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Export promotion *policies in* Central America

Larry Willmore

*Economic Affairs Officer,
Microeconomic and Social
Analysis Division,
United Nations, New York.*

Ten years ago the member countries of the Central American Common Market (Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua) began to turn away from the "inward-oriented development" policy they had been applying for decades. They are now encouraging non-traditional exports by lowering tariff barriers, unifying exchange rates, and giving exporters access to intermediate and capital goods at international prices. Some governments have also granted direct subsidies in the form of tax credits for goods exported to markets outside the subregion. This article reviews these policies and examines their effect on the exports of each of the five member countries, with special attention to the possibility that the subsidies granted in respect of goods exported outside the Central American Common Market may induce exporters to switch from regional to extraregional markets.

I

Introduction

The Central American economies are small in every sense of the word; their exports and imports have no effect on international prices, so free trade is a first-best strategy for all of them.¹ Despite this fact, the five members of the Central American Common Market (CACM), individually and collectively, have implemented protectionist trade policies, for the most part in the form of high import tariffs. Tariff protection acts as an involuntary tax on exports, but policymakers have attempted to counteract this by reducing the height of tariff barriers and by implementing a number of policies which include preferential trading, whereby the countries mutually subsidize each other's exports; the establishment of export processing zones; temporary import regimes; direct subsidies on exports; and exchange controls, which normally discourage exports, but are sometimes used in Central America to subsidize non-traditional exports. This paper gives a brief analytical review of each of these policies and their impact on non-traditional exports. All these poli-

cies are second-best, and would not be necessary if the countries liberalized their trade completely by unilaterally removing all protective tariffs and quotas.

Free trade, it must be emphasized, is not synonymous with *laissez-faire*. Adherence to free trade does not preclude the imposition of taxes on the production or consumption of specific goods or, alternatively, the provision of subsidies for them. In a free-trade regime, however, taxes and subsidies affecting the production of a particular good are the same regardless of whether the output is exported or sold on the domestic market, and those affecting consumption are the same regardless of whether the good is imported or supplied by a local producer. If taxes on luxuries such as cosmetics, television sets and automobiles are imposed only on imports, there is an incentive to produce such items locally, even at high cost, to avoid payment of such taxes, which thus act as import tariffs even though they may be disguised as excise taxes.

II

The policies

1. Protection as a tax on exports

It is understandable that governments of countries specializing in the production and export of only a few commodities should want to diversify their economies by providing incentives for the production of a greater variety of goods. The idea is that the incentives will have a finite life, and that the 'infant industries' thus

benefitted will grow up and eventually prosper without special favours.

Economists traditionally advise governments to subsidize new activities openly rather than resort to tariff protection.² The necessary funds can be raised from general taxes on consumption or income, or from taxes on specific goods whose consumption or production it is desired to discourage. Policymakers rarely accept this advice, so governments everywhere almost always promote new industries with protective tariffs and restrictions on imports rather than cash subsidies, and consumers end up subsidizing protected producers

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¹ Coffee and bananas are possible exceptions to this statement, but even in these cases Central America cannot raise international prices without support from producers in other regions of the world.

² See, for example, Caves and Jones (1973, pp. 254-260) for a presentation of the argument that an optimal tax-cum-subsidy is necessarily superior to any import tariff for the purpose of achieving some specific objective in respect of diversification of production.

by paying a higher price for local goods than they would pay for duty-free imports of goods of comparable quality.

Protective tariffs may encourage the development of new industries, but they have an undesired side effect: they act as a tax on traditional and nontraditional exports alike.³ In fact, tariffs and other restrictions on imports result in two distinct types of export taxes. First, protection of intermediate goods increases the costs of industries that rely on them as inputs. If dressmakers, for example, are forced to pay duty on imported cloth, or to purchase high-cost, low-quality cloth from local mills, they find it difficult to compete in export markets, regardless of the efficiency of their own operations. Second, and more subtly, protective tariffs cause the exchange rate to become overvalued, decreasing the purchasing power of the local currency that exporters receive for each unit of foreign currency that they earn.

The second, indirect manner in which protection acts as an export tax can be illustrated with the following hypothetical case. Suppose that a country with a flexible exchange rate removes its uniform 20% tariff on imports. What will happen to the price of foreign exchange? Obviously, since imports are now cheaper in local currency, there will be greater demand for foreign exchange, driving up its price. In other words, the local currency will depreciate in real terms, and exporters will receive more pesos for each dollar of revenue. The difference between this free-trade exchange rate and the exchange rate with protective tariffs is equivalent to a tax on all exports. This is a tax that is difficult to describe, much less measure, but it does exist and does inhibit nontraditional exports.

Central America strengthened its protectionist policies in the 1960s by adopting a common external tariff that was much higher than any of the five national tariffs it replaced.⁴ In the words of the Secretariat of the Central American Common Market (CACM), "Central America, in forming the Common Market, chose from the beginning an 'inward looking' policy of industrialization and development; this policy contained various instruments, the most important of which was a protectionist tariff ..." (SIECA, 1974, vol. 4, p. 38).

³ The theorem that import taxes are equivalent to export taxes, which was proven by Lerner (1936) for the two-good model, has been generalized to large numbers of goods by Corden (1971, pp. 119-122).

⁴ The unweighted average tariff for consumer nondurables increased from 68% to 122%. For further details and an analysis, see Willmore (1976).

For a time, this policy of promoting new activities behind a high tariff wall produced a diversification of the Central American economies and was accompanied by considerable growth. Each of the five countries registered average annual growth rates in excess of 5% in the period 1960-1977. Beginning in the late 1970s, however, growth slowed noticeably in each country. Negative rates of growth were perhaps inevitable in El Salvador and Nicaragua because of civil war, but slow growth came to characterize Costa Rica, Guatemala and Honduras as well (table 1.)

A series of external events, namely the second oil price shock of 1979-1980, rising interest rates and falling prices for traditional exports, greatly reduced the availability of foreign exchange and impacted negatively on real income in the region.⁵ The response of the economies to this adverse external environment left much to be desired, so a number of Central Americans concluded that it was necessary to move away from the decades-old strategy of 'inward development'. The Government of Costa Rica was the first to promote the idea of a simplified and reduced structure of protection, and in 1985 it was able to convince other members of the CACM of the need for major reform of the external tariff. Three governments implemented the reform the following year, even though it meant temporary abandonment of the principle of a common external tariff. In 1987 Costa Rica announced its goal of reaching, unilaterally, a maximum tariff of 40% by the end of 1990, and in 1989 the new government of El Salvador took the initiative in tariff reform away from Costa Rica by reducing its maximum tariff to 50% in September and to 35% the following March.

On 17 July 1991 the five Presidents of Central America, in the Declaration of San Salvador, pledged to return before 1995 to a common external tariff, albeit to a less protectionist one with a maximum tariff of 20% and a minimum tariff of 5%. As may be seen from the data given in table 2, they did not achieve this goal. By early 1995, only Costa Rica had reached the target range of 5% to 20%, and this situation changed in March of that year when the Government of Costa Rica imposed, for fiscal reasons, a surcharge of 8% on all imports, thus increasing duties to the range of 13%-28%. El Salvador, in April 1995, followed by Guatemala in December, reduced import duties on

⁵ These external shocks also marked the end of price stability in the region. For an analysis, see Escaith and Schatan (1996).

TABLE 1

Central America: Annual growth of GDP, 1960-1996.
(Percentages)

	1960-1977	1977-1989	1990	1991	1992	1993	1994	1995	1996
Costa Rica	6.6	2.7	3.6	2.3	7.7	6.3	4.5	2.5	-0.9
El Salvador	5.4	-0.1	3.4	3.6	7.5	7.4	6.0	6.1	3.0
Guatemala	5.7	2.3	3.1	3.6	4.8	3.9	4.4	4.9	3.0
Honduras	5.5	3.4	0.1	3.3	5.6	6.1	-1.4	3.6	3.5
Nicaragua	5.9	-2.8	-0.1	-0.2	0.4	-0.4	3.3	4.5	5.5

Source: United Nations, Department of Economic and Social Information and Policy Analysis (DESIPA), based on national accounts.

TABLE 2

Central America: Import duties and surcharges, ad valorem, early 1992 and 1995
(Percentages)

	1992	1995
Costa Rica	5 - 46	5 - 20
El Salvador	5 - 30	5 - 30
Guatemala	5 - 30	6 - 21
Honduras	5 - 35	7 - 22
Nicaragua	5 - 60	10 - 40

Source: Willmore, 1992, table 1; The Economist Intelligence Unit, Country Reports.

capital goods to 1%, further increasing the disparity of external tariffs. Throughout this period, Nicaragua maintained import duties considerably higher than those in effect in the other four countries. Even so, tariff barriers are now lower in each country of Central America than they were in the 1960s, 1970s and 1980s; the implicit tax on exports is thus lower as well. In each country, trade liberalization has gone far beyond that required for membership in the General Agreement on Tariffs and Trade (GATT), now transformed into the World Trade Organization (WTO).

Import quotas, which cause domestic prices of the targeted goods to rise, also act as a tax on exports. Nearly always, however, governments in Central America have relied on tariffs rather than quantitative restrictions to protect local producers. Nonetheless, all five countries have required import licenses from time to time, especially as a way to ration foreign exchange sold at an artificially low official price. In recent years, they have avoided both artificial exchange rates and import licenses.

2. Preferential trading arrangements as an export subsidy

A tax on imports allows producers to increase prices and decrease the quality of the goods they sell locally, so it can be viewed in effect as a tax on consumption that is given as a subsidy to the producer. The same is true of preferential trading arrangements like the CACM, with one important difference: the consumer and producer need not reside in the same country. This allows residents of one country to subsidize the exports of another country. In other words, a CACM producer who exports to a partner country is exempt from the external tariff and thus receives a subsidy, in the form of higher than international prices, from consumers in that country.⁶

This form of subsidy is not limited to exports to the CACM, but rather is inherent in any type of preferential trading arrangement. The bilateral treaties that Costa Rica and other Central American countries have signed with Panama provide opportunities for Central American consumers to subsidize Panamanian exports in return for Panama's subsidization of Central American exports. The Costa Rican firm Gallito exports a considerable amount of candy to Panama, not because it is competitive in world markets, but rather because it has preferential access to the protected Panamanian market. Similarly, the success of export processors in Central America and the Caribbean owes much to the fact that the market for garments in the United States is protected by country-specific quotas.

⁶ The argument assumes that a country pays for the goods it imports. If there is an accumulation of unpaid deficits, as has happened on occasion in the CACM, it is not clear who is subsidizing whom.

3. Export Processing Zones

One of the two types of 'taxes' that protection imposes on nontraditional exports is the increased cost of intermediate inputs. Exporters can avoid this tax by locating outside a country's customs territory, in areas known as free zones or export processing zones. These zones are sometimes privately and sometimes publicly owned and operated. In either case, exporters lease a factory shell from the administration of the zone, and are exempt from payment of taxes on their profits, imports and exports. Most importantly, they also avoid many of the bureaucratic costs of dealing with the customs authorities. In return for these privileges, producers in free zones agree to export all of their output. Permission is occasionally given to 'export' to the local customs territory, but goods produced in a free zone are deemed to be foreign, so are subject to payment of full import duties and consumption taxes.

There is a notable absence of anti-export bias in the free zones. If anything, there is a pro-export bias, as governments place restrictions on sales to local markets, while they allow unlimited shipments to foreign markets. Nonetheless, free zone firms do not escape the second 'tax' that protection imposes on exports: real exchange rate appreciation, and hence increased costs—compared to free trade—for labour and for non-tradeables such as local transportation, the factory shells, electricity, water and waste disposal.

Over the last ten years, each of the five Central American countries has enacted legislation governing the creation of free zones. Many of these laws modernized legislation dating from the 1970s, so that the laws in each country are now quite similar. Nicaragua's Decree No. 46-91, which took effect on 22 November 1991, is the most recent addition to this body of law; it replaces legislation enacted by the Somoza government. Some of the countries impose an 8 to 10 year limit on the exemption from taxes on profits, but this provision is rarely enforced. Nor is it enforceable, because investments in export processing are extremely reversible: an entrepreneur can close one plant and open another in a different location in a matter of weeks at very little cost.

One aspect that reduces the attractiveness of free zones for potential exporters is the requirement that plants be located in geographic enclaves, whose location may not be optimal for the firm. Costa Rica has shown great flexibility in this regard by allowing free zone exporters to move to 'satellite plants' where labour is abundant, even if this location is far from the physical

free zone. El Salvador's 1990 Law on the Regime for Free Zones and Bonded Warehouses goes even further and explicitly states that "firms that export all of their production ... and for technical reasons are not located in a free zone, can request that their establishment be declared a bonded warehouse ..." (article 20). The law treats exporters with bonded warehouses in the same way as exporters operating from free zones (article 22).

4. Customs duty drawback (temporary imports)

Temporary import regimes have an advantage over free zones in that they permit plants located anywhere in the country to assemble or process, free of duty, imported inputs for subsequent export. This allows potential exporters to make use of existing infrastructure and avoid costly new investments. The system is similar to El Salvador's 'bonded warehouses', but is more flexible because it allows a firm to devote part of its time (or part of its facilities) to the domestic market and part to the export market.

Each of the five countries has legislation that provides for exemption from duties on machinery and intermediate goods imported for use in the production of goods for export. Firms are also exempt from payment of taxes on profits⁷, in proportion to the amount of output that is exported. It is also possible for an exporter to obtain a refund of import duties already paid, but this is more difficult than obtaining exemption in the first instance. This makes it difficult for a firm that produces for both the domestic and export market to utilize inventory in stock to fill a last-minute export order. El Salvador—alone of the five countries—eases this problem by allowing firms to receive a general drawback of 6% (originally 8%) of the FOB value of exports in lieu of exemption from payment of import duties and other taxes.⁸ The difficulty with a single rate of drawback is that for some exporters the reimbursement is greater than the taxes paid, while for others it is less.

⁷ In Nicaragua the exemption from profits tax on exports is only partial, whereas in the other four countries it is 100%.

⁸ The cash drawback came into effect in 1990 and is also granted for the net exports of firms that operate under the temporary import regime. From 1986 to 1990, El Salvador offered exporters of non-traditional goods *Certificados de Descuento Tributario* (tax credit certificates) (CDTs) for up to 30% of the value of extra-CACM exports, but never more than the taxes actually paid on inputs used to produce the exports. Because of these complex rules, few exporters were able to make use of the CDT incentive in El Salvador.

Much of the export processing (*maquila*) in Costa Rica and Guatemala is carried out under the temporary import regime. Export processors in the other three countries rely more on free zone legislation.

5. Direct export subsidies

In addition to exemption from taxes on profits and inputs, governments sometimes grant direct subsidies to exporters. These subsidies are almost never granted for simple assembly nor for exports from free zones. Typically a minimum national value-added requirement is imposed.

As a correction for protection-induced overvaluation of the exchange rate, export subsidies are only a crude instrument, because they increase the local-currency price of exports, but not the price of imported inputs used in the production process. They therefore tend to encourage exports with a high import content. In addition, they create an incentive to over-invoice exports, both to meet the minimum value-added requirement and to increase the amount of subsidy received.

Four of the five governments of Central America have subsidized non-traditional exports over and above reimbursement of taxes,⁹ but only two countries—Costa Rica and Nicaragua—continue to do so at the present time, and their programmes are coming to an end. In each case the subsidies have been given as tax credit certificates that can be used by an exporter to pay taxes or sold to others to be used for the same purpose.

Costa Rica has the longest experience in Central America with direct subsidies. The Government began issuing tax credits known as *Certificados de Abonos Tributarios* (CATs) in 1972, but made minimal use of the incentive until 1984, when it began to include eligibility for these certificates in ten-year export contracts awarded to qualified firms. Non-traditional exporters originally received CATs at a rate equal to 15% of the FOB value of their shipments to the United States and 20% for shipments to other extraregional markets. CATs are issued in local currency, can be used by anyone to pay taxes upon maturity (originally 12 months, increased in 1991 to 18 months), and are sold freely on the open market. The true rate of subsidy is

⁹ The exception is El Salvador, which awarded tax credits from 1986 to 1990, but only up to the amount of taxes paid on inputs used in the production of exports.

less than 15 or 20 per cent, for the discounted value of a CAT is less than its face value. By 1992 nearly all non-traditional exports from Costa Rica benefited from CATs.¹⁰

In order to be eligible for CATs, exports must incorporate a minimum of 35% of national value-added; nonetheless, three of Costa Rica's eight largest exporters reportedly received CATs without meeting that requirement (Clark, 1995, p. 198). Beginning in 1990, the rate of subsidy was reduced in new export contracts; moreover, the rate decreased further over time but increased with the proportion of national value-added. As from December 1992, CATs were eliminated from new export contracts; by the year 2000, Costa Rica's experiment with CATs will be over.

Guatemala and Honduras issued tax credits to non-traditional exporters for a brief period in the 1980s. Guatemala issued them to eligible exporters at a flat rate of 10% and Honduras at rates that varied from 5% to 15%, depending on national value-added. In each case, however, the tax credits served as partial compensation for a large and increasing overvaluation of the (non-market clearing) official exchange rate. Therefore they had little effect as an export incentive. Each country suspended tax credits after sharply depreciating its official exchange rate. This occurred in 1986 in Guatemala (from one quetzal per dollar to 2.50 quetzales per dollar) and in 1990 in Honduras (from two lempiras per dollar to 4.20 lempiras). The magnitude of these depreciations compensated exporters many times over for their loss of tax credits.

In 1992, Nicaragua followed the example of Costa Rica by granting eligible exporters of non-traditional goods *Certificados de Beneficio Tributario* (CBT) at a rate of 15%. Like Costa Rica, a criterion for eligibility is a minimum of 35% national value-added. Unlike Costa Rica, the rate of subsidy, for all exporters, fell to 10% in 1995 and will fall further to 5% in 1997 and to zero in 1998 (in exceptional cases, in the year 2000).

In sum, direct export subsidies are presently granted only in Costa Rica and Nicaragua. Both coun-

¹⁰ The main exception is certain cut flowers, which are subject to countervailing duties in the United States market. Exports subsidized by CATs in 1992 amounted to US\$ 610 million (Clark, 1995, p. 196). According to table 3, Costa Rica's non-traditional exports to non-CACM countries amounted to US\$ 763 million in that year; but US\$ 65 million of this consisted of exports to Panama, which are not eligible for CATs, so nearly 90% of the non-traditional exports to extra-regional markets received CATs in 1992.

tries are phasing them out, and will end them by the year 2000. There has been little discussion to date of possible instruments to replace these incentives.

6. Exchange controls

When a central bank keeps the price of foreign exchange artificially low, and forces firms to exchange their export earnings for local currency at that rate, it imposes a tax on exports. Even companies operating in free zones cannot avoid this 'tax' if they are required to purchase local currency at the official rate for payment of wages and other local expenses. Production for export becomes increasingly difficult as the parallel rate of exchange diverges from the official rate, central bank controls are tightened, and approvals of foreign exchange for the purchase of necessary inputs are delayed. Exemption from duty on inputs is no incentive to export if producers lack access to foreign exchange.

Exchange controls are sometimes used to subsidize non-traditional exports, but they represent a costly and not very effective subsidy. The export tax may become an export subsidy if exporters are allowed to retain their export receipts (or a portion of them) while paying for imports at the official exchange rate. This subsidy can become very large if the market rate of exchange differs greatly from the official rate. Consider the example of an official exchange

rate of 2 pesos per dollar, a market rate of 4 pesos, and exports that have a (duty-free) import content of 60%. When the exporter must sell the dollars he receives at the rate of 2 pesos, this is equivalent to a 50% tax on value-added.¹¹ If he is allowed to sell dollars for 4 pesos and purchase them for 2 pesos to pay for imported inputs, however, the 50% tax is transformed into a 75% subsidy.¹² This is not a very effective type of subsidy, for two reasons. First, an entrepreneur is likely to regard this good fortune as transitory, so will not invest to expand exports. Second, there are likely to be bureaucratic costs and delays involved in the purchase of foreign exchange at the low rate of 2 pesos per dollar.

One way to avoid converting exchange controls into an inadvertent tax on non-traditional exports (aside from avoiding controls altogether) is to allow exporters to retain the foreign currency that they earn and permit them to purchase local currency in the parallel market. This is currently the practice in each of the five countries, but has not always been true in the past. Each central bank in Central America has, on more than one occasion, imposed exchange controls leading to multiple exchange rates. A review of this history and its effect on exports is beyond the scope of the present paper and possibly beyond the competence of its author. Suffice it to say that fear of policy reversal, of a return to exchange controls of the past, decreases the effectiveness of export incentives in the present.

III

The results

The results of Central America's export promotion efforts are displayed in figures 1, 2 and 3, which show, for each country, the value of non-traditional exports excluding export processing (*maquila*). All data are in current dollars; no attempt has been made to adjust for price inflation. Complete data, for traditional as well as non-traditional exports, are reported in table 3. In figures 2 and 3 and in table 3, exports to the CACM are shown separately from exports to the rest of the world, for two reasons. First, only extraregional exports benefit from tax exemptions and direct subsidies; exports to partner countries of the CACM are not affected by instruments customarily regarded as incentives for non-traditional exports. Second, exports to the CACM

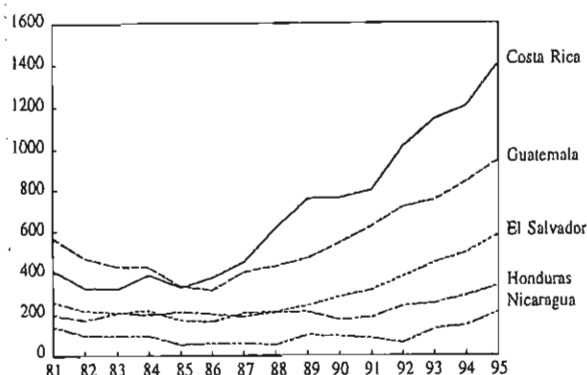
are valued at protected Central American prices, whereas exports to the rest of the world are, for the most part, valued at international prices; in other words, the value of exports to the CACM includes an implicit subsidy paid by the importer, whereas the value of most exports to the rest of the world does not.

Of the five countries, Costa Rica's performance is most impressive: this country increased the value of its

¹¹ For every 100 dollars of exports, net exports are 40 dollars. At the official exchange rate, this is 80 pesos: half the amount of pesos that could be purchased at the parallel rate.

¹² For each 100 dollars of exports, net exports are still 40 dollars, but the net receipts of the exporter are $400 - 120 = 280$ pesos, and $280/160 = 1.75$.

FIGURE 1
Central America: Non-traditional exports^a
(Millions of dollars)



^a Excluding maquila products.

FIGURE 2
Central America: Exports to the
Central American Common Market
(Millions of dollars)

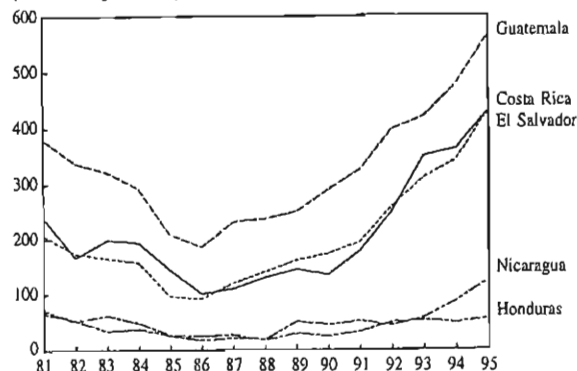
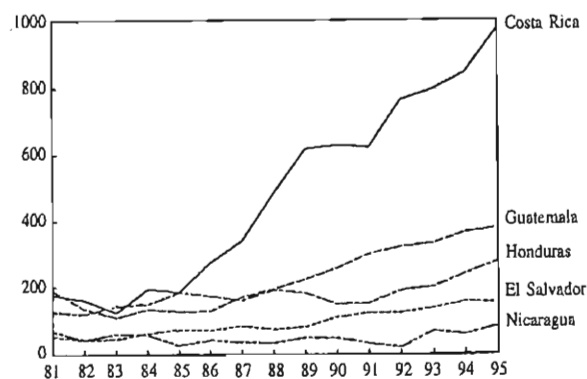


FIGURE 3
Central America: Non-traditional
exports^a to the rest of the world
(Millions of dollars)



^a Excluding maquila products.

non-traditional exports from US\$ 328 million in 1985 to US\$ 1,403 million in 1995, surpassing Guatemala as Central America's largest exporter. Nearly all the increase is due to extra-CACM exports (including exports to neighbouring Panama), for exports to CACM partners increased by less than US\$ 300 million over the same period. Since only Costa Rica gave significant direct subsidies (CATs) for extraregional exports, this outcome is not surprising. The question is, was the export response worth the cost of the subsidies? The Government of Costa Rica has concluded that it is not, and is phasing out the programme.

Debate in Costa Rica has centered on the highly visible fiscal cost of the subsidy programme, which reached 1.2% of GDP in 1989.¹³ There does not seem to be any similar concern for the economic cost to consumers of imports from CACM partners who, reciprocally, subsidize Costa Rica's exports to the CACM.

How did exporters respond to CAT subsidies in Costa Rica? The answer to this question requires an estimate of what exports would have been in the absence of subsidies. Hoffmaister (1992), in the only study of this type in existence for Costa Rica, used quarterly data for the years 1970 through 1989 to fit the following regression model:

$$\text{export volume} = \text{function of } \{ \text{CAT subsidies,} \\ \text{relative prices, nominal exchange rate, real GDP} \}$$

In this model, the dependent variable is the volume of all non-traditional exports, including export processing (*maquila*) and intraregional exports: two categories that were never eligible for CAT subsidies.¹⁴ Relative prices are defined as "the relative world price of exports in terms of the domestic price", and the nominal exchange rate as the price of foreign currency.

¹³ Costa Ricans have also complained of corruption (overinvoicing of exports) and of concentration of benefits in the hands of a few exporters. In the 18-month period from July 1988 through December 1989, a single company (PINDECO, Del Monte's pineapple subsidiary) received 10% of all CAT benefits, and the largest 26 firms, including PINDECO, received 51% of the total benefits (Clark, 1995, p. 198). But nearly all non-traditional exports received CATs at that time, so the concentration of benefits must reflect scale economies in exporting more than discrimination against small exporters.

¹⁴ Export volumes were calculated by dividing export values by a price index for non-traditional exports. Maquila was a small, but increasing, proportion of non-traditional exports, reaching 9.5% in 1989 (Hoffmaister, 1992, p. 154, note 19).

TABLE 3
Central America: Traditional and non-traditional exports, 1981-1995^a
 (Millions of US\$)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
<i>Costa Rica</i>															
Total exports	1 002.6	869.0	852.5	997.5	939.1	1 084.9	1 106.7	1 245.7	414.6	1 448.2	1 597.7	1 851.1	2 094.7	2 258.5	2 624.1
Traditional	587.4	40.7	530.3	608.7	611.1	711.4	657.8	630.7	654.4	684.5	797.5	839.4	951.7	1 054.2	1 221.7
Non-traditional:															
CACM	238.0	167.2	198.2	193.0	143.5	100.5	109.8	129.9	144.1	134.6	177.8	248.4	348.3	360.7	427.6
Rest of World	177.2	161.1	124.0	195.8	184.5	273.0	339.1	485.1	616.1	629.1	622.4	763.3	794.8	843.6	974.8
<i>El Salvador</i>															
Total exports	798.0	699.6	757.9	725.9	695.1	754.9	590.9	608.8	497.8	581.5	588.0	597.5	742.0	818.9	1 004.6
Traditional	538.0	484.4	549.0	507.9	527.5	594.3	388.4	395.9	256.1	298.3	272.1	217.2	295.9	324.1	425.6
Non-traditional:															
CACM	206.5	174.2	164.9	157.2	95.7	91.0	119.6	139.8	160.6	173.0	193.7	257.3	309.2	340.4	426.6
Rest of World	53.5	41.0	44.0	60.8	71.9	69.6	82.9	73.1	81.1	110.2	122.2	123.0	136.9	154.5	152.4
<i>Guatemala</i>															
Total exports	1 291.4	1 170.4	1 091.7	1 132.2	1 059.7	1 043.8	977.9	1 073.4	1 126.1	1 211.5	1 230.0	1 283.6	1 363.2	1 550.2	1 988.8
Traditional	721.8	697.9	661.9	706.6	725.3	730.7	575.7	642.5	653.6	666.0	606.3	566.9	613.7	710.7	1 046.0
Non-traditional:															
CACM	378.9	337.3	320.9	291.4	207.8	185.3	230.6	236.4	248.9	288.2	324.0	395.4	417.8	475.0	565.4
Rest of World	190.7	135.2	108.9	134.2	126.6	127.8	171.6	194.5	223.6	257.3	299.7	321.3	331.7	364.5	377.4
<i>Honduras</i>															
Total exports	753.6	676.5	698.7	737.1	789.6	891.3	844.3	893.0	868.4	831.0	792.4	801.3	808.0	872.8	1 092.0
Traditional	560.1	506.1	494.0	540.6	580.1	693.6	658.2	685.2	657.0	659.0	608.4	563.1	556.1	585.7	760.9
Non-traditional:															
CACM	65.9	51.9	61.3	47.7	25.5	23.4	25.9	15.7	28.9	22.9	32.0	48.2	51.4	47.2	55.0
Rest of World	127.6	118.5	143.4	148.8	184.0	174.3	160.2	192.1	182.5	149.1	152.0	190.0	200.5	239.9	276.1
<i>Nicaragua</i>															
Total exports	513.8	408.6	451.9	412.4	305.1	257.2	295.0	235.7	310.7	330.6	272.4	223.1	267.0	351.2	497.3
Traditional	375.6	313.3	360.1	318.6	256.1	200.8	239.9	185.6	211.9	239.6	190.8	162.5	142.6	208.6	291.9
Non-traditional:															
CACM	70.8	52.1	33.5	37.0	24.2	15.5	20.5	17.9	50.6	43.7	51.2	41.7	56.8	86.6	123.3
Rest of World	67.4	43.2	58.3	56.8	24.8	40.9	34.6	32.2	48.2	47.3	30.4	18.9	67.6	56.0	82.1

Source: Central American Monetary Council.

^a Excludes exports of maquila (offshore assembly). Traditional exports are defined as coffee, sugar and meat for all five countries, plus bananas, seafood and cocoa for Costa Rica; cotton and seafood for El Salvador; bananas, cotton, cardamom and petroleum for Guatemala; bananas, cotton, seafood and lumber for Honduras; bananas, cotton and seafood for Nicaragua.

Gross Domestic Product (real GDP) refers to Costa Rica, so the model is very much one of export supply rather than export demand.¹⁵

After estimating the model and examining its forecasting performance, Hoffmaister proceeded to simulate exports from 1984 by setting the CAT subsidy equal to zero in the period 1984-89 (prior to 1984, almost no subsidies were granted). He then compared actual exports to simulated exports in the 1984-89 period and found that over this six-year period, actual exports were only 10% higher than simulated exports (that is to say, US\$ 277 million higher). CAT subsidies for the same period totalled US\$ 205 million, so each dollar of subsidy appears to have increased exports, on average, by only US\$ 1.35. In 1988 and 1989, the import content of Costa Rica's non-traditional exports was an estimated 60% percent, which means that each dollar of subsidy increased imports by 81 cents and net exports by only 54 cents: an appalling waste of taxpayers' money. The response of exports to the other two price variables (relative prices and nominal exchange rate) was equally weak.¹⁶

In sum, Hoffmaister's model ascribes little of Costa Rica's impressive export performance to favourable CAT subsidies, relative prices or exchange rates. In contrast, the coefficient for the scale variable (real GDP) is very large: for every percentage increase in real output, export volumes increase by more than 2%. In this model, the ratio of exports to GDP increases rapidly over time, independent of prices. This trend is retained in the simulation period when the rate of subsidy is set equal to zero. The implicit assumption is that exports would have continued to grow at more than twice the rate of GDP without the tax credit programme.

One could interpret these findings as evidence that price incentives have little impact on decisions

made by Central American entrepreneurs, but such a conclusion is premature, for two reasons. First, Hoffmaister's model omits two important variables, the parallel exchange rate and exporters' access to the parallel market, and it is well known that a specification error of this type biases the estimated coefficients of all included variables.¹⁷ Second, quarterly export data are not available by country of destination, so Hoffmaister was forced to model total exports. The introduction of subsidies for extraregional exports might be expected to encourage producers to ship their products to distant markets rather than to Central America and Panama.¹⁸ A reduction in the height of the CACM tariff, or even the anticipation of a reduction, can have the same effect: i.e., increased attractiveness of extraregional markets relative to those of Central America. It is possible that the weak response to subsidies that Hoffmaister found for total exports masks a strong positive response for extraregional exports, combined with a negative response for intraregional exports.

Detailed annual data are available for Costa Rican exports, but the limited number of observations are inadequate for estimation of an econometric model using the cointegration techniques that are now routine for estimates derived from observations of time series. There is an additional problem as well: data for non-traditional exports are expressed in nominal dollars. Ideally they ought to be deflated by a price index, but what price index? Is a single index appropriate for both intraregional and extraregional trade? To avoid these difficult questions, I have divided export values by nominal GDP, converted to US dollars at the market rate of exchange. This procedure has its own problems, but it is a convenient first approach to a study of the effect of subsidies on Costa Rica's exports.

Figure 4 shows, for the period 1970 through 1995, Costa Rica's non-traditional exports (excluding export

¹⁵ For small economies, income in destination markets in any event is not expected to be an important determinant of export flows. This was found by Webb and Fackler (1993) to be true in the period 1955 through 1980 for Costa Rica's exports to the rest of the CACM, the industrialized North and the developing South.

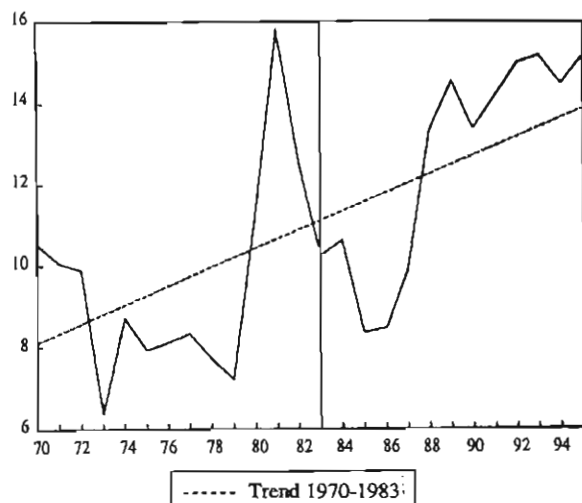
¹⁶ The calculated elasticity (percentage change in export volume associated with a one-percent change in export price) was 0.18 for CAT subsidies, 0.23 for relative prices and 0.13 for the nominal exchange rate. The null hypothesis that all three elasticities were equal could not be rejected. In contrast, the coefficient of the scale variable (real GDP) was 2.31 (see Hoffmaister, 1992, pp. 155-156). It is most unusual for the International Monetary Fund to publish a study with this type of finding: i.e., that price has little impact on export supply!

¹⁷ The nominal exchange rate that Hoffmaister includes in his model is set by the Central Bank of Costa Rica and is rarely a market-

clearing rate. Excess demand for foreign currency is reflected in a premium price for currency transactions in the parallel market. This premium tends to be highest precisely when the combination of subsidies, relative prices and nominal exchange rate is least favourable for exports: i.e., when a major devaluation is imminent. If entrepreneurs are allowed to exchange some or all of their foreign exchange earnings on the parallel market, as is often the case in Costa Rica, exports can flourish even in the face of apparently adverse price signals.

¹⁸ See Tello (1996) for a measurement of this subsidy-induced shift from the CACM to extraregional markets in the case of Nicaragua. Willmore (1989, p. 60) describes the increasing similarity of intraregional and extraregional exports of manufactured goods in the CACM in the 1970s and 1980s: a pattern of trade that facilitates shifts in the destination of non-traditional exports.

FIGURE 4
Costa Rica: Non-traditional exports^a
(As a percentage of GDP)



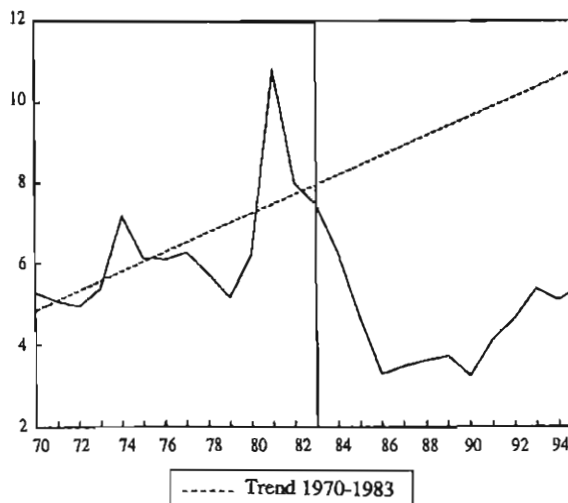
^a Excluding maquila products.

processing) as a percentage of GDP. Export contracts, accompanied by CAT (tax credit) subsidies, were introduced in 1984, so the period up to 1983 can be used to measure the trend in export ratios that existed at that date.¹⁹ This linear trend naive forecasting equation, and its slope is sensitive to inclusion or exclusion of the first two years (1970 and 1971). Nonetheless, a projection of the 1970-1983 trend into the 1984-1995 period serves to illustrate Hoffmaister's more complex model, for the coefficients on each of his price variables were quite small.²⁰ Note that actual export ratios in the post-1984 period differ little, on average, from the projected trend: until 1987, actual exports were less than trend exports, while beginning in 1988 they lie above the trend. Projected exports, much like actual exports, increased from 8% of GDP in 1970 to nearly 14% in 1995. Altogether, in the 1984-1995 period, the export response to the subsidies provided under this measure amounted to only US\$ 286 million: less than 3.5% of actual exports. This assumes, of course, that the positive 1970-1983 trend in the ratio of exports to GDP would have continued in the absence of a CAT programme.

¹⁹ The least squares 1970-1983 trend line shown in figure 4 is $100 \times \text{exports}/\text{GDP} = 7.89 + 0.23 t$, $R^2 = 0.152$, and $DW = 1.09$. The variable t (time) takes a value of unity in the year 1970, and increases by one in each subsequent year.

²⁰ More precisely, estimated export supply was highly inelastic with respect to price, with coefficients of 0.13 to 0.23 (Hoffmaister, 1992, p. 155).

FIGURE 5
Costa Rica: Exports to Central America and Panama
(As a percentage of GDP)



What was the effect of the CAT programme on intraregional exports? These data are reported in figure 5. Here, again, a linear trend is fitted to the observations for the years 1970 through 1983, and projected for subsequent years.²¹ Intraregional exports drop sharply, whereas the projected trend is positive. For the 1984-1995 period as a whole, actual exports were only US\$ 3,137.8 million: a shortfall of US\$ 3,686.4 million, since projected exports were US\$ 6,824.2 million.

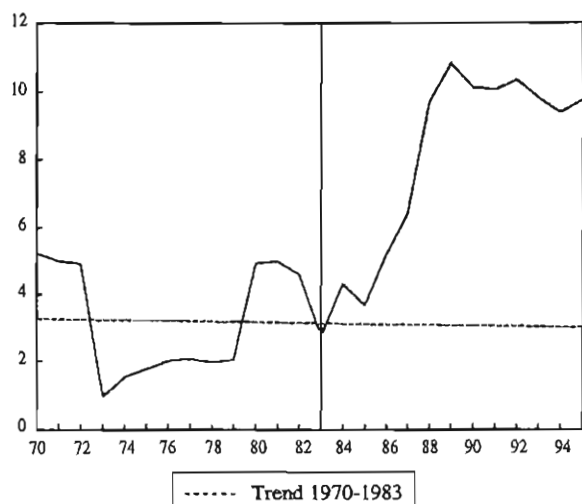
For exports to the rest of the world (see figure 6), the result is precisely the reverse: almost no trend is projected, yet actual exports mushroom.²² The series peaks at 10.9% in 1989, then begins to decline in 1990: precisely the year that CAT subsidies were reduced. For the 1984-1995 period as a whole, actual extraregional exports exceed the projected value by US\$ 3,992.7 million. For the 1984-1989 period studied by Hoffmaister, the response of extraregional exports to this measure is US\$ 1,026 million, or US\$ 3.70 for each dollar of CAT subsidy.

From this naive projection of pre-1984 trends, it appears that much of the increase in Costa Rica's extraregional exports was offset by decreased shipments to Central America and Panama, which do not

²¹ The least squares regression line shown in figure 5 is $100 \times \text{exports}/\text{GDP} = 4.61 + 0.24 t$, $R^2 = 0.408$, and $DW = 1.83$.

²² The least squares regression line for the 1970-1983 trend in figure 6 is $100 \times \text{exports}/\text{GDP} = 3.28 - 0.01 t$, $R^2 = 0.001$, and $DW = 0.82$.

FIGURE 6
Costa Rica: Non-traditional exports
to rest of world^a
(As a percentage of GDP)



^a Excluding maquila products.

qualify for CAT subsidies. On the other hand (see figure 2 once again) Costa Rica was able to retain its relative position in intra-CACM exports throughout the 1984-1995 period, so it is possible that intraregional exports were not affected significantly by incentives given to extraregional exports. We need better models, estimated with disaggregate data, to produce *ex ante* projections of exports in which we can have a reasonable degree of confidence. The lesson to be learned from past research efforts is unfortunately a negative one: Hoffmaister's results are flawed because he failed to distinguish between exports that are eligible for subsidies and those that are not. Sophisticated econometric techniques cannot compensate for inappropriate aggregation of the underlying data.

Central American governments have traditionally recorded export processing as a service rather than merchandise in the balance of payments, although this is in the process of change. The activity is not shown as a separate item in the national accounts, so historical data on export processing are scarce. Surprisingly, more information is available for employment than for gross or net exports of *maquila* products. Table 4 gives estimates of employment in this sector as of 1995, and shows that *maquila* activities are booming in all countries except Nicaragua.

TABLE 4
Central America: Employment in maquila
(offshore assembly), circa 1995
(Number of persons employed)

Costa Rica ^a	50 000
El Salvador ^b	50 000
Guatemala ^c	80 000
Honduras	48 000
Nicaragua	7 000
Total	235 000

Source: The Economist Intelligence Unit, *Country Reports*, except for Costa Rica.

^a Author's estimate, based on the fact that offshore assembly activities for the United States market are as important in Costa Rica as in Honduras or Guatemala.

^b 79% of the workers are female.

^c 81% of the workers are female, according to a 1992 estimate.

I cannot emphasize too much the need to include export processing as part of Central America's non-traditional exports. It is most unfortunate that trade data for *maquila* activities are not readily available for all years and for all countries; their collection deserves high priority on the research agenda of those concerned with trade and development in the region. El Salvador, for example, reports that gross exports of *maquila* products amounted to US\$ 656.7 million in 1995; this exceeds the value of all other non-traditional exports in that year, and is more than four times the value of non-traditional exports shipped by firms in El Salvador to markets outside Central America. Two years earlier, in 1993, El Salvador's *maquila* exports amounted to only US\$ 290 million, but this was nonetheless twice the value of other non-traditional exports sent to extraregional markets.²³

Export processing scarcely existed in Central America eight or nine years ago. In El Salvador, *maquila* activities employed only 4,200 persons in 1989, but 50,000 in 1995 and 62,000 in 1996; in Honduras, the number of workers increased from 9,000 in 1990 to 20,000 in 1991 and 48,000 by 1995. Maquila employment in Guatemala, however, which

²³ The source of these data is the Banco Central de Reserva de El Salvador, which unfortunately does not provide figures for years prior to 1993.

was quite large by the year 1992, apparently has not grown much in recent years; indeed, some of the Guatemalan export processors reportedly moved to El Salvador when the civil war ended there.

Altogether, export processing employed approximately 235,000 persons in Central America in 1995 (see table 4). This is very impressive considering that the well-established free zones of the Dominican Re-

public employed only 176,000 workers at the same time (see Willmore, 1995). Export processing in Central America, as in the Dominican Republic, is concentrated in the manufacture of garments for export to the United States to take advantage of country-specific quotas. Nonetheless, it encompasses other activities as well, including computer software in Costa Rica and data processing in El Salvador.

IV

Summary and conclusions

Central America, like the rest of Latin America, has a history of 'inward development' behind protective trade barriers. The creation of the Central American Common Market in 1960 did not interrupt this process; on the contrary, by raising tariffs, it accelerated it. Goods trade freely within the CACM but are protected from outside competition, so consumers in each country, by paying higher than world prices, subsidize some of the exports of partner countries. Consumers also subsidize producers in their own country when they purchase local goods at protected prices. Except for the absence of bureaucracy, it is as if governments levy consumption taxes on specific goods, giving the proceeds as a subsidy to the producers of those goods, regardless of their location within the CACM.

Protection encourages Central American producers to substitute imports from the rest of the world. At the same time, protective trade barriers discourage exports because of the higher prices of protected intermediate goods and because of overvaluation of local currencies compared to free trade exchange rates. Beginning in the mid-1980s, Central American governments began to make serious efforts to reduce and compensate for this export disincentive in a number of ways. First they considerably lowered their import tariffs. Second, they gave exporters access to intermediate goods at international prices, by allowing them to operate in free zones or under a temporary import regime. Third, they set the official rate of exchange at, or near, a market-clearing rate, and eventually removed exchange controls altogether, at least for exporters. Two of the five countries—Costa Rica and Nicaragua—awarded additional direct subsidies for non-traditional exports to extraregional markets.

The response of non-traditional exports to these changes in commercial policy has been greatest in Costa Rica, the country with the most generous export subsidies in the region. It is possible, however, that direct subsidies have been more effective in inducing exporters to switch from regional to extraregional markets than in promoting increases in the total volume of exports. If this is indeed true, or believed to be true, it is understandable that Costa Rica should want to end its programme of direct export subsidies. From a self-interested, national point of view, it makes no sense for Costa Rica to subsidize, with its taxpayers' money, exports that would otherwise be subsidized by consumers elsewhere in the region.

On the other hand, from a regional point of view, direct subsidies for non-traditional exports make perfect sense even if they induce exporters to switch to overseas markets, provided these subsidies do not exceed the implicit subsidy (i.e. the protection) included in the price of intraregional exports. To ensure that each country gains, it is important that the subsidy scheme be uniform throughout the region. The need for a common export subsidy is the same as the need for a common external tariff: just as rates of import duty above the common tariff can produce losses due to excessive subsidization of a partner's exports, so rates of export subsidy above the common level can produce losses due to an excessive incentive to switch from regional to extraregional markets.

Imported inputs for the production of extraregional exports are normally exempt from payment of duty, so it is equally important to subsidize net exports rather than gross exports; otherwise, incentives are biased in favour of exports with a high import content. It is frequently alleged that export

subsidies are necessary because of high wage levels, low productivity, poor infrastructure, inefficient government, poor public health and education, etc., etc. All such arguments are fallacious, for these inefficiencies and distortions affect the entire economy, not just the export sector. Protection from imports is the only justification for export subsidies. For that reason the rate of subsidy for exports should never exceed the rate of protection from imports. In the absence of import tariffs and quotas, there is no reason to subsidize exports.

El Salvador, Guatemala and Honduras have been much less successful than Costa Rica in export promotion and, since they do not have direct subsidies for

extraregional exports, they continue to rely more on the regional market. Export promotion in Central America has been more successful than would appear from merchandise trade statistics, for these data exclude export processing (*maquila*), which is very important in four of the five countries, the exception being Nicaragua. Nicaragua's export incentives include exchange rate unification, access to intermediate inputs at international prices, and a less generous version of Costa Rica's direct subsidies; so far, the export response has been very weak, but the programme only began in 1992.

(Original: English)

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