian parameters the required imports could not all be replaced by domestic production within the required time span.

The higher *and* steadier post-1967 growth must have also encouraged an investment process more efficient than that undertaken under the stop-go gyrations of earlier years. How much this contributed to lowering the MCOR, however, is a moot point.

It is likely that to sustain the GNP growth rates registered since 1967 the constant-price investment coefficient, particularly that in machinery and equipment, will have to continue its upward climb and at a faster rate. The long-run benefit of breaking the foreign-exchange bottleneck, i.e., allowing a larger inflow of imported capital goods and a higher investment rate, will then become easier to identify than was the case during 1967–72, when the short-run benefits described above predominated. Compared with earlier years, Colombia now has a more diversified base for capital formation. Its indirect sources of machinery and equipment, e.g., exports, as well as its own direct output of those goods, look sturdier than in, say, 1956. A more general diversification of the Colombian productive structure and, thus, a greater capacity to transform, make policy tools potentially more effective in handling possible exogenous shocks and in maintaining both balance-of-payments and macroeconomic equilibrium. A higher rate of capital formation combined with a more efficient allocation of investment should lead to changes in the Colombian growth pattern less ambiguous than those noted earlier in this chapter for 1967–73.

In discussing the links between trade policies and growth in this section, I dealt exclusively with variations on the foreign-exchange-gap model and with short- and medium-term macroeconomic management, an approach which some may find overly "Keynesian." While emphasizing the importance of these effects for the Colombian case, I do not intend to deny the existence of

possible links between trade policies and other dynamic effects that influence growth over the long run. But hard evidence on these matters is scanty. Leonard Dudley,[24] in a study of 25 import-substituting industries in the Colombian metal products sector during 1959–66, found important learning effects, explaining half of substantial productivity gains, particularly in casting, forging, and stamping. Whether or not import-substituting activities generate larger learning effects than exporting ones, however, is a moot point. There is anecdotal evidence showing that some firms (e.g., in textiles) are remarkably X-efficient and innovative whether they devote themselves to import substitution *or* to exporting, as are Germans with alternative socioeconomic systems. It will be recalled from Chapter 6 that as of 1971 major exporting firms still relied heavily on domestic sales. When the exporting experience becomes longer, and more differentiated from domestic sales, greater possibilities for exploring contrasts in behavior between exporting and import-substituting firms may become possible.

TRADE POLICIES, INCOME DISTRIBUTION, AND EMPLOYMENT

The use of one policy instrument or a cluster of closely related ones may bring a community closer to achieving several policy targets simultaneously. Such happy circumstances, however, are rare. In the recent upsurge of export optimism in Colombia as well as in other developing countries, there has been a tendency to suppose that switching from policies emphasizing import substitution to those giving greater incentives to exports will not only promote efficiency and growth, but will also significantly improve income distribution and accelerate the growth of employment in modern (or "truly productive") activities. This supposition is usually based not just on the observation that important control mechanisms associated with import substitution disproportionately benefit the powerful and the rich, but it also rests on appeals to a two-factor version of the Stolper-Samuelson theorem. For developing countries the latter emphasizes plentiful labor and scarce capital with or without downward wage rigidity. How much of an improvement in income distribution or employment can be expected from export-promoting policies, however, is usually not specified.

In earlier chapters, I argued that Colombian import controls and the protective system in general do appear to reinforce income inequality, regional disparities, and industrial concentration. The protective system has also encouraged a large number of capital-intensive projects. A policy package that eliminates import controls while encouraging exports could, however, generate new rents even as it destroys those associated with import substitu-

tion. Furthermore, the elimination of import controls would still leave a multitude of similar mechanisms through which the rich and powerful could take advantage of state power to buttress and further their position.[25] Imperfections in domestic capital markets, to give one fashionable example, are as large a source of inequality as import controls. Thus, focusing just on the protective system can give a misleading impression of the true sources of inequality, confusing a symptom for the cause of the disease, which, as noted by many Colombians, lies in the excessive economic and political power held by privileged minorities. It is debatable whether the economic and political power such minorities may lose from the abolition of import controls is greater that the power gains that would accrue to, say, cattle, cotton, and sugar landowners from their expanding exports.

In earlier chapters, evidence was presented on the characteristics of the new Colombian minor exports. Such limited data suggest that, at the very least, one would want to expand the usual two-by-two Heckscher-Ohlin trade model to a three-by-three one to analyze the impact of trade policies on income distribution and employment. On the input side, land or natural resources must be added to labor and capital, while nontradable goods (or the subsistence sector) must be added to importables and exportables. In the expanded model, applications of the Stolper-Samuelson theorem will become more difficult and ad hoc. But more fundamentally, it was seen earlier that the emerging trade pattern of Colombia cannot be explained only by a simple or expanded Heckscher-Ohlin model. Some "unusual" trade flows can be explained by reference to domestic policies, for example, Colombian trade with other members of the Latin American Free Trade Association (LAFTA). In addition, other trade theories, such as vent-for-surplus, the product cycle, and those emphasizing location, are helpful in explaining particular aspects of Colombian foreign trade. In the literature, there is no systematic exploration, either theoretical or empirical, of the implications of those positive trade theories for *functional* income distribution, much less for family income distribution or for the income of the poorest half of the population.

If a given export expansion can be explained by a vent-for-surplus model, the name of the distributional game will be pure rents. Who gets them depends on who owns the rent-yielding assets. If such assets are relatively homogeneous and compact in location, they can be grouped under one label, "land," and a Heckscher-Ohlin model could be good enough to explore links between trade and distribution, as in the Argentine case. In Colombia, these assets are less homogeneous, ranging from sugar land in the Cauca Valley to mineral deposits scattered over the whole country. One crop or mineral may be a heavy user of labor inputs, but others may not, depending on the technological characteristics of the production functions of the different staples, and the socioeconomic conditions in the region. Nevertheless, the 1972–73 boom in

dollar prices of minor rural exports has highlighted one Argentine-like way of viewing a mechanism linking greater openness of the economy with a worsening of income distribution: as land prices rose because of the boom in those exportable goods, the prices of foodstuffs grown for domestic consumption, using somewhat similar land, also rose—in many cases ahead of money wages.

For exports of manufactured products the product cycle theory emphasizes the technological status of a commodity, i.e., whether it is new or old and standardized. Whether it is labor- or capital-intensive is of secondary importance. The cement exported from the Colombian Atlantic coast, for example, is a standardized good, benefiting in that case also from locational advantages; its capital intensity is not a major barrier to its competing in the Caribbean area. Flat glass is exported from Medellín, in spite of both capital intensity and locational disadvantages.

A switch, speaking in relative terms, from import substitution to export promotion could improve income distribution in countries such as Colombia or could worsen it. And the change attributable to trade policies could be quantitatively important or negligible. No simple model could give us answers to these alternatives, and the detailed information needed for confident projections is not available.

Much the same can be said regarding the possible impact on employment, although there is reason to be more optimistic here, at least for the urban sector. While the link between trade policies and income distribution has much to do with the structures of the import-competing versus exporting sectors, and relatively little to do with the over-all growth rate, it may be conjectured that the opposite is likely to be the case for urban employment. The impact of different growth rates on income distribution, ceteris paribus, is ambiguous, but is almost surely positive for urban employment. Even if it is feared that import liberalization may destroy labor-intensive handicrafts without generating a compensating expansion in labor-intensive exports, a higher GNP growth rate made possible by the relaxation of the foreign-exchange bottleneck is likely to have a net positive impact on urban employment creation. Over the longer run, of course, this could feed back positively on income distribution. The picture for rural employment is more complex, and much depends on what incentives are generated for changes in land tenure, and on the robustness of the subsistence sector.

To clarify these uncertainties it would be helpful to have for marginal import-competing and exporting activities direct and indirect input requirements of such things as natural resources, unskilled and other labor, imported machinery and equipment, and other capital goods. Disaggregation of activities would clearly have to go beyond that available in the Colombian input-output table, which has one row and column for the whole rural sector. It

might then be possible to compare, for example, the direct and indirect factor use of refined sugar with that of "refined cotton," i.e., textiles, which now are excessively dichotomized as exports of primary products versus exports of manufactures.

But even at the level of first-round or direct effects, additional information of a kind not found even in fairly disaggregated input-output tables seems necessary to predict factor use. Factor proportions in a given Colombian industry appear to differ markedly by firm size. It thus becomes important to know whether large or small firms are carrying out marginal import substitution or exportation. It is also relevant to investigate whether, as seems likely on average, large firms participate more in tradable goods sectors (both exportables and importables) than in the sector producing nontradable goods and services. Some idea of the variability in factor use according to size of firm in the Colombian manufacturing sector is given in Table 8-9, on the assumption that differences in average labor productivity reflect, at least partly, differences in factor use. In this table it is indicated, for example, that the variation in average productivity of firms employing between 50 and 100 persons in all the standard industrial classifications is not so different from the variation in average labor productivity of firms producing paper and paper products but differing among themselves in size. It is suggested that the information gained about factor use from knowing that a given firm produces tobacco or rubber products is useful but limited unless size of firm also is specified. How much of this variability is due to heterogeneous output under the standard industrial classifications and how much is due to differences in factor use in the production of "identical" goods is another moot point, given available data. Only finer disaggregation according to both output and size can settle that issue. Similar considerations could be made regarding the rural sector, for which Albert Berry has documented substantial differences in *land* productivity according to farm size. Important distinctions in factor use and technology exist especially between small subsistence farms and large commercial ones producing the same crop.[26]

Colombia has made great strides since World War II in expanding its internal transport network. The abrupt geography of the country, however, still segments domestic markets for goods and services. Ideally, then, the consequences of export expansion or import substitution for regional factor markets and internal migration should be examined, a task not feasible with available data.

During a period of transition from policies emphasizing import substitution to those promoting exports, as 1967–72 undoubtedly was, most exporting firms also sold substantially, and predominantly, to the domestic market. As late as 1973, a group of large firms accounting for 42 per cent of registered manufactured exports of that year were reported to have sold 90.8 per cent of

TABLE 8-9

Value Added per Employed Person in Colombian Manufacturing, 1967

	Average (thous. 1967 pesos) (1)	Stand. Dev. (2)	Coeff. of Variation (col. 2 div. by col. 1) (3)	No. of Industries or Firm Categories Included (4)
According to size of firm (no. of persons):				
1–14	29.1	18.4	0.63	25
15–19	38.1	47.7	1.25	24
20–49	42.1	34.6	0.82	25
50–99	47.0	28.1	0.60	25
100–199	64.6	48.5	0.75	25
200 and over	81.3	79.3	0.98	24
All manufacturing (average and deviation across 25 industrial classifications)	63.0	58.6	0.93	25
According to industrial classification:				
Food	59.6	18.1	0.30	6
Beverages	94.8	58.4	0.62	6
Tobacco products	91.0	132.8	1.46	6
Textiles	32.5	8.6	0.26	6
Clothing and footwear	22.9	6.1	0.27	6
Printing and publishing	35.3	16.1	0.46	6
Pharmaceuticals and related products	68.9	33.1	0.48	6
Furniture and fixtures	19.6	6.1	0.31	6
Rubber products	75.6	88.7	1.17	6
Ceramic products	17.5	6.2	0.35	6
Nonelectrical appliances	28.9	10.0	0.35	5
Electrical appliances	44.2	11.9	0.27	6
Motor vehicles	37.2	25.0	0.67	6
Wood and products	23.5	6.6	0.28	6
Paper and products	50.6	25.2	0.50	6
Leather and products	34.2	15.7	0.46	6
Chemicals other than pharmaceuticals	88.2	34.0	0.39	6
Petroleum and coal products	158.7	98.7	0.62	5
Nonmetallic mineral products	31.2	15.8	0.51	6
Basic metal products	77.2	22.5	0.29	6
Metal products	33.7	13.4	0.40	6
Mechanical machinery	30.6	6.1	0.20	6
Electrical machinery except appliances	43.6	20.6	0.47	6
Transport equipment	30.3	8.1	0.27	6
Other	40.8	11.6	0.28	6
All manufacturing (average and deviation across 6 firm-size categories)	46.3	20.1	0.43	6

Notes to Table 8-9

SOURCE: Basic data obtained from IBRD, *Economic Growth of Colombia: Problems and Prospects*, November 1, 1970, vol. IV, App. 1, Table II. This is the complete document on which the World Bank publication listed in Table 8-3 was based. It should be noted that the averages shown for each firm-size or industrial category are the unweighted averages obtained from the relevant subgroups, which already involve some averaging. Thus, they can be expected to differ from the (more exact) averages shown in Table 8-3. The first line of this table, for example, was computed as follows: Using the average value added per employee of firms having 1 through 14 employees in each of the 25 industrial categories, the average for all industrial firms of that size (29.1) was obtained, and its standard deviation (18.4) computed. For all manufacturing in the seventh row of the table, averages for the value added per employee in each of the 25 industrial categories (including all sizes of firms within that category) were used in the same fashion.

---

their output in the domestic market.[27] Many of these firms used underutilized capacity to produce exports. Thus, a given export expansion may have a widely varying first-round impact on factor use depending on whether attention is directed to the short run or the long, and depending also on what assumptions are made about firm behavior. Putting to use excess installed capacity for sales abroad could involve a marginal capital use per unit of output much lower in the short run than in the long. Contrary to what is likely to happen in import substitution, new smaller firms may plunge into exporting as the export drive becomes consolidated, once the larger firms have shown that Colombian output can compete internationally and establish an export infrastructure. Or smaller firms may become associated with larger export firms in increasing numbers as subcontractors, an evolution that has also occurred in the import-competing sector. In short, the factor use observed during the early stages of an export drive may be significantly different from that observed at more mature stages of export expansion, in a pattern different from that observed during corresponding stages of an import substitution drive.

The calculation of indirect effects on factor demands and other general equilibrium effects are also difficult accurately to trace out. The complementary or indirect services required by different types of export and import-substituting activities could vary substantially. For example, the export of a staple like coal will need complementary capital-intensive services, such as transportation by railroads or trucks to take the product to harbors, quite different from the needs of carnation exports or those generated in duty-free zones.

As was noted in Chapter 1, Berry and Urrutia have shown that as of the mid-1960s the distribution of Colombian personal income was highly unequal; in their calculations for 1964, the Gini coefficient was 0.57.[28] Furthermore, they find that a period of worsening distribution began in the 1930s and continued until around the mid-1950s, not only over-all but in both urban and rural sectors. From the mid-1950s until the mid-1960s, the evidence they

TABLE 8-10

Labor Share in GDP, 1950–54 to 1971–72
(per cent)

	Agriculture and Livestock	Manufacturing	Construction	Commerce	Transport	GDP
1950–54	35.9	29.2	73.5	18.3	36.4	35.9
1955–58	31.3	33.5	71.9	18.3	36.9	35.7
1959–62	32.1	35.6	71.8	18.6	44.0	37.4
1963–66	33.2	37.6	74.4	18.3	47.8	39.3
1967–70	30.9	40.2	79.4	21.0	45.3	40.4
1971–72	27.6	40.7	77.3	17.1	47.0	40.1

SOURCE: BdlR-CN. Percentages were computed using data at current prices and measured at factor cost.

examined suggests a moderate over-all improvement and an improvement in urban distribution but a continued worsening of the distribution in agriculture. They add that there is some tentative evidence that the latest episode of fast growth, between 1967 and 1973, may have been characterized by a deterioration in the position of the urban employed worker, although the exact causes for such deterioration are unclear. Some of this effect may have been compensated for by a decrease in unemployment, however. They conclude that the challenge now facing Colombia is in avoiding an increase in inequality in the future as economic growth accelerates.

Changes in the labor share of GDP provide a crude, but available, index of recent changes in income distribution. It may be seen in Table 8-10 that in 1971–72, by which time the post-1967 policies had become well established, there was either an end or a reversal of the upward trend in the manufacturing and over-all wage shares that had started after 1955–58. The plunge in the rural wage share suggests that the new commercial crops use less labor than the old staple, coffee, or the subsistence sector. By 1972, the wage share was 26.5 per cent in agriculture and livestock, 40.2 per cent in manufacturing, and 39.4 per cent for the whole GDP.

Scattered evidence[29] suggests that open unemployment rates in the four largest Colombian cities peaked in 1967, and have been declining ever since. As in other developing countries, however, the openly unemployed in Colombia are typically young people, nonheads of families, and others who can afford to be in that situation. Those at the bottom of the income scale usually have some kind of employment, and there is no evidence on whether demand for their services has expanded substantially since 1967.

Both a priori considerations and available post-1967 evidence cast doubt on the power of further import liberalization by itself significantly to alter Colombian income distribution and employment patterns. It is particularly

doubtful that further import liberalization would do much for or against those in the bottom half of the income scale, say, during the next ten years or so. Indeed, it is conceivable that continued encouragement of modern mechanized rural activities oriented toward foreign markets could further damage the prospects of landless farmers and *minifundistas* for obtaining family-sized farms. It should be recalled that about 45 per cent of the Colombian active population is still engaged in rural activities and that a good share of the poorest part of the nation is to be found there. Unless other policies are adopted, the encouragement of commercial, export-oriented farming could worsen land and income distribution in the countryside, and by absorbing parts of the subsistence sector, it could actually generate disguised rural or urban unemployment. It would not be the first time in history that such a thing has happened.

TRADE AND FINANCIAL POLICIES AND NATIONAL AUTONOMY

While income distribution and employment data are scarce, at least the concepts involved are in principle quantifiable. "National autonomy" is a vaguer concept, but of no less importance to those responsible for framing international trade and financial policies in Colombia and elsewhere. As measured by the proportion of imports of goods and services in GDP, the openness of the Colombian economy rose from 13.0 per cent during 1963–66, to 14.0 per cent during 1967–70, and to 15.6 per cent in 1971–72.[30] Has this trend been accompanied by a significant change in the degree of control of Colombians over their own economy? What will be the impact of further liberalization and openness on such control?

The post-1967 expansion has been characterized not only by a remarkable diversification in the goods exported, but also by a continuing diversification of geographical trade partners, visible also in imports. The extent of the geographical diversification may be seen in tables 3-8 and 4-10. It was also noted earlier, in chapters 2 and 6, that the participation of foreign-owned enterprises in minor exports, while important, particularly for manufactured products, is less than that of domestic firms, and probably less than the participation of foreign firms in the most dynamic import-substituting activities. It would indeed be dangerous for the political viability of export promotion if the production or merchandising of new exports fell predominantly under the control of foreign enterprise. Dissatisfaction with protectionist policies was boosted as a greater share of those firms most critical to the success of import substitution turned out to be foreign owned.

Vulnerability to external cycles and pressures has been reduced not only

by geographical and product diversification, but also by the establishment of preferential arrangements with middle-income countries at a similar stage of industrialization. The Andean Common Market may be viewed partly as insurance against a collapse of world markets. If such an event occurs, import substitution at the Andean level could go into high gear partly to offset the collapse of export drives. Had Latin America had such arrangements in 1929, the industrialization of the 1930s and 1940s would in all likelihood have been faster and more efficient. Andean and wider Latin American integration schemes also afford some insurance against possible commercial and financial blockades and could facilitate access to specific raw materials. Ecuador and Venezuela, both Colombian neighbors and members of the Andean group, are blessed by ample oil deposits, while other Andean partners have rich stores of minerals.

Year-to-year percentage changes in total export dollar earnings for 1968–72 compared with 1963–67 already show not only a higher average growth rate (8.19 per cent versus 2.42 per cent) but also a lower average absolute deviation from the mean of the more recent period (5.97 per cent versus 8.11 per cent).

Trade is only one aspect of Colombian links with the international economy, and trade liberalization will typically be accompanied by larger gross flows of capital as well as special services, such as technology. A case can be made that international markets for technology and capital are less diversified and competitive than those for most goods, thus posing a potential threat to the autonomy of countries relying too heavily on them without defensive mechanisms. Such mechanisms, of course, can also be used to obtain better bargains. For these reasons, Colombian authorities are likely to retain present controls and registration procedures for transfer of technology and capital flows, particularly direct foreign investments, even if they eliminate import controls. In some cases the greater competitive pressures put on import-competing firms, many of them foreign owned, by the elimination of import controls, plus realistic exchange rates, will reduce the importance of keeping detailed tabs on such matters as overinvoicing of imported inputs and fake royalty payments abroad. This should make for greater efficiency of controls over transactions involving monopoly power originating abroad, rather than wasting effort dealing with monopoly power created by misguided domestic protectionism.

The presence of both capital and technological inflows raises the possibility of excessive reliance on foreigners. The effect could be to weaken local efforts and reduce the capability of Colombia for long-run autonomous development. The flabby performance of recent Colombian private and public savings, at a time of fast growth *and* substantial capital inflow, documented earlier in this chapter, suggests that such a concern may not be misplaced, even if it is difficult to say much more on the subject for a single country.

More, however, can be said on different types of capital flows. Nonconcessional long-term capital is now available to Colombia mainly in two forms: as direct foreign investment (DFI) and as sales abroad of Colombian debt. The former type, as is well known, comes as a package of technology, management, marketing, and capital. The same Decree Law 444 of 1967 that consolidated the framework for a crawling peg and export promotion also established firm controls over DFI, later reflected in the celebrated Resolution 24 of the Andean group. The fears of the international financial press notwithstanding, DFI has continued flowing into Colombia. Indeed, and somewhat disappointingly, the allocation pattern of such investment since 1967 has been about what it was before. It may be seen in Table 8-11 that chemicals, refineries, rubber, and plastics, heavily oriented toward import substitution, have continued attracting about one-third of DFI. The same source given in that table indicates little change in the geographical origins of DFI: the United States still accounts for about half, with the shares for Switzerland, France, Japan, and the Federal Republic of Germany showing an increase after 1967.[31]

As with other semi-industrialized or resource-rich developing countries, Colombia discovered during the early 1970s that it could obtain substantial sums from "arm's length" world capital markets. During 1973, for example, Colombia was reported to have borrowed $170 million in the Eurocurrency market.[32] This source of funds, although expensive, provides a healthy alternative to both DFI and the more traditional forms of borrowing from multilateral intermediaries, such as the IBRD and the IADB, as well as to concessional bilateral finance. Borrowing from either the Eurocurrency market or other foreign capital markets carries costs and risks not associated with borrowing from the IBRD and the IADB, but could involve less sacrifice of national control over investment decisions.[33] As with any form of foreign borrowing, of course, it bears careful controlling, both at the level of individual loans and in the aggregate.

As measured by the traditional indicators, e.g., service payments on the whole external public debt as a percentage of exports of goods and nonfactor services, the Colombian debt burden remains moderate. It stood at 15.5 per cent in 1965–66, at 12.7 per cent in 1967–70, and at 13.5 per cent in 1971–72.[34] So long as exports maintain their dynamism, the Colombian capacity to borrow in private markets should be quite good, potentially strengthening the position of the country vis-à-vis multilateral intermediaries and bilateral donors.

On the whole, it is doubtful that the gradual post-1967 liberalization trend has substantially changed Colombia's capacity for autonomous decision making; on balance, the net change seems to be, if anything, toward greater effective national control over the domestic economy. Aided also by trends in

TABLE 8-11

Structure of Accumulated Direct Foreign Investment in Colombia
(per cent of total)

	As of January 1, 1967	Accumulated Investment from January 1, 1967, Through December 31, 1972
Foodstuffs, beverages, and tobacco	6.8	3.7
Textiles, clothing, and leather products	4.0	3.8
Wood products and furniture	0.3	4.1
Paper, printing, and publishing	8.9	2.7
Chemicals, refineries, rubber, and plastics	31.8	33.3
Nonmetallic minerals	5.1	2.6
Basic metals	1.6	1.2
Metal products, machinery, and equipment	11.3	12.7
Other manufacturing	0.6	0.4
All manufacturing	70.3	64.4
Finance, insurance, real estate, and related services	11.4	24.4
Commerce, hotels, and restaurants	11.4	6.5
Mining (except petroleum)	2.7	1.4
Transport and communications	2.4	0.8
Agriculture, livestock, and fishing	0.9	0.9
All other	0.8	1.6
Total	100.0	100.0
Total value, millions of U.S. dollars	$429.1	$111.0

SOURCE: BdlR-IAGJD, 1972, p. 122. Data refer to the registered and accumulated value of investments except those in petroleum. Registered value underestimates the value of assets owned and controlled by foreign investors.

the world economy, policymakers are able to consider more options than they could have realistically faced, say, around 1965. On the other hand, the greater openness of the economy demands a more careful coordination of different policy tools, such as monetary, fiscal, and exchange-rate policies, than was necessary when both Colombia and the Atlantic world had less complex and interrelated economies, as during the 1950s.

SOME FINAL REMARKS

The gradualist trade and payments policies followed since 1967 have impressive achievements to their credit. By placing balance-of-payments management on a routine basis, they permitted a more efficient and faster over-all growth rate, which appeared out of reach during 1957–66. A remarkable expansion of exports, aided by a booming world economy, confounded export pessimists. The improved balance-of-payments and growth performance also defied gloomy predictions about the unique post-1967 Colombian approach to liberalization made by perspicacious foreign observers as late as 1971.[35] As noted by several Colombian analysts, the relaxation of the foreign-exchange bottleneck and the removal of periodic exchange crises from the front pages have given policymakers the option of turning their attention to the *really* serious problems in the Colombian economy—poverty, underemployment, income distribution, and national autonomy—areas in which the impact of trade and payments policies is indirect and weak or uncertain.

Further import liberalization, beyond the stage reached in mid-1974, and a reorganizing of the export promotion system could, if properly managed, and with the right world market conditions, consolidate and expand the post-1967 gains in efficiency and growth. But a good case can be made that other reforms, complementing those in the area of foreign trade and payments, are likely now to have a larger payoff, particularly in the area of income distribution. These would include a profound tax reform, involving stiffer land taxes, expansion of public expenditures in education and health, and a liberalization of the domestic capital market, either by giving a greater role to market-influenced interest rates or by lending and borrowing policies of a nationalized banking and financial system that imitated ideal competitive solutions. The relaxation of the foreign-exchange constraint has focused attention once again on the need to expand local (private and public) savings if the over-all growth rate is to be increased, or even maintained, since the marginal capital-output ratio registered in recent years is unlikely to persist. A less distorted internal capital market may help somewhat in this area.

While avoidable balance-of-payments crises have not distracted policymakers in recent years, a similar superficial issue has re-emerged, especially in 1973 and 1974. During those years overly expansionary fiscal and monetary policies, including financial reforms boosting construction, led to an overheating of the economy which, coupled with exogenous increases in the world dollar price level, resulted in severe inflation. Among other things, such inflation has endangered the crawling peg policy, undertaken since 1967 amidst declining inflationary rates. The policymaker, in particular the new reformist administration inaugurated August 1974, is forced to give first priority to a macroeconomic management issue which lacks positive long-run

structural effects but which if left unattended could have negative consequences. In some respects the anti-inflation struggle should accelerate the trend toward more efficient trade policies, as in the case of the dismantling of import controls. However, such a struggle also encourages export controls, so that even as the old prohibited and prior-license import lists disappear or shrink, similar ones appear on the export side. And the temptation remains to slow down the crawling peg as a way of fighting inflation.

In retrospect, the Colombian experience vindicates the case for gradualism in import liberalization which went pari passu with export expansion. It was not necessary to dismantle the protective system before that export expansion could be generated. The wisdom of avoiding shock treatments while keeping control over macroeconomic management policies remains relevant for anti-inflationary policies.

Even as Colombian policymaking has gained in sophistication, trends in the world economy have imposed upon it the need for further improvement, particularly in the areas of macroeconomic and balance-of-payment management. As Colombian links with world trade and financial markets multiply, for example, problems long familiar to policymakers of industrialized countries, such as the coordination of monetary and foreign-exchange policies, will claim greater attention from Colombian authorities. The Colombian crawling peg during most of 1967–74 was basically used to eliminate wide divergences between local and external inflation; expectations about the pace of the crawl were fairly stable and on the whole were confirmed by actual experience. Under these circumstances the crawling peg has not performed the isolating role a more freely fluctuating rate is supposed to achieve. Therefore, domestic monetary policy cannot have the autonomy it could have under a truly flexible rate system. Furthermore, the confused and disturbed state of the world economy during 1974 indicates that Colombian exchange-rate policy will have to deal not only with disturbances originating inside the country, but also with those issuing from an increasingly erratic world market.

It would therefore be a mistake to interpret import liberalization and rationalization of the system of protection as a retreat from planning in the foreign sector. Such steps in fact are a part of the search for a more efficient planning of international trade and finance policies.

NOTES

1. These rates of growth or decline are obtained by fitting trend lines, as in tables 1-1 and 1-2.

2. In Table 1-2, GDP growth rates are shown only for 1950–56 and 1967–72. Preliminary statistics indicate a GDP growth rate of 7.0 per cent for 1973. See *Coyuntura Económica*, April 1974, p. 5. UNECLA estimates place the GDP annual growth rate at 5.2 per cent during 1945–50

and at 4.2 per cent for just 1947–50. The UNECLA estimates can be found in DANE-BME, no. 226, May 1970.

3. See Richard Caves, "Export-led Growth and the New Economic History," in J. N. Bhagwati et al., eds., *Trade, Balance of Payments and Growth: Papers in International Economics in Honor of Charles P. Kindleberger* (Amsterdam: North-Holland, 1971), especially pp. 419–438.

4. Trend growth rates and deviations somewhat different from those shown in tables 8-1 and 8-2 are obtained when the dummy variable t_2 for the six years 1967–72 is given values of 1, 2, . . . , 5, 6 (instead of 18, 19, . . . , 22, 23), leaving t_1 as before. Using this alternative procedure, for example, the following results are obtained (standard errors in parentheses), which may be compared with those in tables 8-1 and 8-2:

	Trend	*Deviation*
All agriculture	3.05	0.96
	(0.17)	(0.63)
All livestock	3.57	1.51
	(0.22)	(0.81)
All manufacturing	6.07	0.19
	(0.11)	(0.42)
Industrial manufacturing	6.83	−0.22
	(0.15)	(0.56)

5. Thomas L. Hutcheson, "Incentives for Industrialization in Colombia" (Ph.D. diss., University of Michigan, 1973).

6. Ibid., App. B, pp. 147–148.

7. The theoretical rationale for linking effective rates of protection to either import-substitution ratios or sectoral growth rates has been questioned by Jagdish Bhagwati. "Tariff Protection and Industrialization in Nigeria: A Comment," *Bangladesh Economic Review*, forthcoming.

8. Other case studies are reported in Daniel Vargas and Eduardo Wiesner, "Las Exportaciones y el Empleo; Una Perspectiva para Colombia," mimeographed (Bogotá: FEDESARROLLO, November 1971). There is little mystery in these DRC results: typically one starts with labor-intensive exports selling at world prices and compares them with heavily protected activities whose output sells domestically at prices twice or more those in world markets. The further contribution made to the gap in DRCs by differences in cost structure and guesses about shadow input prices is usually quite small.

9. The 1962 Colombian development plan included export targets for 1970, which were revised by the IBRD during 1962. Those projections, made in millions of current U.S. dollars, can be compared with actual 1970 figures, as follows:

	Colombian Plan	*IBRD Estimates*	*Actual 1970 Exports*
Registered exports, total	$827	$700	$736
Coffee	405	340	467
Crude oil	167	167	59
Bananas	43	43	18
Cotton	39	40	35
Tobacco	173	15	7
Sugar		5	15
Other		90	135
Nonregistered exports	30	30	59

The projections are from IBRD, *An Appraisal of the Development Program of Colombia,* Report WH-119a, June 21, 1962, Annex I, pp. 5 and 11. Actual 1970 data are from Chapter 2, above. Actual registered minor exports in 1970 exceeded the IBRD projections by 9 per cent, but fell short of the ambitious targets of the development plan by 18 per cent.

10. See Francisco E. Thoumi, "Evolución de la Industria Manufacturera Fabril 1958–1967," DANE-BME, March 1971, p. 60.

11. David Morawetz, "Import Substitution, Employment and Foreign Exchange in Colombia: No Cheers for Petrochemicals," mimeographed (Harvard Development Advisory Service, September 1972). Morawetz adds: "In Colombia petrochemicals received more government finance and support than any other industrial sector in the 1960s. For example, in 1969 chemicals and petrochemicals participated 40 percent in the portfolio of the largest government industrial development agency (IFI) and received 25 percent of all credits and refinancings granted by the government's Private Investment Fund (FIP), in spite of the fact that it generated only 8 percent of industrial production and employment" (p. 1).

12. For an early analysis of this industry see Bernard E. Munk, "The Colombian Automotive Industry: The Welfare Consequences of Import Substitution," mimeographed (AID, August 1968). In that paper Munk was pessimistic about cost reductions in this industry even assuming Andean integration.

13. Speculative holdings of importable-goods inventories were emphasized by Alberto Roque Musalem, but from a balance-of-payments and macroeconomic perspective. See his *Dinero, Inflación y Balanza de Pagos: La Experiencia de Colombia en la Post-Guerra* (Bogotá: Talleres Gráficos del Banco de la República, 1971), particularly Chapter I.

14. See Francisco E. Thoumi, "The Utilization of Fixed Industrial Capital in Colombia: Some Empirical Findings," mimeographed (IBRD, December 1973).

15. See Carlos F. Díaz-Alejandro, "The Andean Common Market: Gestation and Outlook," in R. S. Eckaus and P. N. Rosenstein-Rodan, eds., *Analysis of Development Problems: Studies of the Chilean Economy* (Amsterdam: North-Holland, 1973), pp. 293–326. See also David Morawetz, "Economic Integration Among Less Developed Countries with Special Reference to the Andean Group" (Ph.D. diss., Massachusetts Institute of Technology, 1972).

16. Current tax revenues of the national government reached 9.8 per cent of GDP in 1970, but fell to approximately 9.0 per cent by 1973, contributing to a large fiscal deficit and a deteriorating, inflationary situation during 1973 and 1974. See *Coyuntura Económica*, April 1974, p. 124 and pp. 133–134.

17. During 1974 the U.S. Treasury charged Colombia with "dumping" carnations in the U.S. market, giving as evidence the CAT received by those exporters. It will be recalled that the CAT has been in effect since 1967; its creation was widely celebrated by U.S. AID officials.

On September 26, 1974, the Colombian government announced a sharp reduction in the CATs granted to exporters. Among the reasons given for such a move was the recent imposition by the United States of countervailing duties on some Colombian exports. Colombia also announced that GATT-approved exemptions from sales taxes would now be granted to exporters. As sales taxes burden luxury goods more than necessities, it was argued that such a step would reduce pressure on the cost of living of the poorest Colombians. The government also argued that a high CAT was stimulating fake export invoicing, notably on clothing and on emeralds, rubies, and other precious stones. Skinning the CAT is expected to increase public revenues by about P900 million. The government indicated that it expects eventually to lift all export prohibitions.

18. The best proxy for the price ratio of tradable goods to nontradables may be an average EER relative to Colombian wages for unskilled labor deflated by comparable wages abroad. Data for this were not available for the whole period under study. Even this measure, of course, neglects to take into account changes in the terms of trade.

19. Such a base was taken in Díaz-Alejandro, "Andean Common Market," p. 326.

20. National accounting procedures may overemphasize somewhat the link between the real

import exchange rate and the relative prices of machinery and equipment by neglecting to account fully for changes in import premiums at times of balance-of-payments turbulence. Changes in import duties on capital goods, however, have been small. It will also be recalled that major industrial corporations import their machinery and equipment directly.

21. See Carlos F. Díaz-Alejandro, *Essays on the Economic History of the Argentine Republic* (New Haven: Yale University Press, 1970), especially Essay 6. For a long time 1950 was the base year for Argentine national accounts expressed in constant prices. In that year, relative prices of all Argentine investment goods reached a peak, as did Colombian ones in 1958. Researchers using Argentine and Colombian constant-price data for cross-country comparisons have therefore frequently marveled at the high investment coefficients and extraordinary marginal capital-output ratios of the two countries. Contrary to the Argentine experience, Colombian implicit prices for the two major commodity-producing sectors have evolved comparatively undramatically relative to the GNP deflator, as follows (1958 = 100):

	Agriculture and Livestock	*Manufacturing*		*Agriculture and Livestock*	*Manufacturing*
1950–54	99.0	109.3	1963–66	96.9	106.0
1955–56	104.3	103.5	1967–70	94.3	97.6
1957–58	102.7	101.0	1971–72	95.5	97.2
1959–62	96.2	103.6			

22. Some model builders have speculated about such an elasticity. See W. M. Corden, "The Effects of Trade on the Rate of Growth," in Bhagwati et al, eds., *Trade*, Chap. 6, especially pp. 126–131.

23. Without the rise in minor and coffee exports it is doubtful whether Colombia could have expanded its foreign debt and attracted other types of capital to the extent realized since 1967.

24. Leonard Dudley, "The Effects of Learning on Employment and Productivity in the Colombian Metal Products Sector," mimeographed (University of Montreal, September 1973).

25. The statement stands, of course, whether the country is developed or underdeveloped. Without import controls (but with milk subsidies!), the 1973–74 Watergate matter in the United States showed some of the many channels through which private interests can manipulate state power. The Matesa scandal in Spain was in fact related to export-promotion schemes.

26. See R. Albert Berry, "Land Distribution, Income Distribution and Productivity," Chapter IV of a forthcoming Yale Economic Growth Center book on the Colombian rural sector. Berry indicates that the labor-land ratio may vary by as much as five to ten times between the two ends of the technology spectrum, a range associated with size of farms, in a crop such as corn.

27. See FEDESARROLLO, *Encuesta Industrial*, June 1974, pp. 7–8. In 1972 these firms had sold 92.7 per cent of their output domestically.

28. R. Albert Berry and Miguel Urrutia, *Income Distribution in Colombia* (New Haven: Yale University Press, forthcoming), Chap. 12.

29. Here I follow (again!) unpublished estimates of R. Albert Berry, as well as FEDESARROLLO, *Coyuntura Económica*, various issues.

30. Both imports of goods and services and GDP (at market prices) are measured at current prices. The percentages will thus reflect changes in the relation between the average import exchange rate and the GDP deflator. For earlier years, the corresponding percentages are as follows: 1950–54, 12.9; 1955–56, 13.5; 1957–58, 14.8; and 1959–62, 14.3.

31. A good share of the registered DFI gives as its home base countries such as Panamá, Curaçao, the Bahamas, Luxembourg, and Liechtenstein, making further precision as to geographical origins spurious. Some of these countries, incidentally, are also notorious smuggling centers. It appears that Colombia was hurt more by having stalled on the enforcement of Andean rules than if the country had acted at once. The debate over the constitutionality of Andean rules during 1972

seems to have led to a slowdown in DFI inflow. But once Decision 24 was firmly in place, DFI picked up vigorously. See *Business Latin America*, September 25, 1974, p. 310.

32. See *IMF Survey*, June 3, 1974, p. 165.

33. In the articles listed below, I have argued the thesis that DFI, particularly in the form it took during the 1950s and 1960s, is an unsatisfactory mechanism for promoting international interdependence: "Direct Foreign Investment in Latin America," in Charles P. Kindleberger, ed., *The International Corporation; A Symposium* (Cambridge: The M.I.T. Press, 1970), pp. 319–344; "The Future of Direct Foreign Investment in Latin America," in Stephen E. Guisinger, ed., *Trade and Investment Policies in the Americas* (Dallas: Southern Methodist University Press, 1973), pp. 3–28; and "North-South Relations: The Economic Component," *International Organization*, Winter 1975, pp. 213–241. As they gain in bargaining power, one may expect countries such as Colombia and Mexico to tie their regulations over DFI to the treatment received by their emigrating labor (or their labor-intensive exports) in the home countries of foreign investors.

34. As reported in World Bank/IDA, *Annual Report*, 1974, p. 87. The corresponding 1972 percentages were 22.2 for Argentina, 13.4 for Brazil, and 23.5 for Mexico.

35. See chapters 7 and 8 in 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). Although their study was published during 1971, background research was carried out mainly during the difficult years of 1967 and 1968. Nelson and Slighton, who themselves called my attention to the pessimism of the indicated chapters, consider that they underestimated the influence of the younger Colombian economists and the rapidity with which an export lobby with political clout would be created.