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Costa Rica
Trade Incentives and Export Diversification

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LIST OF COMMON ABBREVIATIONS

CAAFIID	Central American Agreement on Fiscal Incentives for Industrial Development
CABEI	Central American Bank for Economic Integration
CACM	Central American Common Market
CAT	Certificado de Abono Tributario (Export Tax Credit Certificate)
CENPRO	Centro de Promocion de Exportaciones e Inversiones
CET	Common External Tariff
CIEX	Certificado de Incremento de Exportaxiones (Certificate of Increase of Exports)
CIIU	Clasificacion Industrial Internacional Uniforme (Uniform International Industrial Classification)
IDB	Inter-American Development Bank
IMF	International Monetary Fund
NAUCA	Nomenclatura Arancelaria Uniforme Centroamericana (Uniform Central American Customs Nomenclature)
REIFALDI	Regulamento de Incentivos Fiscales para el Desarrollo Industrial (Regulations for Fiscal Incentives for Industrial Development)
SIECA	Secretaria Permanente del Tratado General de Integracion Economica Centroamericana (Permanent Secretariat for the General Treaty for Central American Economic Integration)

PREFACE

This report was prepared by a Bank mission which visited Costa Rica in June/July 1979, and a draft was presented to the Government in early 1980. Accompanying its present publication is the publication of two further World Bank reports: a report entitled "Costa Rica: Current Economic Position and Prospects" and a special report on the Central American Common Market.

Since the report was written, the country's macroeconomic difficulties have deepened. These problems speak directly to the major recommendation of this report, that the pervasive anti-export bias which forms the incentive policies of the country should be changed. The considerable disequilibrium in Costa Rica's balance of payments is, in large part, attributable to import substituting policies which although successful in the past, are now in need of revision. The price prospects facing the country's traditional agricultural commodities (about two-thirds of export trade) in the decade ahead are not promising. The country, thus, urgently needs to promote non-traditional exports outside the region. Whilst the present need for a stabilization program renders this task difficult, nonetheless the basic policy issue remains inescapable.

In addition, since the report was written, political difficulties in the region have continued, and there has been some loss in momentum in restructuring the integration agreements of the Central American Common Market. It is hoped that this report, along with its companion volumes, may assist in rekindling the effort to reform the market's tariff and industrial policies. Such a reform holds gains for all the countries concerned and, may indeed, be regarded as one of the most urgent issues on the development agenda for the region.

This report is based on the findings of a mission which visited Costa Rica in June-July 1979. The mission comprised:

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COSTA RICA

TRADE INCENTIVES AND EXPORT DIVERSIFICATION

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SUMMARY OF PRINCIPAL CONCLUSIONS AND RECOMMENDATIONS

i. Costa Rica is a small country with slightly more than two million inhabitants and a GNP per capita in 1978 of $1,650. With a narrow resource base and a small domestic market, the country has consistently and correctly perceived that trade with other countries must act as the economy's engine of growth. Much of the impulse for growth in this century has been provided by the export of agricultural commodities. The development for export of coffee, bananas, cocoa, sugar and beef have raised the levels of domestic output and income, provided the base for forward linkages to agricultural processing enterprises, raised the country's capacity to import, and yielded many of the dynamic benefits of specialization. Exports in 1977-79 were about 31% of GDP. About two-thirds of agricultural output in the economy is currently exported, and these exports in turn constitute about two-thirds of the total export earnings of the country. Trade has also played an important role in the development of the industrial sector. In 1963 Costa Rica joined the Central American Common Market and adopted the instruments of integration which, in essence, promoted a strategy of regional import substitution. Exports of manufactured goods, which constituted only 4% of exports in 1963, grew to 28% in 1977, and fully 80% of these manufactured goods exports were to the other members of the Common Market.

ii. This strategy of regional import-substituting industrialization now shows diminishing returns. Future economic growth will continue to depend on the country's ability to circumvent, through trade, the limitations imposed by size and natural resource endowment. Whilst traditional agricultural exports will continue to play a role, the extensive margin of cultivation is rapidly being approached, and these commodities have recently been losing their growth momentum, and by extension their ability to propel the country's development. In addition, they are subject to considerable price volatility and this has imparted an undesirable degree of instability to the domestic economy. Moreover, the Central America market, so successfully tapped in the last two decades as a source of growth for manufacturing enterprise, has also lost much of its dynamism. The first "easy" stage of import substitution has come to an end, the expansion of intra-regional trade has slowed significantly, and the demand impulse for expansion of industry from domestic and regional sources has experienced considerable weakening. Unfortunately, many of the inefficiencies and distortions brought about by the policy of import-substitution are apparent in the structure of production. Continued adhesion to this path of development is likely not only to exact increasingly onerous costs on domestic and regional consumers but also to place the economy upon a declining growth path with diminished foreign exchange availability exercising a severe constraint to rapid development. Recognizing, therefore, that increased trade must continue to be the country's avenue to sustained improvements in its standard of living, this report recommends a fundamental change in policy orientation, away from import substitution, towards the promotion of non-traditional exports to third markets outside the region.

iii. The primary instruments of this reorientation are to be sought in changing the incentive policies of the CACM. Prior to recommending these changes, however, the non-traditional export experience of the country, the pattern of manufacturing activity in Costa Rica, the precise content of the import substituting incentive instruments, and present mechanisms of export promotion are analyzed. The conclusions of these analyses may be summarized.

Non-Traditional Exports

iv. Non-traditional exports, comprising non-traditional primary products as well as manufactured products, have experienced spectacular growth since Costa Rica joined the CACM in 1963. In that year they were $12 million, in 1971 they were US$67 million and in 1977 were estimated to be $292 million. Their annual growth, 12.3% in real terms, was more than double that of traditional exports at 6.0% per annum. In 1963, primary commodities were just under half of non-traditional exports; in 1977 they were only 14%, with the remainder being exports of manufactured goods. Of these manufactured goods exports of chemicals, textiles, clothing and food products were the most important. About 70% of non-traditional exports go to the CACM. About 97% of these exports to the CACM are manufactured products, and these in turn constitute 80% of the country's entire export of manufactured goods. The proportion of manufactured exports destined for the regional market has, however, declined from its high point of 88% in 1971, again illustrating the weakening demand impulse of the CACM. The 30% of non-traditional exports which go to markets outside the region are comprised of about 40% non-traditional primary products, and the remainder manufactured exports; of the latter chemical and electrical machinery exports are the most important. Outside the CACM the U.S. is the largest absorber of non-traditional exports from Costa Rica.

Manufacturing

v. Manufacturing has now supplanted agriculture as the most important productive sector in the economy and has played an important role in absorbing new entrants to the labor force. Between 1963 and 1977 manufacturing alone absorbed more than twice the numbers of workers as agriculture. Within the manufacturing sector itself important shifts in the pattern of production have been registered since 1963. Consumer goods industries have experienced declines in their shares of total manufacturing value added, while gains have been made by the intermediate and capital goods sectors. Despite this, Costa Rica has not developed particularly deep intermediate or capital goods sectors, testimony in part to the relatively weaker incentives for production in these branches.

vi. The success in import substitution policies can in one rough measure be gauged by measuring the decline in total domestic supply represented by imports. In Costa Rica imports of goods competing with the products of domestic manufacturing enterprise declined from 46% of domestic supply in 1963 to 42% in 1971 and 40% in 1977. The small reduction in the import coefficient between 1971-77 testifies, however, to the declining importance of import substitution to the expansion of manufacturing activities. This is further brought

out by examining the sources of demand growth for Costa Rican manufacturing between 1963 and 1977. Domestic import substitution provided 12% of the demand impulse for growth in 1963-69 and only 3% in 1969-77. The combined regional import substitution impulse declined from 21% in 1963-69 to 11% in 1969-77. Despite the weakening demand impulse to manufacturing expansion from Central American import substitution sources in 1969-77, many industries continue to export a significant proportion of their output to Central America and are likely to be particularly hard hit by sudden changes in the system of protection.

vii. Two consequences of protectionist policies are readily apparent. The first, which is also in part due to the small size of the country is the high concentration of industrial activity. In 1975, 70% of manufacturing value added was generated in subsectors where two firms at most accounted for 50% of the subsector's output; these same subsectors employed 56% of the manufacturing labor force. Concentration is naturally associated with the size of the firms, with 40 of the country's 50 largest establishments found in the highly concentrated subsectors. Surprisingly, these large firms do not export as high a proportion of their output as do medium-sized firms, and of the exports that are generated, smaller firms tend to export a much higher proportion to countries outside the region. One explanation is that the oligopolistic biases of the domestic and regional market, with which large firms are so clearly identified, allows them to dominate domestic activity and regional trade, and thus force medium- to small-scale firms to look for markets abroad.

viii. A second consequence of the environment of protection is the paradoxical increase in import intensity in manufacturing activity. In 1974-76, for instance, excluding the food products sector, intermediate and raw material imports for manufacturing exceeded manufactured exports by about 70%. Two characteristics of industrial development help explain this phenomenon. First, as protection has largely been granted at the finished end of consumer goods production, domestic intermediate and raw materials have either been unavailable or in short supply, and industry has consequently veered into import intensity. The process has been aided by generous exemptions from the payment of all tariffs for the import of manufacturing inputs and by persistent overvaluation of the exchange rate. The second charactertic explaining increased import intensity is the changing structure of production. Certain rapidly growing industries (especially the chemical and metal mechanical industries) are particularly dependent upon imports.

ix. The large external trade deficit of the manufacturing sector promotes a highly unwelcome rigidity in the balance of payments. Industrial raw materials were nearly 40% of the country's imports in 1974-76, as compared to slightly more than 20% in 1960-62. Balance of payments deficits have thus become much more difficult to manage as compressing imports entails depressing perhaps severely, the level of domestic activity. Moreover, as the growth of industry's demand for foreign exchange far outruns the growth of agriculture's net supply of foreign exchange, the stage is set for chronic and ever deepening balance of payments difficulties. Continued adhesion to protective policies for domestic industry will likely place the economy on a declining growth path, punctuated by periodic exchange crises.

x. Cheap credit policies accompanied by very generous fiscal exemptions for industry have resulted in strong incentives for capital accumulation and considerable underutilized capacity now exists in Costa Rican manufacturing industry. A recent sample survey showed nearly 80% of individual establishments working only one shift and approximately 20% each working two and three shifts. Capacity underutilization is pervasive across industries, and the products produced do not appear to be a determinant of the pattern of utilization. In Costa Rica, unlike other countries, capacity utilization decreases the larger the size of the firm. There is some evidence, however, that firms with high utilization rates tend to export proportionately more. The limited size of the market and manpower unavailability are the reasons most commonly cited for failure to achieve higher rates of capital usage. Underutilized capacity does nevertheless represent a reservoir for export expansion.

Wages, Salaries, and Employment

xi. The charge that Costa Rican wage levels are "uncompetitive" vis-a-vis the successful exporting countries of East Asia and Latin America is unfounded. A cross-country survey of wage levels (admittedly approximate in that it does not take into account differences in productivity) shows that Costa Rican wage levels are only slightly above those of Korea, Taiwan and Singapore. The differences, however, are well within the bounds of statistical error. Costa Rican wage levels are below those of the newly industrializing countries of Latin America such as Brazil and Mexico. Two sets of Government policies have the potential to directly affect the price of labor to industry. The first of these, minimum wage levels, are found to be unimportant. Social charges on income, however, amount to 26% of gross income. These charges, which in relative terms, are perhaps not high in comparison to other Latin American countries, nevertheless have a dampening effect on the demand for labor. It is recommended that they not be increased. A further belief that manufacturing activity in Costa Rica will suddenly strain at capacity due to labor shortages also does not withstand examination. The country is unusual in that it does not have large supplies of surplus labor. However, some labor is currently underemployed, agriculture will continue to be a net supplier of workers to industry, women's participation in the labor force is steadily growing, and reversal of the very high absorption of labor by the public sector will free labor for employment in industry. Structural mismatches are, however, evident, and the supply of particular kinds of occupational skill to industry deserves further study. In this regard, a closer surveillance of the education system's capacity to meet the labor market's demand for specific skills is called for.

The System of Incentives

xii. The exchange rate, in many ways, is the central instrument for promoting exports to countries outside the region. In Costa Rica a survey of the use of the exchange rate in the last two decades demonstrates that the authorities have not considered this the highest priority in balance of payments management. Rather the converse. The country has passed through several devaluations and in each instance the protective intent of the devaluation has outweighed the objective of improving the incentives for exports. The disincentive to exporting given by exchange rate policy is analyzed in two ways. First, the course of the real effective exchange rate (i.e., a purchasing parity rate) is charted for the years since 1970. In the first devaluationary phase between 1970 and 1974, Costa Rican inflation was

higher than inflation experienced in her trading partners and much higher than the U.S. (which accounts for about 35% of Costa Rica's imports and exports). Changes in parity more than offset, however, the decline in competitiveness experienced by higher relative inflation. Since 1974 Costa Rica's exchange rate has been pegged to the dollar and the parity unchanged. With no overall compensatory devaluation movements against the dollar among Costa Rica's major trading partners, the real effective value of the colon was 15% lower in the third quarter of 1979 than in 1974. The real decline in the effective rate against the U.S. was more dramatic. The 1979 real effective rate was 17% below 1974 devaluation parity and 27% below the 1973 parity.

xiii. A second measure of the exchange rate captures the bias against exporting imparted by the entire system of commercial policy. On the one hand, the quantitative effect of all import barriers on the exchange rate is evaluated; on the other hand, the quantitative effect of export incentives (with export taxes serving as negative incentives) is considered. The net effect of commercial policy on the exchange rate is a currency overvaluation of about 18%. (For a variety of technical reasons, however, this is a highly conservative estimate.) That is to say, if all barriers and incentives to trade were removed overnight, the currency would have to be devalued by at least 18% to maintain the present deficit in the balance of payments. If the present large deficit were to be reduced, the devaluation would correspondingly have to be greater. Nonetheless, an effective overvaluation of at least 18% represents a serious disincentive to exporting activity, capturing as it does the net effect of the entire pattern of Costa Rica's commercial policy.

xiv. The major instrument of protection in Costa Rica is the tariff (and not as in some other countries, quotas). The tariff regime derives, for the most part, from the common agreements of the CACM, and consists of a series of charges that are or can be applied to imports from outside the region. At the same time, a large number of extra-regional imports are exonerated from some or all of these charges, usually on the grounds that they are intermediate, raw material, or capital goods inputs to productive activity. One result is high levels of effective protection to Costa Rican industry. Taking the various elements of the import charges together (the common external tariff of the CACM, the San Jose Protocol Surcharge, the temporary import surcharges and the discriminatory element in the consumption tax) yields very high levels of nominal protection for manufacturing industry. In 1972 (the last year for which comprehensive data are available) the average nominal tariff in manufacturing is estimated to be 106%. There is reason to believe that nominal ad valorem tariff equivalents have been reduced since 1972, and the average manufacturing tariff is currently estimated to be in the region of 60%-70%. Nominal tariff rates (which are highly correlated with effective protection rates) have a wide dispersion across industrial branches indicating highly uneven resource pulls between different manufacturing activities. In general, however, the consumer goods industries show the highest levels of protection.

xv. Exemption from the payment of tariffs plays an important role in trade policy. Between 1976 and 1978 about three-quarters of Costa Rica's imports have entered the country duty free. The great majority (about 55% of these imports) were imports of raw materials and intermediate and capital

goods from extraregional sources exempted under the industrial incentives program of the CACM. In view of the high tariffs imposed on finished goods, the import duty exoneration has facilitated high levels of effective protection, fostered an import intensity of production, and restrained the growth of intermediate goods industries in Costa Rica. The fiscal cost of these exemptions is substantial, representing about 4% of 1978 GDP, and about four-fifths of the central government's overall deficit in that year.

xvi. Not all intermediate goods are exempted from tariff payments. Firms can seek to have their products placed on special regional and national lists of goods which have to bear customs duties. To do this, they must satisfy the relevant authorities that their products can compete in quality, price (CIF import price plus relevant tariff) and assurance of supply, with imports. This system of intermediate goods production has not advanced very far, and occasionally gives rise to onerous consequences. Existing or potential exporters find their competitiveness eroded as they pay inflated prices for inferior products, the adequacy of whose supply cannot always be guaranteed.

xvii. In subscribing to the Central American agreement on fiscal incentives, Costa Rica allows firms to import capital goods duty-free, allows full deduction from the tax base of reinvested profits, and then provides generous depreciation allowances. The income tax incentives alone reduce income tax liabilities for firms holding industrial contracts by about 12% to 18%. The reinvestment benefit represents on the average a 40% subsidy to capital. These incentives, coupled with cheap credit policies, have encouraged capital accumulation with the resulting excess capacity noted earlier.

xviii. On the side of export incentives, Costa Rica has developed one major instrument to overcome the cost disability imposed on exports by the trade regime. The Certificado Abono Tributario (CAT) is a tax credit of 15% of the f.o.b. value of the export, applied to certain non-traditional exports destined for extra-regional markets. The use of CATs has grown dramatically from less than $0.5 million in 1973-74 to about $10 million in 1977-78; this has paralleled the rapid rise in non-traditional exports to extraregional markets from about $40 million in 1973-74 to almost $120 million in 1977-78. About half of Costa Rica's non-traditional exports are underwritten by the CAT subsidy, while the remainder suffer the full cost disability of the overvalued exchange rate. Processed and non-traditional agricultural products are the major beneficiaries of this scheme. While reasonably well administered, the CAT scheme has certain deficiencies. Firms have to prove "need" in order to obtain the CATs, meaning in effect that efficient firms are or should be penalized and rather cumbersome criteria are applied to obtain CATs. The suggestion has been made that the CAT subsidy rate be changed from the present 15% to a multiplicity of rates reflecting the presumed national benefits generated by different export lines. This course is not recommended as it will introduce further distortions as well as invite a tangle of administrative problems. Other export incentive instruments in Costa Rica include a scheme to reward exporters for the increment in exports achieved over previous year's levels, as well as a drawback scheme. The former has proved unimportant, while the latter confers few advantages over the presently available CACM incentives and is not widely used. At the same time that Costa Rica applies these export incentive schemes, all exports are subject to a 1% export tax, and traditional exports are subject to much higher levels of export taxation (coffee 9-1/4%, cocoa 13%, sugar up to 18%, etc.).

xix. The net impact of the incentive system is in one sense given by the overvaluation of the exchange rate. Effective protection rates are another measure indicating the pro- or anti-export bias of the regime. (Effective protection rates measure the proportional excess of domestic value added over value added which would be obtained if trade were free.) In Costa Rica effective rates of protection are very high, ranging from 230% in the consumer goods manufacturing branches to 62% in the metal mechanical branches, with an overall manufacturing average of 164%. In nearly half of industrial categories, Costa Rica has the highest rates of effective protection in the region. Even when effective rates of export subsidy are incorporated, there still remains a severe anti-export bias. While many firms studied did export a part of their output outside the region these export activities, are simply not as profitable, on the average, as producing for the domestic market. The conclusion restated is that for manufactured exports to achieve rapid growth the tilt in the incentive system will need to be modified.

xx. The proposals of the Integration Secretariat (SIECA) for the CACM to adjust the Common Market incentives yield, when analyzed, no improvement in the current very high levels of protection. Indeed, when adjustments are made for omission in the Secretariat's calculations, the resulting levels of protection are likely to be even higher than currently in force.

Export Promotion

xxi. The Center for the Promotion of Exports (CENPRO) was established in 1968 with a wide mandate to stimulate non-traditional exports from Costa Rica. The institution only began to exercise a powerful role after the establishment of the CAT scheme (which it administers) in 1972. Its activities have been wide-ranging and have included expediting the exporting process in Costa Rica, providing information to exporters about foreign markets, surveying exporters' needs and problems, participating in international trade fairs, and maintaining commercial attache posts in overseas embassies and consulates. The institution suffers from the major handicap of trying to promote exports in an environment not particularly conducive to that end, does not have a large budget, and its manpower resources are relatively small. For these reasons it has not achieved the visible success first hoped for it, though exporters who have had dealings with the institution have found that contact valuable. In two areas the institution has performed or is performing important work. The first is an attempt to simplify the paper work in exporting. Costa Rican exporters face a multiplicity of document requirements and a poorly coordinated system of procedures. Various suggestions are made in the report to simplify the procedures and requirements, but since interagency coordination is beyond the legislative mandate of CENPRO, the simplification of the system requires Government commitment at high levels of decision-making authority. The second valuable initiative of CENPRO is, in coordination with the Ministry of Economy, Industry and Commerce, to distinguish key bottlenecks to exporting in specific manufacturing subsectors. It is recommended that this initiative be strengthened by experts with a broad crosscountry experience in the sectors being examined who can help place the subsectors on a competitive export footing. Finally, CENPRO needs to re-evaluate the objectives of and experiences in its participation in international fairs and its commercial attache program.

xxii. Although the mission was unable to examine all areas of concern in the process of export promotion, two areas merit further study. The first is transport arrangements from Costa Rica; communications with Europe, the Caribbean and Latin America south of Panama need to be strengthened. The second area is finance and insurance. The instruments of export financing and of export credit insurance are not well developed in the country. These are necessary adjuncts to successful exporting and it is recommended that studies be initiated and steps be taken to provide exporters with these facilities.

Liberalization

xxiii. The primary recommendation of this report is that the Government should change the principal components of the present incentive system, remove the biases against exporting, and create a stable policy environment where there is an unquestioned perception of strong Government commitment to expand exports and keep exporting activities profitable. Judging from both private sector response in Costa Rica to incentives schemes (and in particular export incentive schemes) as well as from the experience of a number of countries which have implemented liberalization programs, there is ground for reasonable optimism that this strategy will be successful. The suggested elements of the strategy are (a) devaluation and subsequent import liberalization; (b) the establishment of prudent monetary and fiscal policies; and (c) more active Government involvement in export promotion. For a variety of reasons, the most important of which are the regional dependence of much of industrial activity as well as the fact that Costa Rica's economy currently faces an urgent need for stabilization, the liberalization should be implemented gradually rather than in a dramatic "overnight" fashion.

xxiv. The centerpiece of the reform would be changing the exchange rate. There is no other instrument which in its power and simplicity can so effectively signal to producers the gains to be made in exporting. The currency is overvalued both from the perspective of a purchasing parity comparison and more central to this report, from the perspective of the implicit anti-trade bias, imparted by the instruments of commercial policy. Devaluation should not be a once-for-all affair, but rather the country should adopt a mechanism for keeping the real effective parity profitable to exporters. In practice this will probably mean the adoption of a crawling peg system, where adverse domestic price and wage cost increases can promptly be reflected in a new nominal exchange rate parity. This recommendation rests on the assumptions that those inflationary pressures stemming from excess demand will be appropriately tackled and reduced by strict monetary and fiscal policies.

xxv. Tariff dismantling should be used as a complement to exchange rate policy. High protection levels in Costa Rica are essentially a function of high tariffs on finished goods, and hence the removal of the bias toward import substituting will need to focus on tariffs. It is not recommended that all tariffs be removed at once. This would invite severe producer resistance and, given the dependence of many industries on protection for continued survival, would likely result in severe short-term economic dislocation and high social costs. Rather it is suggested that tariff dismantling be phased over a period of time, with initial maximum and, from thence, declining rates of nominal protection established on an annual basis.

xxvi. The present need for Costa Rica to undertake a stabilization program introduces complications for a simultaneous program of trade liberalization. Although the historic evidence suggests that most countries which have liberalized have done so in circumstances of macro-economic difficulty, nevertheless, these conditions are not the most propitious for a trade liberalization. The structural dislocations of the latter, in essence, are exacerbated by the deflationary consequences of tight fiscal and credit policies. A survey of countries which have successfully liberalized in difficult circumstances, however, yields the important inference that exchange rate policies are crucial to success. Provided that the real effective parity of the new exchange rate is maintained (i.e., profitable export opportunities are not hidden by persistent overvaluation), and provided also that stabilization instruments are effective in reducing domestic inflation, then the liberalization program has a much greater chance of being sustained over the longer term. Certain emphases can be given to stabilization instruments if trade liberalization is attempted at the same time. First the Government's foreign exchange and credit requirements should be reduced to a minimum so as not to preempt private sector and especially exporters' demands for these resources. Next, export expansion could first be promoted from the intensive use of existing capacity; in this regard temporary surcharges on investment goods as well as reform of the very generous fiscal incentives may be recommended; in order not to penalize exporters further, however, they should have access to duty-free inputs. Finally, to augment import capacity in the short term credits tied to the liberalization program should be sought from institutional investors.

xxvii. Prudent macro-economic management is an essential ingredient in a trade liberalization program. This report focuses more fundamentally on some of the underlying, structural reasons for repeated Balance of Payments crises in Costa Rica; it visualizes declining economic growth if trade policy remains unchanged and perceives nontraditional export expansion as the only medium- and long-term answer to the country's foreign exchange constraint. From a different perspective therefore, the report emphasizes the exchange rate instrument as the major tool for adjustment to a more balanced and ultimately higher growth path. If a liberalization program is indeed embarked upon, then it will be important to ensure consistency between stabilization instruments and the measures (especially the exchange rate) used to promote exports. The objective, of course, is not to sacrifice the stabilization effort, but rather to accommodate, within the discipline of reduced fiscal expenditures and monetary expansion, the additional objective of export expansion and diversification.

xxviii. Since the general agreements of the CACM are the source of the major part of Costa Rica's commercial and fiscal incentive policies, the issue of change will need to be tackled at the regional level. Although detailed country studies are not available recent studies of the regional integration process point to the similar consequences and the generally worsened environment for economic management in each of the countries stemming from the policy of import substitution. The commonality of interest and the similarity of the problems heighten the need for a regional approach to tackle what is essentially a regional problem.

xxix. On the side of a more active Government participation in the process of export promotion, the role of CENPRO should be strengthened. Far-reaching changes of the structure of production are likely to be set in train by a trade liberalization. In the effort of export promotion, the Government will need to be continuously informed of producer problems and where possible apply timely and appropriate remedies. In this regard, a clearing house of information which can simultaneously act as a bridge between producer interests and the highest levels of Government will attenuate some of the difficulty and uncertainty that inevitably accompanies an export drive. Specific areas for action include the already mentioned surveys of subsectoral export capacities and the strengthening of the systems of export finance and insurance. In addition, the role of trading companies, the pooling of capacity in different enterprises to meet large export orders, and the installation of a roster of industrial consultants to formulate programs and assist export projects should be examined.

COSTA RICA: TRADE INCENTIVES AND EXPORT DIVERSIFICATION

CHAPTER I: EXPORTS

Introduction

1. In the past three decades Cost Rica has consistently opted for a strategy of vigorous participation in international trade. With a narrow resource base and relatively small population, the country has correctly perceived that trade with other countries must act as the engine of economic growth. Much of the impulse for growth in the twentieth century has been provided by the export of agricultural commodities--where successive development of first coffee, next bananas, and then beef exports have yielded many of the dynamic benefits of specialization. In 1977 exports of primary agricultural commodities comprised two-thirds of agricultural output in the country, with many forward linkages from the agricultural sector to agricultural export processing enterprises. In the last two decades trade has also served to propel the development of the industrial sector, although most of this trade has been regionally concentrated and industrial growth stimulated behind the protective barriers of the Central American Common Market (CACM). In 1977 about 16% of manufacturing output was exported--13% to the CACM and 3% to the rest of the world. 1/

2. There can be little doubt that future economic growth, and with it the well being of the people, will depend upon the capacity to maintain a vigorous and competitive export thrust. The exports of traditional products 2/ will continue to play an important role. At present they constitute some two-thirds of total export earnings and are an important underpin of general economic activity. Traditional exports are, however, most affected by highly volatile price fluctuations in external markets, and for this reason have imparted a degree of instability to the domestic economy. 3/ The stop-go

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1/ Excluding roasted coffee, refined sugar and processed beef. For most of the purposes of this report, these are counted as agricultural rather than manufactured products. The processing of these agricultural commodities is, however, of fairly recent origin, and for this reason it is conventional in Costa Rican trade statistics to regard them as non-traditional rather than traditional exports. This convention is maintained here. In 1976, roasted coffee, refined sugar and processed beef constituted less than 8% of the total exports--raw and processed--of these commodities.

2/ Defined here as coffee, bananas, beef, cocoa and sugar.

3/ Between 1957 and 1976 Costa Rica underwent four major balance of payments crises, in 1961, 1965, 1971 and 1974, with the resource gap as a percent of GDP reaching 4.0, 10.0, 10.3 and 14.9% respectively. In the three years preceding the first crisis, the coffee-banana price index fell by 30%. In each of the other years, except 1974, the traditional export price index fell. In 1974, with the first major oil price rise, the terms of trade moved sharply against the country. The most recent period of difficulty, 1978-79 -- with the resource gap in 1979 estimated at 14.5 of GDP--has occurred against a background of an 18% decline in the coffee-banana price index since 1977.

pattern of economic management, that has characterized Costa Rican development in the last two decades, is in large measure a reflection of Costa Rica's commodity trade cycles. Whilst diversification into different primary commodity exports (from coffee and cocoa into bananas, sugar and beef) has, to an extent, dampened the effect of sudden, sharp changes in one market, nevertheless the repercussions from single commodity price swings are still pervasively felt. On the demand side, as is well known, agricultural commodities face relatively less buoyancy from increased income growth than do the products of manufacturing enterprises. On the supply side, the extensive frontier of cultivation in Costa Rica is rapidly being approached, and the traditional exports now increasingly rely on yield improvements rather than acreage expansion as the source of their growth; indeed recently they have been losing much of the dynamism experienced in the decades of the fifties and sixties. These considerations lead to the view that Costa Rica should continue diversifying her export base, seek sources of export earnings different from her traditional commodity exports, and urgently discover export lines which can serve to propel future development.

3. In this setting it is natural to turn to the exports of non-traditional products and analyze Costa Rica's experience in developing these exports, as well as examine the potential for future expansion. The experience, to date, as outlined in the section below, has been promising. As much to the point, the country has, in the last six or seven years, acquired the institutional infrastructure that can act to service and strengthen at key points a novel export thrust. This includes institutions of technical learning, a center for export promotion, export finance instruments, and a system of export incentives, with complementary administrative facilities. Moreover, the industrial base has been considerably strengthened and expanded and a wide range of manufacturing skills have been developed. Much of course remains to be done, but only a few years ago a contemplated export thrust would not have enjoyed these advantages.

4. The crux of the matter is, however, that the highly satisfactory non-traditional export performance has occurred within a narrow geographical setting and behind the high protective barriers of the Central American Common Market (CACM). The adhesion to the regional free trade arrangement occurred at a time when total exports, consisting almost entirely of traditional agricultural exports to their markets, were growing slowly. Exports to the CACM increased four-fold in the first year of entry, 1963, and by 1976 1/ comprised 25% of all merchandise exports. Almost ninety-five percent of these exports were manufactured goods. The achievement was bought, however, by a policy of import substitution which, by combining high nominal protection on final goods with exemptions for imported raw materials on intermediate inputs, affords high levels of effective protection for Costa Rican industry. There can be little question that, despite its serious shortcomings, the policy has yielded for

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1/ 1976 is the last year for which detailed trade statistics are available. Figures after 1976 are preliminary and cannot usually be disaggregated to the same level of detail as 1976 trade data.

Costa Rica benefits which on balance have been positive. 1/ However, the advantages that first motivated the creation of the regional group have now been realized. Costa Rica's growth of exports to the CACM, in real terms, were 43% annually between 1963 and 1968, 9% in 1969-1970, slackened to 5% in 1971-1973, and dropped to a mere 2% between 1974-1976. The impact of high coffee prices on incomes in the Central American economies stimulated a higher growth of intra-regional trade in 1977, but performance after this date was again disappointing with political difficulties in the CACM in 1979 further dampening trade flows. Between 1976-1979, the real annual growth of Costa Rican exports to the CACM is estimated in the order of 3%-4%. This slowing of growth does not reflect the worsening of Costa Rica's position vis-a-vis its regional trading partners--in fact Costa Rica's performance after 1969 is only exceeded by Nicaragua. Its significance lies in that the regional opportunities for import substitution, under the present system of incentives, have by and large dried up, a conclusion of general application to all member countries. This being the case, a policy of export expansion and diversification takes on a new coloring. It must mean the seeking of new markets outside the CACM in products that reflect comparative advantage and which are internationally competitive.

1/ The Brookings Institution has produced the most detailed description and analysis of the development of the Common Market and the impact of the integration movement on the Central American economies ("Economic Integration in Central America," edited by William R. Cline and Enrique Delgado, The Brookings Institution, 1978). Their conclusions on this point are worth restating. "Total net economic benefits of integration were large amounting to 3% or 4% of regional product by 1972. Expressed as a single present discounted value for all future years, the decision to integrate was with an estimated $3 billion ... all five countries enjoyed positive gains for economic integration ... The distribution of net benefits of integration across countries was relatively equitable." Brookings Institution op. cit. pps. 112, 395, 396.

Table 1.1: COSTA RICAN EXPORTS, 1957, 1969, 1977

PRODUCT	EXPORT REVENUES (Millions of Current Dollars) 1957	1969	1977	REAL GROWTH 1/ RATES (%) 1957-77	1957-69	1970-77
Coffee	40.6	55.8	319.2	3.5	4.9	-0.3
Bananas	32.2	51.5	150.3	9.3	6.4	2.6
Cocoa	4.0	7.1	17.1	-4.8	-3.4	5.1
Beef and Cattle	2.2	15.2	51.3	7.6	5.0	11.7
Sugar	0.1	9.1	15.6	16.7	32.4	-1.3
Total Traditional Products	79.1	138.7	553.5	6.0	5.5	1.5
Fertilizer	0.6 2/	3.0	13.7	10.5	13.1	12.5
Other	7.7 3/	48.0	278.6	15.9	23.7	10.7
Total Non-Traditional Products	7.7 3/	51.0	292.3	12.3	19.6	11.5
Memo Item: Exports of Non-Traditional Products			204.7			
to Central America	4.5 2/	42.3	87.6	13.7	29.2	8.3
to Rest of World	7.8 2/	8.7		11.1	2.1	23.9
Total Exports	83.4	189.7	845.8	8.2	10.7	5.2

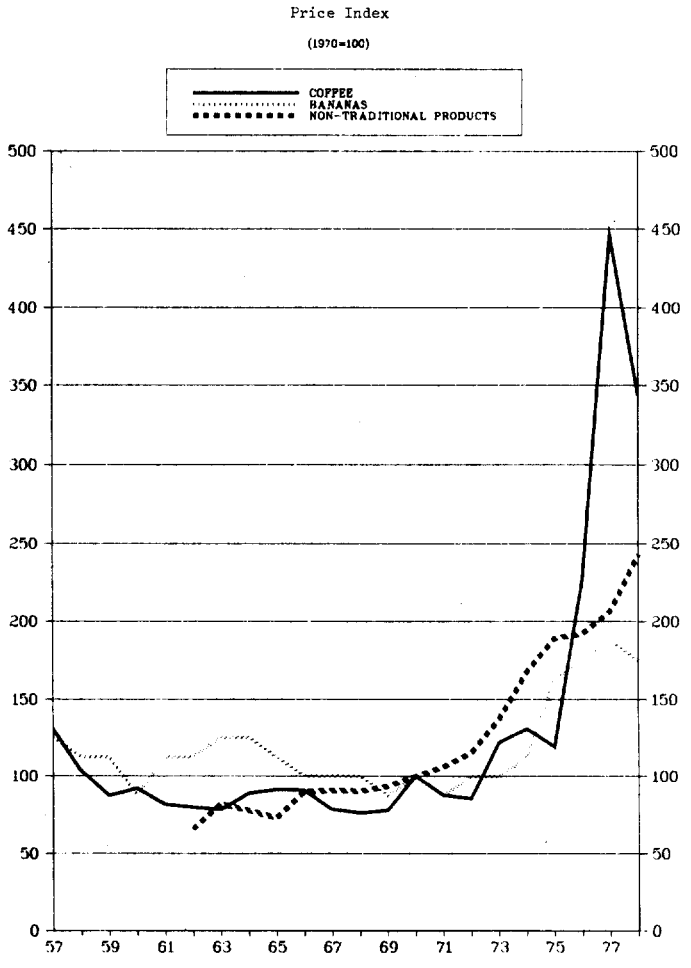
1/ Growth rates are log-regressed.

2/ First year of time series: 1963.

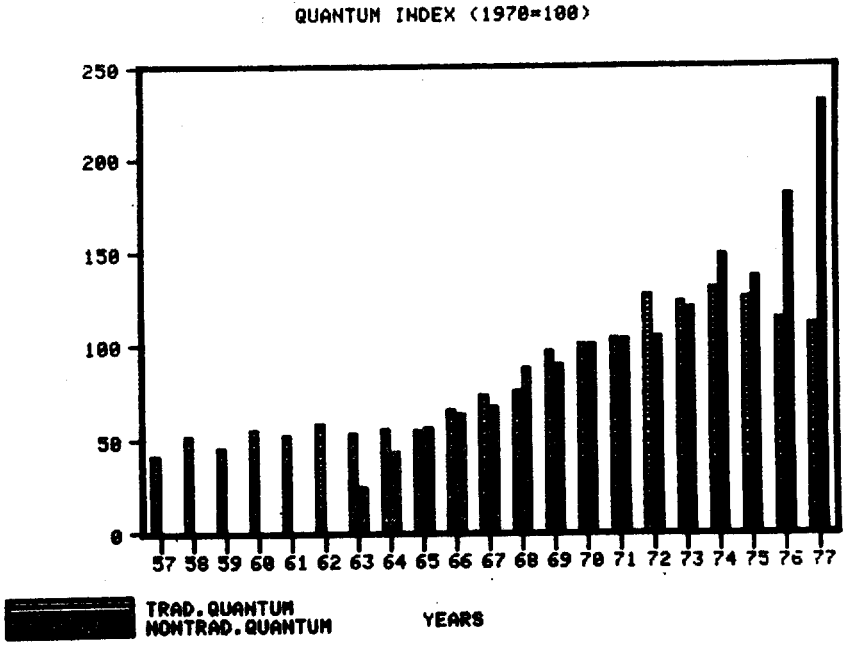
3/ First year of time series: 1960.

Source: Comercio Exterior de Costa Rica. Minor discrepancies exist between export data found here and the figures supplied by the Central Bank.

FIGURE 1.1: COSTA RICAN EXPORT PRICE AND QUANTUM INDICES, 1957-1977



SOURCE CENTRAL BANK AND BANK STAFF CALCULATIONS



Source: Banco Central. Algunas Estadísticas del Sector Externo.

The Export Sector

5. In the period since 1960, exports have served as the pivotal activity directly advancing the levels of economic development in the country and indirectly propelling that advance through the linkage of effects from the exporting sector to other areas of economic activity. Export growth at 8.2% per annum has consistently outstripped GDP growth at 6% p.a., and consonant with this a share of exports to GDP has risen from 22% in 1957-1960 to 31% in 1975-1977. Two-thirds of agricultural output goes to markets in other countries, and about a sixth of manufacturing output. 1/ The economy can thus truly be characterized as an export economy. Changes have, however, taken place both in the composition of exports and in the geographical markets that have been reached. Indeed, much of the remarkable development performance of the country in the last two decades can be attributed to the emergence of new products and new markets at crucial moments when the wind has suddenly fallen away from those products which, till then, had served as leading components of growth.

Traditional Exports

6. Five products - coffee, bananas, beef, sugar and cocoa - together characterize Costa Rica's traditional exports. These five commodities averaged some two-thirds of all export earnings in the period 1975-1977. The argument for diversification is lent weight by noting that bananas and coffee have between them ranged from 50%-60% of all export earnings in this period. Either coffee or bananas, depending upon international prices, is capable of being the country's major foreign exchange earner. In 1975, for instance, banana exports were about 30% of merchandise export earnings with coffee constituting about 20%; in 1976 the two commodities contributed equally together generating 51% of export revenues; in 1977, with the second doubling of coffee prices in as many years, coffee earnings were nearly 40% of total merchandise export earnings, and bananas had fallen to a share of 20%. It is only in the banana trade that Costa Rica can exercise influence on prices in the market. Costa Rica's banana exports constitute some 14% of world trade in bananas, whilst coffee exports are a mere 2.3% of world trade in the commodity (1974-76). The markets for the two products are essentially different. Coffee, largely grown by small independent producers and marketed by a national production agency, is, for the most part, exported to Europe (especially West Germany), which in 1976 absorbed 80% of the exported crop with lesser amounts destined for the USA (14%) and Japan (3%). Bananas on the other hand, grown on estates under the aegis of large U.S. concerns, find their largest market in the USA (73% of exports in 1976) with most of the remainder (24%) destined for Europe.

7. Beef is the next most important traditional export commodity; in 1976-1977 earnings from beef average 7% of merchandise export revenues. Like sugar the product is unusual in that the upper limits to export expansion in its largest market, the USA (73% of beef exports), is dictated by quota

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1/ These figures overstate slightly the proportion of output exported, as they do not incorporate internal transport costs or export taxes.

restrictions of the importing country. Finally, cocoa and sugar exports make up the tail end of traditional commodity exports. Although dwarfed in relative importance by the other traditional exports, they are nevertheless sizeable in comparison to particular non-traditional exports: in 1976 sugar comprised some 4% of all exports and generated about one and a half times the revenue of the largest single non-traditional export (fertilizers). The long slump in cocoa prices that began in the early fifties and lasted to the late sixties had its inevitable effect on cocoa production, and the commodity contributed only 1% of export earnings in 1976 as compared to an average 8% in 1957-1958. A remarkable upsurge in price and output in 1977, however, placed the commodity ahead of all non-traditional export earners.

8. The pattern of growth in these traditional export commodities has shown wide divergencies in the last two decades, exemplifying both the country's talent for spurring the development of new export lines, as well as good fortune having a variety of exports to continue the momemtum of growth, as specific commodity markets have suffered sudden sharp reversals. Between 1957 and 1967 coffee exports constituted the mainstay of export activity, averaging 47% of all export earnings and ranging from a high export share of 59% in 1958 to a low share, 39% in 1967. During this period, the volume of coffee exports more than doubled, at an annual growth rate of 8.5%. Since 1967 the volume of coffee exported has been highly erratic but there can be little doubt that the pace of growth has slowed; between 1967-1978 the volume of coffee exports grew by an estimated 2.4% p.a. 1/ Simultaneous with this sudden levelling in coffee available for export, however, the banana sector experienced rapid growth. Between 1957 and 1967 banana exports grew in volume by less than 2% per annum; from 1967 to 1973, however, the volume of exports nearly tripled, growing at an annual rate of about 20%; and with prices largely stable, revenue from banana exports also tripled. After 1973 the quantum of banana exports declined but with rising prices export earnings were some two-thirds higher in 1977 than in 1973. 2/ Even as the banana resurgence peaked in 1973,

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1/ 1977, the endpoint used in the text for most of the traditional export growth series was not a good year for coffee exports; 1977 exports were only 2% higher than in 1967; 1978 exports, on the other hand, were 30% higher in volume terms than in 1967. Several reasons explain the erratic form of the export series since 1967: (a) inadequate rainfall in several years, (b) high labor and fertilizer costs (especially after the 1973 oil crisis) which diminished coffee exporters' margins, (c) export price swings; unit prices increased between 1967-1970, declined between 1970-1972, increased between 1972-1974, declined again in 1975 and then surged ahead to a near quadrupling of prices between 1975-1977.

2/ In the 1930's when the Sigatoka and Panamanian diseases first appeared in Costa Rica many banana plantations on the Atlantic coast were abandoned, and the locus of major banana growing shifted to the South Pacific region. In 1967 however the Cavendish banana, resistant to both these diseases was planted on the Atlantic Coast and achieved an overnight spectacular success. The fall in output after 1973 is attributed to several causes including adverse climatic conditions, strikes by banana labores and producer resistance to a newly-imposed export tax.

before production declined, the beef industry generated momentum to fill part of the slack. Export volume grew by an annual rate of 16% between 1973-1977 in contrast to their growth of 9% in the previous 10 years.

9. For none of these commodities can it be claimed that the frontier of production has been reached. Within this pattern of acceleration at opportune moments, however, rests considerable volatility in both output and prices. The variation of output in each commodity can on examination be seen to be in part a response to price movements, in part the effect of natural causes affecting each crop, and on occasion a response to such events as the raising of the US beef quota. What does emerge, however, is that the raising of production to new plateaus in the case of coffee and beef will become increasingly more difficult. Beef production is rapidly approaching the extensive margin of cultivation, having brought in its wake environmental problems of deforestation and consequent soil erosion. Increases in output are likely to come from yield improvements rather than acreage expansion. The same is true of coffee. Costa Rican Governments, in subscribing to the international coffee agreements, have traditionally discouraged expansion of coffee acreages. Only two thousand additional hectares were planted to coffee between 1962 and 1973, for instance. Substitution of old coffee trees with high yielding varieties will now likely constitute the major source of future growth. Plans are, however, being implemented to increase acreages in banana and sugar. In sum, given the large weight in the export trade of these traditional commodities, and granted also Costa Rica's demonstrated comparative advantage in their production, these five agricultural products will continue to play an important role. Dramatic gains in production and growth, as has been experienced in the past, are now, however, unlikely.

Non-traditional Exports

10. In the last two decades, and in particular since Costa Rica joined the Common Market in 1968, non-traditional 1/ exports have experienced spectacular growth. Non-traditional exports were US$12 million in 1963. In 1971 they had increased to US$68 million and in 1977 were estimated to be US$292 million. In 1963 non-traditional exports were about 13% of the country's total exports; in 1977 this ratio had climbed to 35%. In 1963 more than half of non-traditional exports were primary commodities (including refined sugar and fish); in 1976 manufactured exports were 85% of the vastly increased total of non-traditional exports. The contrast with the performance of traditional

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1/ By non-traditional exports are meant all those exports other than raw coffee, bananas, beef, unrefined sugar and cocoa. Included in non-traditional exports are, therefore, such commodities as roasted coffee, refined sugar and processed beef and primary exports such as fish and crustaceans, black beans, plantains, and unprocessed vegetables. By far and away, however, the largest component of non-traditional exports is manufactured exports; in 1976 these constituted 85% of the non-traditional exporting sector. Naturally, somewhat difficult allocations of commodities to traditional/non-traditional and between primary/manufacturing categories have to be made. The text will make clear which category or sub-category of export each commodity has been allocated to.

exports is vivid. Between 1957 and 1977 traditional exports grew at 6% per annum, keeping precise step with the overall growth of domestic output; between 1963-1977 non-traditional exports grew more than twice as fast at 12.3% per annum. Within the period several pronounced price swings can be distinguished in the price indices for traditional exports--swings which, when combined with output fluctuations, have resulted in significant revenue fluctuations. The importance of non-traditional export revenue in total export earnings has meant that these swings have been rapidly transmitted to the domestic economy and created conditions for periodic external payments difficulties. By contrast non-traditional exports have experienced much less volatility in prices; the trend of prices has been upward and export revenues in every year after 1963 has been higher than the previous year.

Table 1.2: COSTA RICAN EXPORTS, 1963, 1971, 1976

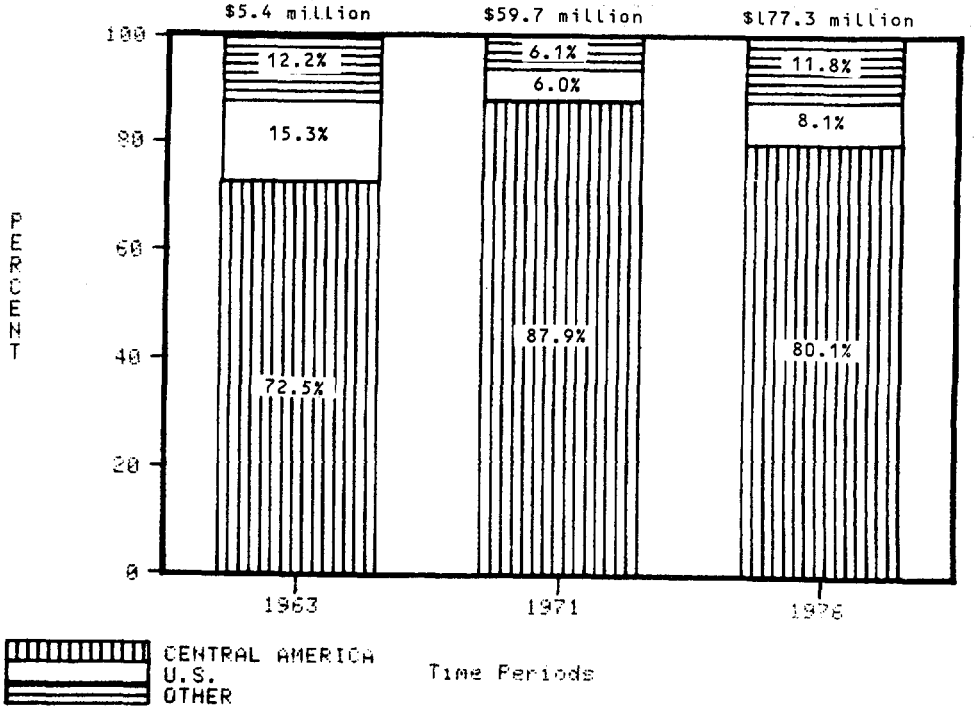
($ 000)

	1963		1971		1976	
	To Central America	To Rest of World	To Central America	To Rest of World	To Central America	To Rest of World
NON-TRADITIONAL PRIMARY PRODUCTS	855.9	6,026.5	2,671.1	4,281.5	9,839.8	26,128.1
Fish, Crustaceans, Etc.	3.0	894.5	590.0	2,016.1	1,152.2	4,051.8
Inedible Vegetable Products	30.9	740.1	95.6	652.2	264.5	4,639.5
Edible Vegetable Products	53.6	326.6	185.3	97.0	405.2	2,798.3
Plantains	12.5	43.7	104.1	441.3	76.4	934.5
Roasted Coffee	0.0	0.5	0.0	4.3	0.6	11,229.9
Refined Sugar	0.0	3,458.4	0.0	0.0	0.0	0.0
Processed Beef	48.0	0.3	526.7	1.4	1,064.9	0.3
Other	717.9	562.4	1,169.4	1,069.2	6,876.0	2,473.8
MANUFACTURES	3,605.8	1,783.7	52,875.0	6,783.1	139,816.3	37,450.7
Food, Beverage, and Tobacco Products	1,135.9	122.4	7,568.0	770.3	13,813.3	3,393.9
Textiles, Clothing, Leather Products	474.3	28.9	7,720.1	77.6	29,024.5	4,105.7
Wood and Products, Including Furniture	403.4	588.0	1,495.4	453.2	3,591.1	2,467.5
Paper, Printing and Related Products	160.1	108.8	2,356.5	15.1	3,549.1	1,184.9
Chemical, Petroleum, Coal, Rubber and Plastic Products	928.5	537.5	18,188.9	3,824.6	49,452.9	13,429.2
Other Nonmetallic Mineral Products	59.7	0.1	204.8	0.3	1,214.9	30.7
Iron and Steel	13.6	0.0	2,592.1	10.6	10,408.6	24.7
Metal Products, Machinery and Equipment	339.7	5.2	11,163.1	332.3	25,295.9	5,741.5
Other Manufactures	90.6	392.8	1,586.1	1,299.1	3,466.0	7,072.6
TRADITIONAL PRIMARY PRODUCTS	598.7	79,629.7	763.8	157,988.5	972.8	378,733.4
TOTAL	5,060.4	87,439.9	56,309.9	169,053.1	150,628.9	442,312.2

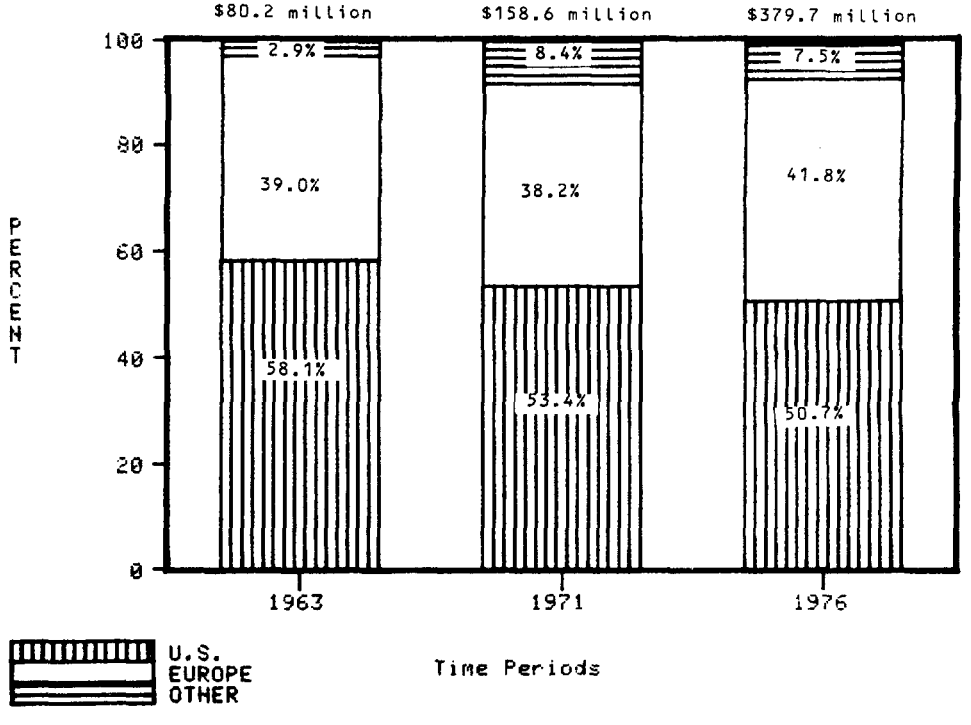
Source: MEIC, Comercio Exterior de Costa Rica

FIGURE 1.2: EXPORT DESTINATION FOR MANUFACTURED AND TRADITIONAL PRODUCTS 1963, 1971, 1976

MANUFACTURES



TRADITIONAL PRODUCTS



SOURCE: COMERCIO EXTERIOR DE COSTA RICA.

11. In 1963 refined sugar was the only non-traditional product that had an export value of more than US$1 million. In 1976 five non-traditional primary product categories and fully 37 manufactured product categories registered export sales of more than US$1 million (see Appendix, Table 2.4). Focusing on manufactured exports by industrial sector classification, the largest categories of manufactured goods exports in 1976 were, in descending order of importance: chemicals--including fertilizers, medicines, and pharmeceuticals and insecticides and fungicides; textiles and clothing, including synthetic fabrics, knit and crocheted textiles, interior and exterior clothing, and thread and yarn, electrical machinery, including refrigerators, electrical control mechanisms, and copper cables (sold to Chile); food products, including syrups and concentrates, margarine and lard, preserved fruits, buscuits and crackers, cocoa butter and paste, processed vegetables, and candies and sweets; and basic metals and metal products. Lacking detailed price information and given significant product diversification since 1963, it is not possible to comment on the real growth in different non-traditional manufacturing export categories. A few examples in current prices illustrate the surge in export activity in this period. Processed food exports rose from slightly under $5.0 million in 1963 to $16 million in 1976. Exports of chemicals rose from just over US$1 million in 1963 to slightly under US$50 million in 1976; textiles and clothing exports increased from US$0.5 million in 1963 to US$28 million in 1976. Examples could be multiplied, but clearly there has been a powerful growth in manufactured exports as well as a significant diversification in the products exported.

12. Costa Rica's participation in the CACM must account for a large share of this growth. From a total sale of manufactures to Central America of US$4 million in 1963 sales of manufactures grew in 1976 to US$140 million and the share of manufactured exports going to the CACM increased from 72% to 80%. Indeed, the share of manufactured exports absorbed by the Common Market reached a peak of 88% in 1971 before the gradual exhaustion of import substitution possibilites within the region weakened considerably the regional group as a final market. The pattern of Costa Rica's export trade in manufactures in the Common Market reflects quite clearly the impact of production for a regional grouping protected from external competition by high tariff barriers. Chemicals constitute the largest grouping of manufactured exports to the CACM, and within this, fertilizers are the most important sub-category; fertilizer production in Costa Rica is dominated by the activities of a Mexican-owned consortium, and within the regional protection available, fertilizer prices are in the range of up to twice those ruling internationally. Food products and textiles, the next most important exports in the Common Market are, in order, the most heavily protected industries in Costa Rica and in the region (see Table 3.2). These three industries together accounted for 62% of Costa Rica's non-traditional exports to the CACM in 1976. Refrigerators, electric cables, tires, plastics and metal sheets are further examples of products or product groupings with high export sales to Central America, which owe their development and perhaps even their continued survival to generous tariff protection and access to duty free imported inputs for production for the local market. Even for product groupings where Costa Rica may reasonably be argued to have a comparative advantage in production, such as wood or leather,

TABLE 1.3: COSTA RICAN EXPORTS BY DESTINATION
(US $000)
1976

CIIU	DESCRIPTION	TOTAL	CENTRAL AMERICA	U.S.	CARIBBEAN	OTHER LATIN AMERICA	EUROPE 1/	OTHER
	TRADITIONAL PRIMARY PRODUCTS	379,706.2	972.8	192,618.4	6,570.5	5,458.9	158,877.8	15,207.8
	NON-TRADITIONAL PRIMARY PRODUCTS 2/	35,967.9	9,839.8	14,972.4	2,841.1	429.8	2,424.0	460.8
	MANUFACTURED PRODUCTS	177,267.0	139,816.3	15,355.7	2,809.2	14,534.1	3,722.7	1,029.0
31	Food Products Beverages, Tobacco	17,207.2	13,813.3	2,625.9	184.8	204.4	378.8	0.0
32	Textiles, Clothing, Leather Products	33,130.2	29,024.5	1,844.4	96.0	195.6	1,886.7	43.0
33	Wooden Products, including Furniture	6,058.6	3,591.1	1,722.4	668.2	61.8	12.6	2.5
34	Paper, Paper Products, Printing and Publishing	4,734.0	3,549.1	432.2	647.5	92.7	10.8	1.7
35	Chemicals, Rubber, Plastics, Petroleum, and Coal Products	62,882.1	49,452.9	336.2	636.9	11,642.9	23.8	789.4 3/
36	Non-Metallic Mineral Products, except Petroleum and Coal	1,245.6	1,214.9	20.7	0.4	9.6	0.0	0.0
37	Basic Metals	10,433.3	10,408.6	24.7	0.0	0.0	0.0	0.0
38	Metal Products, Machinery and Equipment	31,037.4	25,295.9	1,500.3	575.3	2,286.7	1,241.6	137.6
39	Other Manufactures	10,538.6	3,466.0	6,808.9	0.1	40.4	158.4	54.8
	Total	592,941.1	150,628.9	227,946.5	12,220.8	20,422.8	165,024.5	16,697.6

1/ Not including Soviet Union.

2/ Includes NAUCA categories 00104, 01104, 01109, 02, 03, 042, 0510115, 0510199, 05107, 0540201, 05403, 05409, 07102, 07202, 074, 075, 08103, 08104, 121, 21, 22, 23, 24, 25, 26, 272, 291, 292, 4 and 92.

3/ Of which 753.1 was fuel for ships.

Source: Comercio Exterior de Costa Rica, 1976. Translation of NAUCA trade data to CIIU industrial categories was effected using a 1972 translation supplied by the Consejo Monetario Centroamericano, Tabla de Equivalencias de los Codigos NAUCA, CUODE, y CIIU Revisados. However, this translation includes many primary products within manufactures, particularly in food products. Elsewhere, industrial statistics do include these products, but this table classifies them separately.

protection levels have been high, and high export sales have been generated within the CACM at the cost of earning hard currency foreign exchange by expanding sales to the rest of the world.

13. Competing against the very strong pull for production for the regional market, non-traditional exports to the third countries have not yet achieved the high visible impact of manufactured goods sales to the CACM. Nevertheless they are important, comprising about 30% of all non-traditional exports (some 11% of all merchandise exports). Recently these exports have experienced very high growth in contrast to slower absorption by the CACM. Between 1970 and 1977, non-traditional exports to the rest of the world grew at a 24% real rate per annum; non-traditional exports to the CACM grew, over the same period, at 8% per annum. This reverses the previous trend: in 1957-69, non-traditional exports to the rest of the world grew by an average 2% per annum in contrast to the 29% growth in these exports to the CACM. In 1963 non-traditional exports to the rest of the world were heavily weighted in favor of non-traditional primaries (including refined sugar); non-traditional primaries comprised 74% of all such exports in that year. In 1976 the balance had changed somewhat; non-traditional primaries (including roasted coffee) were 41% of non-traditional exports and manufactured products constituted the remainder. The chief (over US$1 million sales) non-traditional exports to the rest of the world in 1976 were roasted coffee, fertilizers, seafood, vegetable products, tanned leather, electrical control mechanisms, canned beans, furniture, cocoa butter and paste, insecticides and fungicides, vegetable raw materials and plantains.

14. The largest market for non-traditional exports to the rest of the world from Costa Rica is the US, which absorbs 56% of such exports at the value in 1976 of about US$35 million. Mexico is the second largest market with a share of 17% (US$10.5 million), but this is almost totally due to the intrafirm transactions of FERTICA, the Mexican owned fertilizer firm. Other Latin American countries received about US$10 million of non-traditional exports in 1976, and Europe, the next most important trading partner, about US$6 million. It is clear that in the most important market, the US, resource based processed products have found a ready outlet; these products include roasted coffee, potted shrimps, vegetables, cocoa butter and paste, furniture and wood products, tanned leather and shoes. The important exports to Europe are similar, including inedible vegetable products and tanned leather, and a non-primary based export, electrical control mechanisms. Latin America and the Caribbean purchase chemicals (medicines, insecticides, fungicides) furniture and plywood, and electric cables.

15. In summary, non-traditional exports have grown very rapidly, and the export of non-traditional products to the rest of the world between 1969 and 1977 considerably outpaced the export of these products to the CACM. There has been considerable diversification in the composition of non-traditional products, away from a heavy reliance on nontraditional primary or processed traditional primary products towards manufactured goods. Exports of the latter, however, given the strong incentives to provide for the regional market, are for the most part destined for the member countries of the CACM. At the same time manufactured exports are making inroads into markets outside the region. As might be expected, domestic resource-based products have achieved the greatest penetration in third markets.

CHAPTER II: INDUSTRIAL DEVELOPMENT - Major Features

Industrial Structure

16. The rapid growth of non-traditional exports from Costa Rica has been accompanied by an equally rapid growth in industrial production. The Costa Rican economy has, in the last two decades, undergone a fundamental structural change where industry has become the largest productive sector in the economy, and the relative contribution of agriculture to output has fallen. In 1960, agriculture's share of GDP was 25%. In 1977 this had fallen to 19%. Over the same period manufacturing industry increased its share in production from 14% to 22%. 1/ Changing shares in output naturally reflected different underlying growth trends; between 1960 and 1977 industrial growth, at an annual real rate of 9.2% outstripped GDP growth of 6.1% per annum, and considerably outstripped agricultural growth at 4.4% annually. 2/ Manufacturing industry absorbed 58,000 new employees between 1963 and 1977, as compared to agriculture, which absorbed 25,000. As a result, industry's share in total employment increased from 11.7% in 1963 to 15.8% in 1977, whilst agriculture's share declined from 50% in 1963 to 33% in 1977. 3/ Consistent with these trends, productivity (value-added in real terms per person employed) has been growing in both sectors--at an equal pace of 3.7% per annum since 1963. Relative productivity has not changed since 1963; value-added per person employed in manufacturing is still about two and a half times as high as in agriculture and one and a half times the national average.

17. Despite the pronounced shifts in output and employment patterns, Costa Rica has actually proceeded along a fairly balanced path of development. Based on a cross-country survey of "expected" structural characteristics the country fits well to norm. For a country of its size and level of income the "most probable" shares of primary output in production would be

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1/ The more traditional definition of industry includes, in addition to manufacturing industry, construction, electricity, gas and water. Since it is manufacturing output that we are primarily concerned with in this report the word "industry" will be used in the narrower sense and exclude construction, electricity, gas and water.

2/ This is not to belittle the achievement in agriculture. Costa Rican agricultural growth is considerably higher than the average of Latin America, which in 1960-73 experienced an agricultural growth rate of 3.2% per annum. Between 1965 and 1973 Costa Rica achieved the highest agricultural growth of any country in the region.

3/ Correspondingly, manufacturing industry has displayed a much higher employment elasticity with respect to value-added than agriculture; between 1963 and 1977, for instance, manufacturing industry's employment elasticity was 11% as compared to 2% for agriculture.

19% (Costa Rica 1977: 19%) and of industry (widely defined) would be 32% (Costa Rica 1977:33%). 1/ The country has thus neither veered into an overwhelming industrial concentration nor remained with a heavy concentration of agricultural production. The reasons for this are, unfortunately, not easy to distinguish. Over the period it can be argued that the intent of public policy has been to "favor" industry at the expense of agriculture, by following a policy of protecting manufacturing activity behind high tariff barriers. This has not only raised the domestic price levels of manufactured consumer goods vis-a-vis agricultural goods, but the prices of locally manufactured inputs to agricultural activity have also risen, with both effects acting to turn the domestic terms of trade against agricultural activity. 2/ Three points however deserve emphasis. First, despite the industry-oriented policy stance Costa Rica has capitalized remarkably successfully on its natural resource advantage in agricultural production, suggesting that the sector will continue to be an important mainstay of activity. Second, the small size of the economy entails that further changes in productive structure will continue to be considerably affected by trade and by extension, by overall commercial policy. The importance of trade to Costa Rican agriculture need not be restated. As analysed below, intraregional trade and domestic import substitution have been important sources of growth for Costa Rican industry. These sources are now of diminishing importance. Industry's growth and hence the pace--and pattern--of increased industrial participation in the economy will be predicated on finding new sources of export growth. 3/ The third point is that despite its size the Costa Rican economy is indeed highly complex. Both the agricultural and industrial sectors have shown dynamism in growth and entrepreneurs in each sector have responded vigorously and successfully to new opportunities. It is not, therefore, easy to type-cast the country as either typically "agricultural" or "industrial." Neither is it easy to clearly identify comparative advantage as between sectors. In these circumstances an even-handed policy which does not serve to unduly discriminate in favor of one sector against the other and which does not serve to disorient the pattern of resource allocation might best be advised.

1/ Chenery and Carter: "A Handbook of Expected Values of Structural Characteristics," IBRD 1973.

2/ This hypothesis, probably correct, does deserve further study, for in Costa Rica the prices of agricultural products are not by and large determined by exchange relationships in the domestic market but, with two-thirds of agricultural output exported, by prices ruling internationally. Moreover, the Government has in recent years set high support prices for domestic grain production and subsidized certain subsectors of agricultural activity by a policy of low interest rates. The question as to the relative strength of incentive pulls between agriculture and industry over the period--and thus some of the reasons for Costa Rica's fairly balanced pattern of structural transformation in the last two decades--cannot therefore be easily answered.

3/ This is not to say that in the normal course of development industry will not continue to increase its share in output and employment. Rising incomes, higher income elasticity of demand for manufactured goods and, on the cost side, a higher productivity in industry will all tend to move resources away from agriculture and into industrial activities.

18. Not only has an economy-wide change in production pattern occurred in the last two decades, but the structure of industry has itself changed.

Table 2.1: INDUSTRIAL STRUCTURE 1960-1977

	Shares in Value Added			Growth Rates	
	1960	1969	1977	1960-69	1969-77
Consumer Goods	79.2	65.2	63.8	6.9	8.1
Intermediate Goods	20.8	31.3	33.1	14.3	9.1
Capital Goods	0.0	3.5	3.1	-	6.9
Total	100.0	100.0	100.0	9.2	8.4

Source: Appendix Table 3.2.

In 1960 about 80% of value-added in manufacturing industry was in the final consumption goods industries of food, beverages, footwear, clothing, printing and consumer chemicals. The subsector experienced a drop of about 15% in its share of industrial activity in the period 1960 to 1969; thereafter its share declined but little. The most visibly affected industries were food and beverages, which between them accounted for 11 points of this reduced share. Intermediate good production on the other hand experienced strong gains, with textiles, industrial chemicals, plastic and rubber products and metal products registering strong increases in their share of manufacturing activity. Capital goods (mechanical and electrical machinery) of which there was no registered production in 1960, grew to slightly more than 3% of value-added in 1977. Despite this widening of the industrial base, the composition of activity is still heavily slanted towards consumer goods industries. Partly because of the policies of providing high protection for consumer goods industries, Costa Rica has not developed particularly deep or extensive capital or intermediate goods sectors.

Import Substitution and Sources of Growth

19. The policy of import substitution and the tying of industrial incentives to the common schemes of the regional market have exercised a most powerful influence on the development of industry in Costa Rica. One rough measure of the success of import substitution policies is provided by the degree to which domestic production has replaced imports in total supply (Table 2.2). When Costa Rica joined the Common Market in 1963, there was little production in many industries. Imports accounted for over 90% of total available domestic supply in such industries as basic metals, mechanical machinery, electrical machinery and transport equipment and over 60% of total domestic supply in textiles, chemicals, and rubber products. By 1977 the percentage of total available domestic supply represented by imports of manufactured goods had fallen from an average of 46% to 40%. In some industries such as food products, beverages, tobaccos, clothing, wood products and furniture (that is, largely consumer goods industries), imports were at

Table 2.2: RATIO OF IMPORTS TO TOTAL AVAILABLE DOMESTIC SUPPLY 1/
BY INDUSTRIAL BRANCH, 1963, 1971, 1977

CIIU	INDUSTRY	1963	1971	1977
31	Food Products, Beverages, Tobacco 2/	12.2	10.0	8.7
32	Textiles, Clothing, Leather Products	36.2	38.3 3/	29.3
33	Wood and Products, including Furniture	1.3	4.6	2.1
34	Paper and Products, Printing, Publishing	56.7	50.0	43.9
35	Chemical, Petroleum, Coal, Rubber and Plastic Products	67.9	47.5	49.9
36	Other Non-metallic Mineral Products	46.8	30.8	28.7
37	Basic Metals	100.0	84.7	84.4
38	Metal Products, Machinery and Equipment	90.1	69.2	70.9
39	Other Manufactures, including Re-exports	80.8	78.2	64.4
	TOTAL	46.4	42.2	40.3

1/ Expressed as a percentage, Ratio = $M_i/(M_i + Y_i)$, where M_i are subsectoral competing imports and Y_i is gross value of domestic output.

2/ Omits coffee drying and roasting, beef preparation and packing, and sugar refining. These agrindustrial processes, because of their large weight in production, tend to overwhelm the measure of import substitution in food processing, and in total import substitution. See footnote on page 19.

3/ This import ratio increased from 1963 because of a large increase in imports of footwear. For the other categories of the subsector, textiles, clothing, and leather products, the import ratios declined.

Source: MEIC, Comercio Exterior de Costa Rica, and Banco Central, Cifras de Produccion Industrial, 1957-1977.

most 11% of total domestic supply in 1977. There is little scope for further import substitution in these subsectors. Inevitably, further import substitution possibilities exist in the metal mechanical sectors and more generally in intermediate product categories. In view, however, of the very small size of the domestic and regional markets, of the inefficiencies entailed in additional protection, and of certain higher costs to consumers, further import substitution incentives in these sectors should be avoided.

20. Whilst the import substitution policy has clearly been important for Costa Rica's industrial development, recently much of the steam has been going out of the movement. The process was strongest in the early years of the common market and weakened considerably after the El Savador/Honduran confict in 1969. Four sources of growth for Costa Rican industry have been distinguished in Table 2.3: (1) Export expansion to Central America, (2) Export expansion to the rest of the world, (3) Import substitution (seen as the reduction in the ratio of imports to total domestic supply), and (4) The expansion of domestic demand (measured as a residual). 1/ In 1971-77 domestic import substitution contributed only 3% to industrial growth in contrast to the period 1963-1971, when 11% of the expansion of industry could be attributed to the process of replacing imports by local production (excluding major food products exported outside the region). 2/ The export expansion to Central America can to a degree

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1/ For a description of the analytical procedures employed see Annex 1. The original formulation of the procedure can be found in Hollis B. Chenery "Patterns of Industrial Growth," American Economic Review, Vol. 40, No. 2, June 1960, pages 634-640. This analysis does not measure industry linkages and Keynsian multiplier effects and as a result is likely to overstate somewhat the importance of domestic demand growth.

2/ For technical and substantive reasons it is useful to exclude a large part of the food products sector in analyzing the process of import substitution. The technical reason is that the food product sector so dominates manufacturing production that changes in the food subsector easily overwhelm the averages for manufacturing as a whole, thus giving a partial view of the evolution of import substitution in the rest of the manufacturing sector. The substantive reason is that the food product sector is in turn dominated by the export-oriented enterprises (coffee roasting, beef preparation and sugar refining), only a small proportion of whose output is destined for the local market. Thus, the food product averages and that of manufacturing as a whole are heavily influenced by primary-based export-oriented enterprises. Inclusion of these enterprises again confuse the analysis of import-substitution. (In 1977, the food product sector constituted 44% of total manufacturing output; fully one-half of this was the "output" of the coffee roasting, meat processing and sugar refining enterprises. About 70% of the combined output of these products is exported, and more than 95% of these exports are destined outside the region.) Table 2.3 thus reports calculations in the foods products sector both with and without these export-oriented agricultural processing concerns and the manufacturing totals again present calculations with and without the coffee roasting, beef preparation and sugar refining enterprises.

Table 2.3: SOURCES OF DEMAND GROWTH (AS % OF TOTAL GROWTH IN OUTPUT) FOR COSTA RICAN INDUSTRIES, 1963-71, AND 1971-77

CIIU	INDUSTRY	EXPORT EXPANSION TO CENTRAL AMERICA		EXPORT EXPANSION TO REST OF WORLD		IMPORT SUBSTITUTION WITHIN COSTA RICA		DOMESTIC DEMAND GROWTH	
		1963-71	1971-77	1963-71	1971-77	1963-71	1971-77	1963-71	1971-77
311-312	Food Products, less Coffee Roasting, Meat Processing and Sugar Refining	8.0	4.3	0.8	13.0	5.9	3.4	85.2	79.3
313	Beverages	0.1	0.0	0.0	0.0	6.1	-5.9	93.8	105.8
314	Tobacco Manufactures	0.0	0.0	0.5	8.8	-2.8	1.2	102.3	90.0
321	Textiles, including Carpet and Lace	15.9	12.9	0.1	0.1	1.1	39.9	82.8	47.0
322	Clothing	4.6	9.0	0.1	0.3	4.4	-3.3	91.0	94.1
323	Leather Products, except Clothing & Footwear	21.0	16.3	-0.5	26.4	25.0	5.9	54.4	51.4
324	Footwear	23.9	6.6	0.0	0.2	-153.0	-5.2	229.0	98.4
331	Wood and Products, including Cork	9.1	6.7	-1.3	2.3	-7.6	3.2	99.9	87.8
332	Wooden Furniture and Accessories	2.3	2.4	0.4	3.4	-9.1	3.6	106.5	90.6
34	Paper, Printing, and Related Products	5.4	3.3	-0.2	0.0	19.6	14.5	75.2	82.1
351-352	Chemicals	13.0	13.2	1.9	1.4	22.7	6.7	62.4	78.6
355	Rubber Products	9.2	11.9	3.3	-2.1	66.1	6.3	21.4	83.8
356	Plastic Products	17.5	17.7	0.0	1.2	-8.9	5.1	91.4	76.0
36	Non-metallic Mineral Products, nei	0.7	2.6	0.0	0.1	34.3	3.9	64.9	93.4
37	Basic Metals	0.0	14.8	0.0	0.2	100.0	2.4	0.0	82.6
381	Metal Products	4.3	14.2	0.2	0.4	78.4	7.4	17.2	77.9
382	Mechanical Machinery	1.5	9.5	0.1	0.2	77.0	-61.4	21.3	151.7
383	Electrical Machinery	0.9	11.4	0.0	5.5	94.3	16.1	4.8	67.0
384	Transport Equipment	0.0	0.1	0.0	0.5	80.8	-13.3	19.2	112.6
39	Other Manufactures	18.1	74.9	11.0	70.5	29.4	31.6	100.3	6.8
	Total	9.3	8.0	0.9	1.6	10.6	3.3	79.2	83.6
	Memo Item:								
	Food Products Sector, including Coffee, Meat, Sugar	4.9	2.6	14.7	12.4	0.5	0.8	80.0	84.2
	Total, including Meat, Coffee, Sugar	9.0	7.3	7.4	19.4	1.7	0.4	81.9	72.9

Source: Bank staff calculations. For methodology, see Annex 1.

be regarded as part of a regional import substitution process. Again excluding those food products which are overwhelmingly exported outside the region, the region provided 9% of the demand impulse for growth between 1963 and 1971 and 8% between 1971 and 1977. In the first phase of high import substitution within Costa Rica, intermediate and capital goods industries were most rapidly establishing domestic bases. The consumer goods industries of food, clothing, footwear and wooden furniture during this first phase, gained significantly from the extension of protection from the national to the regional market, as export expansion to Central America (i.e. regional import substitution) provided a more powerful stimulus to growth than domestic import substitution. In the second period, 1971 to 1977, domestic intermediate and capital good import substitution gave way to export expansion to Central America as the chief source of development; overall, in this latter period regional import substitution as a source of growth dropped in most consumer good categories. In both periods the most powerful stimulus for expansion came from the growth of the domestic demand, which in Costa Rica is, to a large extent, the result of buoyancy in traditional and non-traditional exports to third countries outside the CACM.

21. Even though the impulse for industrial growth coming from regional import substitution may be fading, much of the Costa Rican industry has been and continues to be dependent on the regional market. In 1963 for instance 2% of manufacturing output was exported to market countries. In 1977, 13% of manufacturing output was sold to market countries (Appendix Table 3.4). (Both these figures exclude the dominating influence of processed food exports to third markets from the food sector.) Industries which export a high proportion of their output to Central America included in 1977: basic metals (93%), mechanical machinery (47%), electrical machinery (35%), chemicals (30%), textiles (31%), metal products (24%), plastic products (21%), rubber products (19%), and leather products (18%). These later industries contribute almost 25% of value-added in industry and comprise some 22% of the total value of sales. Only the food and beverages, tobacco, furniture, petroleum, and non-metallic mineral subsectors, in fact, sold less than 5% of their output to the CACM. Thus, a considerable interdependence exists between the regional economy and the Costa Rica's manufacturing industry. The industries with high export ratios to the market and which have grown most rapidly behind the protective walls of the market are likely to be particularly sensitive to changes in CACM arrangements.

22. Export expansion to markets outside Central America has provided a minor stimulus to manufacturing sector growth--in 1963-1971, 0.9% and in 1971-77, 1.6% of industrial growth can be attributed to this source. Overseas markets have been important, however, for particular industries. For the food products sector export expansion to third markets provide 1% of the demand stimulus in 1963-1971 and 13% in the later period 1971-1977. Several industries are now, however, fast increasing their exports outside the region. The wood and furniture products industries are an example; in 1963 these industries together exported 3% of their output to the rest of the world and 2% to Central America. With the formation of the CACM the industries were granted one of the highest protection rates available (see Table 3.2). By 1967, exports to the CACM were 7% of output, and extra-regional exports had

dwindled to virtually zero. With the saturation of the regional market, however, the industry has had to look abroad again for markets. In 1977 regional exports had fallen to 4% of total output, and extra-regional exports were back at the position they enjoyed in 1963, i.e., 3% of output. In general, and as can be expected, those industries with a high domestic resource content have been most successful in exporting outside the region.

Industrial Concentration

23. Costa Rica's industrial structure is highly concentrated with a few establishments generating the major share of employment, output, and manufactured exports. In 1975, for instance, those companies which employed 200 or more persons (less than 2% of all manufacturing establishments) employed about a third of the manufacturing labor force and generated about 44% of the sector's value-added. At the other end of the scale enterprises which employed less then 20 persons comprised over 80% of all establishments, employed 20% of the labor force and produced only 10% of manufacturing value-added. A recent study has focused more incisively on this problem of concentration. 1/ The study reports that those industrial subsectors which generate the largest shares of value-added and employment, are in fact dominated by the activities of one or two firms. In 1975, for instance, 70% of manufacturing value-added was generated in subsectors where two firms at most accounted for more than 50% of the subsector's output; these same subsectors employed 56% of the manufacturing labor force. Thus, a sizeable proportion of manufacturing activity occurs in subsectors where one or two firms dominate production. In 1975, 40 out of 50 of the largest establishments (200 employees or more) in Costa Rica, which together accounted for 41% of value-added in manufacturing, were to be found in these highly concentrated subsectors.

24. At the same time the evidence is much less clear that large firms exercise the same predominance in the export effort. Large firms do on the one hand contribute by far and away the greater proportion of total manufactured exports; firms which employ 150 or more employees (about 3% of all establishments) for instance produce about 54% of the total manufactured exports of the country. On the other hand, the proportion of output exported is much more evenly spread across firms of different sizes (see Appendix Table 3.13). Firms which employ ten to 29 persons, for instance, export 26% of their total output--the highest proportion reported among firms of different sizes. If firms are classified by value of output rather than by numbers of employees the same pattern emerges. Firms with value of sales greater than ¢30 million contributed 53% of all manufactured exports, exporting about 22% of their output. Small- to medium-sized firms however, ranging in production levels from ¢10 million to ¢29 million, have, on average, export ratios of 31%.

1/ Carlos A. Izurieta Segura: La Concentracion Industrial en Costa Rica 1964-75 y las Actuales Formas de Mercados Dominantes, 1979. Instituto de Investigaciones en Ciencas Economicas, Universidad de Costa Rica.

25. There is a small but significant difference in the destination of export sales amongst firms of different sizes. Medium-sized firms tend to sell a greater proportion of their export production to the rest of the world; conversely, larger firms export proportionally more to the CACM. Firms of from 30 to 100 employees send, on the average, slightly more than half of their exports to countries outside the common market. Firms which employ more than 100 employees, on the other hand, send little more than a third of their exports to countries outside the CACM. This feature requires explanation, as it might be expected that larger firms are perhaps better placed to exploit economies of scale, and have greater resources to devote to marketing efforts abroad. One possible explanation is that the oligopolistic biases of the domestic and regional markets, with which large firms are so clearly identified, allow them to dominate regional trade and allow them to neglect third-market exports which medium- to small-scale firms cannot afford. In this sense, large firms do not feel compelled, nor does the incentive system encourage production to third markets.

26. The picture which emerges is thus one of a few large firms dominating manufacturing activity and export activity, operating in highly concentrated market strata, but with a promising participation of medium-sized firms in foreign trade, and especially in the proportion of output destined from these firms to third markets. Several policy prescriptions follow. First, it is desirable to reduce the oligopolistic biases in the market by stimulating the development of the smaller sized firms. This would increase competition and efficiency and stimulate the larger firms to utilize excess capacity by exporting abroad. Second, the participation of medium-sized firms in the export effort requires greater analysis and ways sought to assist them in their efforts to export to third markets. The mission met several examples of smaller-scale firms which were simply not large enough to capture the scale economies necessary for powerful export pushes. On occasion, and this is particularly true of the textile industry, severe market fragmentation (small firms producing essentially the same product but with great "brand differentiation") acts as a constraint to successful exporting. In this regard, pooling supply arrangements of small firms (under the aegis of trading companies for instance) can create levels of supply sufficiently attractive to large foreign buyers.

Import Intensity

27. Paradoxically, at the same time that industrial strategy has been to replace imports by domestic production, manufacturing activity has become more, rather than less, import intensive. Raw material imports for industry averaged 11% of industrial output in 1960-1962, and this ratio had climbed to 20% in 1975-1977. Several characteristics of industrial development help explain this development. First, the successive replacing of imports by domestic production has largely been at the finished end of consumer goods production. As industry has expanded, and as domestic intermediate and raw materials have either been unavailable or in short supply, the structure of industrial production has veered into import intensity. The process has been aided and abetted by very generous exemptions from the payment of all tariffs for intermediate and raw material imports. In fact, as the exchange rate has been consistently overvalued, the imports of raw materials and intermediate inputs for industry have contained an important subsidy

component. A second reason for the high overall import intensity of production is that certain industries which have grown very rapidly are particularly dependent on imports. The chemicals (especially pharmaceuticals, fertilizers, tires) and metal/mechanical industries fall into this category. Table 2.4 summarizes sector import intensities from a sample of firms which obtain import exonerations.

28. The phenomenon of increased import intensity in manufacturing has had important consequences for the country's external trade position. In 1960-1962 industrial raw materials were 22% of the country's total imports; in 1974-1977 the ratio had climbed to 37%. In fact the manufacturing sector has consistently run trade deficits; in 1974-1976, for instance, raw material imports for industry exceeded manufactured exports by 25%; excluding the food, beverages and tobacco sector (CIUU 31) the excess of raw materials imports over exports of the manufacturing sector was about 70%. 1/ The growing proportion of imports that are inputs to manufacturing activity in the country creates an unwelcome rigidity in balance of payments. External deficits become much more difficult to manage as compressing imports entails depressing, perhaps severely, the level of domestic activity.

29. Because industry earns much less foreign exchange than it demands (for intermediate and raw material imports), the economy has to rely on agricultural activities to redress the foreign exchange imbalance. Both the cyclical variation in export revenues earned by the latter as well as the fact that foreign exchange demand by industry far exceeds the growth of exchange supply by agriculture 2/ set the stage for chronic and ever-deepening balance of payments difficulties. This is why one of the conventional wisdoms about Costa Rica should be changed. It is not simply export price swings any longer, which lead the country into periodic exchange crises. The other edge of the scissors, as it were, is the rapid growth in demand by industry for foreign exchange. The twin effects lead to move pronounced crises than would otherwise be the case. Moreover as the foreign exchange feeds into protected, inefficient industries serving a small market, the country inevitably finds itself on a declining growth path, punctuated by periodic and ever worsening exchange crises. As is well known, developing countries do discover secularly increasing demands for foreign exchange as their economies grow. The elevated levels and peculiarly intractable composition of this demand in Costa Rica is, however, directly attributable to the policies of import substitution followed by the country in the last two decades.

1/ This estimate is arrived at, by assuming from the MEIC data, that 17% of the raw material imports for manufacturing industry are for the food, beverages and tobacco sector.

2/ Between 1963-1965 and 1974-1976 the derived demand for foreign exchange by industry, reflecting the demand for imported industrial inputs, grew by 20% annually; agricultural export revenue, by contrast, grew by 14% annually.

Table 2.4: IMPORT INTENSITY, EXPORT CONTRIBUTION, AND TRADE DEFICITS OF SELECTED [1/] MANUFACTURING ENTERPRISES, 1975-1976

		Imported Inputs as % of Output			Export as % of Output			
		Cent. Amer.	Rest of World	TOTAL	Cent. Amer.	Rest of World	TOTAL	TRADE DEFICIT AS % OF OUTPUT EXPORTS-IMPORTS
31	Food, Beverages and Tobacco	4.1	21.7	25.8	7.9	15.2	23.1	-2.7
32	Textiles, Apparel and Leather	10.8	16.1	26.9	20.2	5.4	25.6	-1.3
33	Wood Products and Furniture	2.1	13.0	15.1	14.2	8.8	23.0	7.9
34	Paper Products and Printing	3.2	31.8	35.0	10.9	1.6	12.5	-22.5
35	Chemicals	6.5	42.8	49.3	29.3	8.3	37.6	-11.7
36	Non-Metallic Mineral Products	2.4	8.0	10.4	2.4	0.0	2.4	-8.0
37	Basic Metals	1.6	79.1	80.7	8.6	0.0	8.6	-72.1
38	Metal Products and Machinery	1.6	46.0	47.6	34.5	7.9	42.4	-5.2
39	Miscellaneous Manufacturing	1.5	36.4	37.9	30.3	0.0	30.3	-7.6
	Total	5.1	31.3	36.4	20.2	8.4	28.6	-7.8

Source: MEIC, Bank Staff Computations

1/ A sample of 433 firms which, because they receive industrial incentives, have to file with MEIC. Total output of these firms is about 40% of national manufacturing output.

Capacity Utilization

30. A further consequence of the incentive schemes that have been applied in Costa Rica has been to encourage entrepreneurs to install excess capacity. Over time, low interest rates subsidizing the purchase of capital goods, duty exemptions for the import of machinery and equipment and tax provisions which allow full deductions from the tax base of reinvested profits at the time of capital good purchase, followed by generous depreciation allowances, have each acted to lower the price of capital below its social opportunity cost. Relative factor prices have been further distorted by high payroll charges (payroll taxes comprise about one-fifth of average gross compensation) which have effectively served to reduce the demand for labor. 1/ Excess capacity manifests itself in the low number of shifts worked, in the large number of days when activities shut down (weekends, holidays, etc.), and low intensity of utilization during the work day. In a 1974 study of capacity utilization of Costa Rica, Schydlowsky reported that about two-thirds of industrial firms typically work one shift, slightly 10% work two shifts, and the remainder works three. 2/ An OFIPLAN survey of 1976 3/ found that the number of shifts worked was on the average only 56% of the number of shifts that entrepreneurs considered technically feasible. A later survey by the Ministry of Labor (1977) showed, in a sample of 700 industrial establishments, nearly 80% working only one shift and approximately 10% each working two or three shifts. Although the pattern of utilization varies across industries there are some single-shifters and triple-shifters in each industrial category. Thus, the products produced do not seem to determine the pattern of utilization. 4/ The size of an establishment, in most countries, is usually positively correlated with multiple shifting; in Costa Rica, however, the percentage of firms working only one shift rises as one goes to the highest sized group (See Appendix Table 3.8). Most interestingly, Schydlowsky reported, "A further major variable which affects utilization is the extent to which a firm's output is exported. In the presence of economies of scale, protected domestic markets tend to develop oligopolistic structures, which hamper expansion of sales and multiple shifting. Exporting provides a 'vent for surplus' for the production of additional shifts, while not upsetting the domestic oligopolistic structure. Exports seem to be related to utilization in the Costa Rican data." 5/

1/ Chapter III analyzes these incentive schemes and policies in greater detail.

2/ Daniel M. Schydlowsky; Capital Utilization, Growth, Employment, Balance of Payments and Price Stabilization. Boston University Center for Latin American Development Studies, Discussion Paper Series Number 22, December 1976.

3/ OFIPLAN Encuesta de Empresarios Industriales, Informe Preliminar July, 1976.

4/ Schydlowsky, op cit page 26; see Appendix Tables 3.6-3.10.

5/ Schydlowsky op cit.

31. The reasons Costa Rican entrepreneurs give for not using capital more intensively, i.e., working more shifts, vary. In the Ministry of Labor survey, of the 555 firms which worked only one shift, nearly 214 firms (40%) indicated they were satisfied with the status quo (i.e., no reason given); of the remainder, 40% claim their more intensive use of capital was limited by lack of markets, 30% found that they consistently worked overtime but could not justify going to a full second shift, 11% claimed that skilled second shift manpower was scarce, and often unavailable, and the remainder had diverse reasons including a lack of electric power. Evidently, entrepreneurs can not be considered irrational in adding to capacity if Government policies cheapen the price of capital in comparison to labor, and if protected small markets enable them to enjoy the good life without undue exertion. Clearly some change in the incentive framework is called for. (The cheap interest rate policy has now been changed. The duty free exemptions and highly advantageous depreciation allowances remain. These will be treated more fully in Chapter III below.) At the same time, the underutilized capacity pervasive across all manufactured sectors does represent a reservoir for expansion of exports, and the widening of Costa Rica's markets could allow economies of scale to be more appropriately exploited.

Wages and Employment

32. Information on wage levels is of particular interest to countries contemplating an export drive, as information of this kind is often thought valuable in making judgments on potential competitiveness. 1/ Table 2.5 presents estimates of average wages in the manufacturing sectors of selected countries, and Table 2.6 presents more specific data on hourly remuneration in the clothing industry in selected countries. The more aggregated data suggests that average Costa Rican manufacturing wages are indeed higher than the East Asian countries which are usually considered as the principal competitors in the markets for manufactured exports. The Costa Rican wage is, however, only 15% higher than the average of Hong Kong, Singapore, Taiwan and Korea, and this is certainly within the bounds of error, given the weakness of the underlying data. (Firms in Korea, for instance, will often provide meals, uniforms, transport, sports facilities, etc., to employees; these benefits, if included in the calculation of remuneration, would raise the real level of the Korean average wage.) Costa Rica's average wage is, on the other hand, considerably below those of the newly industrializing countries of Latin America, Brazil and Mexico. The more specific, and for this reason more realistic, comparison of wage levels in the clothing industry places Costa Rica between Taiwan and Hong Kong in hourly wages paid. A tentative conclusion would therefore be that Costa Rican's wage levels are not, indeed, out of line with countries that are making, or have made, major efforts to capture markets in the high income countries.

1/ There is abundant reason, however, to qualify the value of judgments of this kind. First, simple cross-country wage comparisons do not take into account differences in labor productivity. Second, "average" wage comparisons conceal large differences in wage rates to different skills, occupations, and between different industries and sectors. Third, wage rates are compared at existing exchange rates. And fourth, wage rates data are usually very poor and often not comparable, as fringe benefits and other items are included in some series and not in others.

Table 2.5: INTERNATIONAL COMPARISONS OF WAGES IN INDUSTRY 1/

	GNP Per Capita	Average Wages Per Month ($) (1977)
USA	8762	983
Japan	6069	748
Venezuela	2910	336
Brazil (1976)	1570	266
Philippines	510	257
Mexico	1290	249
Panama	1290	238
Costa Rica	1540	168
Nicaragua (1976)	840	158
Hong Kong	3040	149
Singapore	3260	147
Taiwan	1400	144
Korea	1160	143
El Salvador	600	108
Honduras	480	105
Colombia	870	102
Guatemala	910	100

1/ Includes basic salary and wage payments. Conversions are made on average length of work week and based upon average exchange rates during the year.

Sources: ILO, Yearbook of Labor Statistics, 1977; IMF, International Financial Statistics, April 1979; and Philippine NCSO; IBRD Atlas.

Table 2.6: WAGES IN CLOTHING INDUSTRY IN SELECTED COUNTRIES

	GNP Per Capita	Wages In US Cents Per Hour, 1977
Colombia	870	30
Korea	1160	40
Taiwan	1400	51
Costa Rica	1540	66
Hong Kong	3040	75
USA	8762	362

Sources: GNP Per Capita: IBRD Atlas and estimates.
Wages in Clothing: D. Morawetz: Unpublished Draft Paper on Colombian Textile exports and Costa Rican Ministry of Labour and Social Security.

33. Two sets of Government policies do, or have the potential to, exercise influence on wage levels. The first is the operation of a minimum wage-rate system. The second is the imposition of a number of social charges on income. The minimum wage rate system in Costa Rica does not require much comment as it appears that neither is there general compliance nor are the rates economically effective in the sense that legally enforced rates vitally affect wage setting. (Considerable evasion of the minimum wage exists, especially in the agricultural sector where, except for banana laborers, minimum wage rates are considered maxima rather than minima.) Salary indices for the manufacturing industry over a long period of time show an independent life from the once a year minimum wage setting of the National Council of Salaries, confirming that these labor markets are comparatively free of regulatory intrusion. The social charges on labor are, however, a different matter. Social security and other payroll taxes total a flat 26% statutory rate on wages and salaries withheld by the employer (Table 2.7). In the short- to medium-term these taxes amount to a rise in wage costs to the employer, and have a consequent dampening effect on the demand for labor. (Estimates on plausible assumptions for Costa Rica indicate that over the medium-term only half of all payroll taxes are shifted to labor.) The taxes serve to distort relative factor prices and arguably, have contributed to the over-capitalization of Costa Rican industry. At the same time these charges do serve to finance the health and social security systems and have yielded benefits which presumably have some value to employees. Thus the net impact of the charges can not be ascertained without a fuller investigation. In so far as it would be less distortionary, on equity and efficiency grounds, however, to fund social services through an income tax, it is recommended at a minimum, that these charges not be raised, and, if possible, lowered.

Table 2.7: COSTA RICA - PAYROLL TAXES

	Statutory Tax Rate (Percent of Wages and Salaries)
Payroll Taxes	26.00
(a) Employer Contributions	18.50
Social Security Administration (CCSS): sickness and maternity	6.75
Social Security Administration (CCSS): disability, old age, and death	4.75
Social Assistance Institute (IMAS)	0.50
National Apprenticeship Institute (INA)	1.00
Community Development Bank	0.50
Family Assistance Program	5.00
(b) Employee Contributions	7.50
Social Security Administration (CCSS): sickness and maternity	4.00
Social Security Administration (CCSS): disability, old age, and death	2.50
Community Development Bank	1.00

Source: Centro Para la Promocion de Las Exportaciones e Inversiones de Costa Rica.

34. With a relatively small labor force and with rates of open unemployment ranging from 7% to 4% in recent years, it has been speculated that Costa Rica is likely to experience labor shortages in the future, which will quickly set limits to export expansion in the products of comparative advantage. This perception maintains that both an "absolute" constraint to expansion exists for lack of overall labor supply, as well as "structural" constraints for lack of skilled and semi-skilled personnel. (More subtly the "absolute" constraint version maintains that high industrial demand for labor will lead to a rapid wage inflation and make much of Costa Rica's manufacturing industry uncompetitive internationally.) Labor "shortages" have already been experienced in the country particularly in the construction sector, in agriculture during the peak of the coffee picking season, and in various industrial occupational categories. A 1977 sample survey of selected occupational groups in manufacturing industries for instance showed an average vacancy rate of 25% (ratio to people employed), fully 50% of which were unfilled for more than two months; employers claimed that 70% of vacancies could not be filled for lack of qualified people in the market, and for 10% of vacancies, workers existed but were badly trained. The textile, furniture, and metal mechanical industries had the highest ratios of unfilled vacancies to persons employed. The vacancies were largely for skilled and semi-skilled personnel, including seamstresses, embroiderers, carpenters, lathe turners, arc welders, electrical engineers, mechanics, construction workers, etc. Moreover, several businessmen interviewed by the mission maintained that the reason they did not run second or third shifts was lack of qualified personnel. The perception clearly exists, therefore, that Costa Rica faces limits to industrial expansion for lack of skilled labor. This observation deserves analysis.

35. In July 1978 the national labor force was estimated at some 720,000 persons, with an overall participation rate (labor force/total population) of 34%. Between 1973 and 1978 employment has been growing faster than the labor force, at 4.8% and 4.3% per annum respectively, and thus the rate of open unemployment dropped from 7.3% in 1973 to 4.5% in 1978. In 1978 about 94% of males between the ages of 20 years and 65 years 1/ were in the labor force and the rate of open unemployment for this group was 2.4%; 31% of females in this same age group were in the labor force with a higher rate of open unemployment of 5.7%. Women in Costa Rica have become increasingly drawn into salaried work. Whilst the overall male participation rate increased slightly from 50% to 53% between 1963 and 1978; by contrast female participation rose from 10% in 1963 to 21% in 1978; over the period the growth in the female labor force was slightly more than double that of males.

1/ It is more usual to choose 15 years, rather than 20 years, in numbering potentially economically active persons. Costa Rican statistics, unfortunately, only provide 12 years and 20 years as end points.

36. These high ratios do not mean, however, that there is no "slack" in overall labor supply. Despite the high participation rates and low open unemployment rates there is a degree of underemployment. In 1978 about 8% of the labor force worked less than 30 hours a week, 10% of employed workers wished to work more hours than were offered in their current occupations (equivalent to incremental open unemployment of 3.1% of the labor force) and about 15% of the employed 1/ were in low paying, and by inference, low productivity jobs. The agricultural sector contains higher numbers of underemployed persons than industry; about 40% more workers in agriculture worked less than 30 hours a week in 1978 than in industry. A little less than a third of agricultural workers (60% of whom are wage earners) work less than 40 hours a week as compared to less than one-sixth of industrial workers. Because agriculture contains higher absolute numbers of workers, because these workers suffer from relatively greater underemployment, and because wages in agriculture are lower than in industry (by an average of 30%), it can be expected the sector will continue to serve as a net supplier of labor to industry. The educational and skill profile of agricultural labor is, however, quite different from industrial labor; nearly a third of industrial workers have secondary or university education as compared to only 7% of agricultural workers; in the category "operarios y artesanos" some 50% of all the employed, about 80% of industrial workers, are semi-skilled, as opposed to 12% of agricultural workers. The redeployment of labor from agriculture to industry is thus likely to entail substantial skill-enrichment training programs. Moreover, if the public sector curtails its policy of being "employer of last resort", which has resulted in a tremendous growth of public sector employment (public sector employment, now 19% of all employment, grew by 12.4% per annum in 1970-1978 in contrast to 3.9% per annum for the whole economy), and reduces the differential between public and private sector wages (only professionals and highly qualified technicians amongst salaried workers, receive, on the average, higher remuneration in private rather than in public service), then availability of labor to the private sector manufacturing enterprises can be reasonably assured.

37. Thus the belief that Costa Rica's manufacturing sector will suddenly strain at capacity owing to a deficiency of labor supply does not withstand examination. The country is indeed unusual among developing countries in that it does not possess large reserves of "surplus" or unemployed labor. However, female labor force participation has been increasing with further potential for rise, underemployment exists, especially in agriculture,

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1/ Costa Rican labor statistics follow the ILO convention of measuring "invisible" underemployment as those workers whose earnings are below a certain cut-off point; this is placed at 832 colones per month which is about half the average wage. About 7% of salaried workers in 1978 earned approximately a quarter of the average wage. The incidence of low wage employment is much higher in agriculture than in industry.

and the public sector by limiting its claims on the employable can free resources for development. More to the point, the failure to train and provide the skills needed in industry has created bottlenecks in certain occupational categories. Indeed there is current evidence of structural mismatches between educated entrants to the labor force and the demands of the economy. The growth rates of unemployed persons with higher education accelerated from 8.5% p.a. in 1973 to 19.5% p.a. in 1978. By contrast the numbers of unemployed unskilled laborers grew at 4.6% p.a. between 1963-1973 and then contracted at an annual rate of 5.2% between 1973-1978. As noted previously, measured by vacancy rates, the demand for technical and skilled labor remains high. The country does therefore need to consider carefully its educational strategy and orient the educational sector to producing manpower of the level and possessing the skills that industrialists demand. A first step in this process would be the installation of an effective planning mechanism in the Ministry of Education, which can initiate a comprehensive review of the educational system and particularly examine the degree to which the system is responsive to the economy's needs. In the final analysis, however, and assuming structural bottlenecks are cleared, high labor demand in a situation of high employment will inevitably push wage levels upwards. This does not signify an end to export competitiveness. Rather, labor can be expected to be drawn into those industries where productivity per person employed is high, and where continued profitability is consistent with high levels of remuneration. Indeed, rising wages, stemming from high demand for industrial labor, are precisely the end to be sought, marking the success, rather than the failure, of an export effort.

CHAPTER III: INCENTIVE SCHEMES

A. THE EXCHANGE RATE

38. The exchange rate is, in many senses, the most vital instrument available for promoting exports. In the first place the level of the exchange rate gives the simplest and clearest signal to producers of the gains to be made in exporting. Other policy measures, such as subsidies, are less immediate in their appeal; experience from a number of countries in fact suggests that, largely due to the directness of the exchange rate incentive, exporters respond more vigorously and more promptly to exchange rate changes than to other equally "valuable" combinations of policy measures. In the second place, there exists no great variety of, (or, indeed, better), policy instruments for encouraging exports other than setting the exchange rate at a realistic level. For promoting import substitution, for instance, tariffs, import quotas, licensing arrangements, etc. can all serve to increase the profitability of import competing enterprise; for exports the only major policy instrument available, other than the exchange rate, is subsidies. These, however, invite retaliation and are clearly outside the international rules of the game as enshrined in such agreements as the GATT. Thirdly the exchange rate is a comparatively flexible instrument and its level can be adjusted, frequently if necessary, to maintain the real incentive given to exports.

39. In Costa Rica the exchange rate has not been used as an instrument to promote exports. 1/ In the last 20 years the country has experienced three devaluations, each of which was managed by a movement from a unified exchange rate to a system of multiple exchange rates and back again to a unified exchange rate. 2/ Each episode was prompted by a relatively severe balance of payments problem, and none of the devaluations was provoked by any independent desire on the part of the authorities to stimulate exports. Quite the contrary. In the three periods of multiple exchange rates, 1960-1961, 1967-1969, 1971-1973 "free" market rates ranged between 11% to 30% higher than the official market rates. In each case, exports were granted the less favorable "official" rate while imports were, by and large, granted the higher "free" rate, thus providing an extra twist, as it were, to the incentive for import substitution. There were qualifications to this picture. "Mixing" rates--or rates which were some

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1/ See Annex 2.1 for an extensive classification of Costa Rica's exchange rate history.

2/ In fact, in only two of these cases of multiple exchange rate systems was the exchange rate ultimately unified at the higher "free" rate. However, all three are classified as devaluations because (a) in the exceptional case of 1967-1969 the free rate fluctuated 11% to 18% higher than the level at which the rate was finally unified, (b) the final unified rate was made feasible by the simple expedient of a 30% surcharge on imports, and (c) in any event the unified rate lasted only 18 months.

combination of "official" and "free"--were occasionally allowed to exporters, particularly if the exports concerned contained a high proportion of inputs bought in the "free" market. Even so, the mixing rates were always below the free rates. Furthermore, not all imports were brought in at the free rate; the authorities maintained lists of essential imports which were granted the official rate. By and large, however, these devaluations were essentially geared to stemming import flows and were managed in a fashion that gave little prospective encouragement to exporters.

40. In the last two devaluations, common market partners brought pressures to bear against the devaluation decision. In both cases, imports from the common market were allowed in at a lower "official" rate while imports from the rest of the world, if not on the select list of "essential" imports, had to bear the higher rate. Common market partners, thus, did not react favorably to the Costa Rican devaluations. Only after prolonged periods of balance of payments difficulties were common market parities unified at a higher exchange rate. The experience suggests that the devaluation instrument, if not exactly proscribed by common market agreements, is certainly limited in use. The instrument is however the most powerful tool available for stimulating exports and the use of the instrument should therefore be placed on the agenda for discussion in the upcoming negotiations between the various members of the market.

41. Changes in the level of the official exchange rate give, however, only a partial view of the impact of the exchange rate regime. It is the exchange rate in relation to local costs and prices that effectively dictates the relative profitability of exporting activity. In the second place, the official exchange rate, as is well understood, will often understate the value of foreign exchange to an economy. Import restrictions (tariffs, quotas, advance import deposits, etc.) have the effect of reducing the demand for foreign exchange and thus allow the price of foreign exchange to be kept lower than it would otherwise be. These two approaches to currency overvaluation are treated in the following sections.

Real Effective Exchange Rate

42. The real effective exchange rate is in essence a purchasing power parity rate. 1/ It is a measure of how the purchasing power of Costa Rica's currency has changed over time in relation to the purchasing power of the

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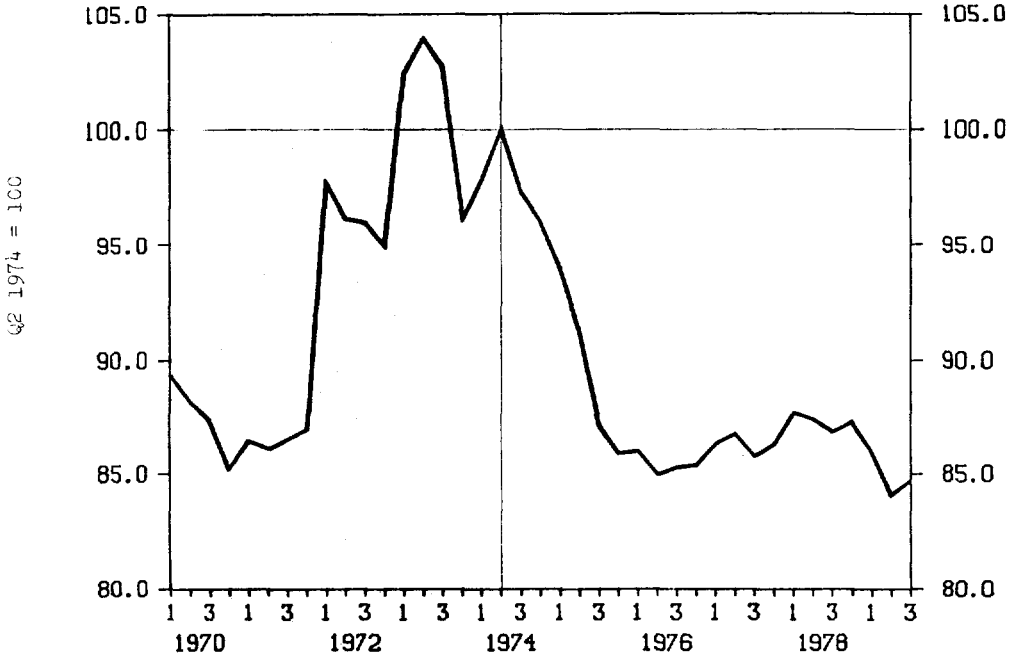
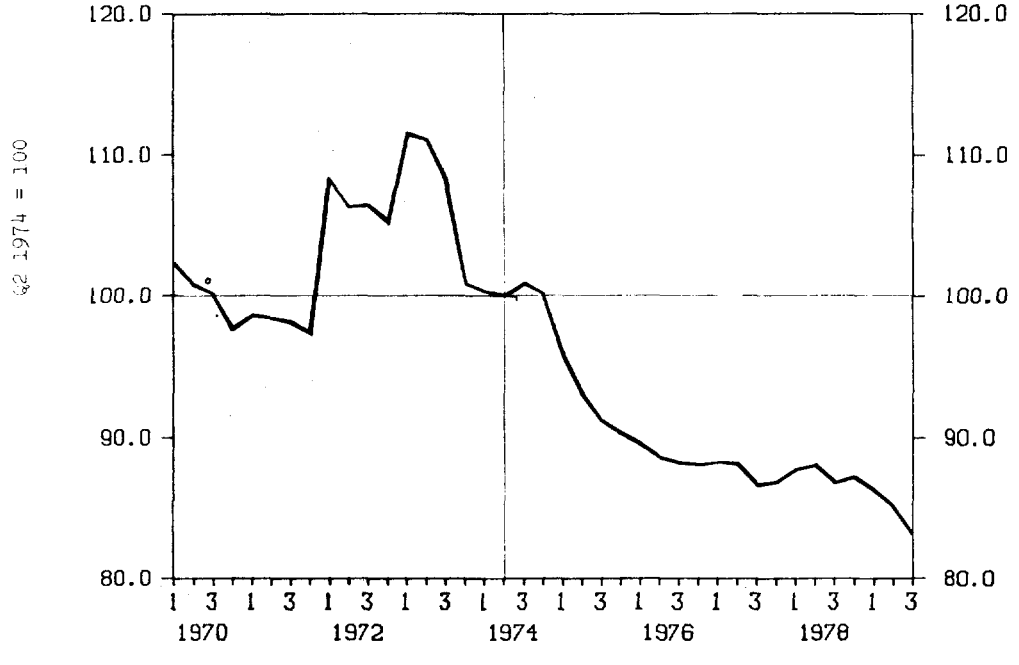
1/ Methodology in Annex 2.2. For an extensive review see L. Officer: "Purchasing Power Parity Theory of Exchange Rates: A Review Article" IMF Staff Papers, 1976. Few students now believe that PPP theory holds except in a loose and approximate fashion. For one thing, the price of non-tradeable goods inevitably enters into the construction of price indices, and, under certain conditions, upward shifts in the price of non-tradeables (and hence in the overall price index) can occur without entailing a decline in export competitiveness. A PPP analysis is presented here (a) because it can be argued that very open economies such as Costa Rica (i.e., low proportions of non-tradeables to tradeables) are more amenable than "closed" economies to PPP analysis, and (b) because a fairly long time period of analysis is presented where a systematic trend differential between inflation levels, a fortiori, creates the case for a PPP comparison.

Figure 3.1: COSTA RICA REAL EFFECTIVE EXCHANGE RATE VIS-A-VIS MAJOR TRADING PARTNEPS

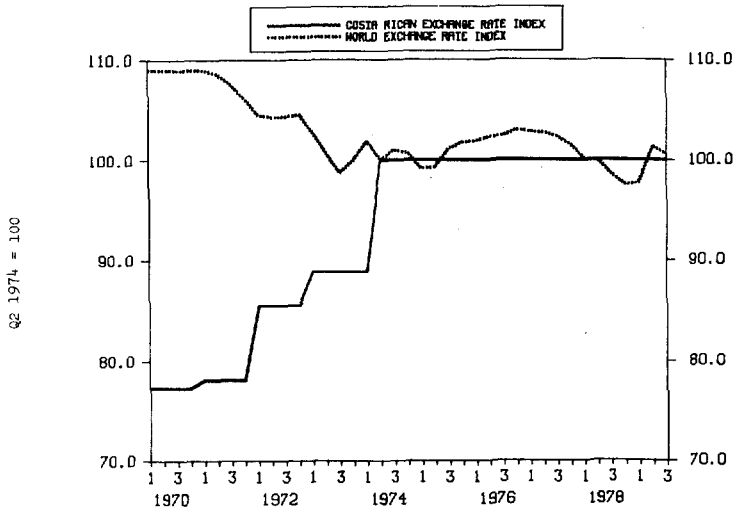


COSTA RICAN REAL EFFECTIVE EXCHANGE RATE VIS-A-VIS THE DOLLAR

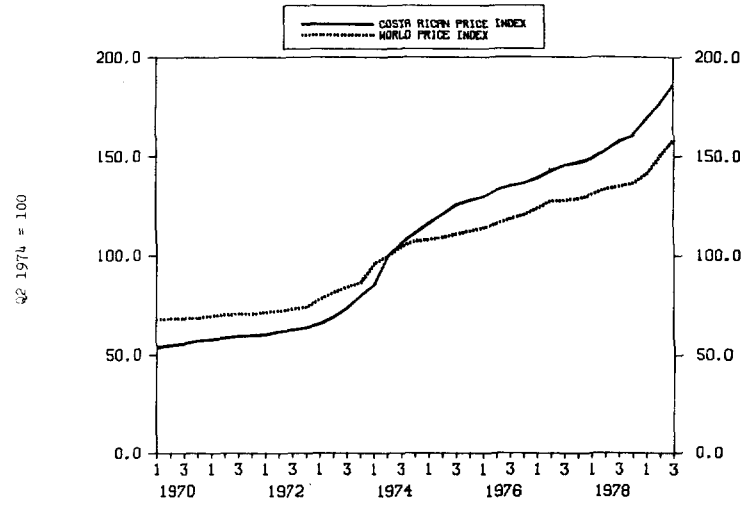


Source: IFS, Banco Central. For methodology, see Annex 2.2.

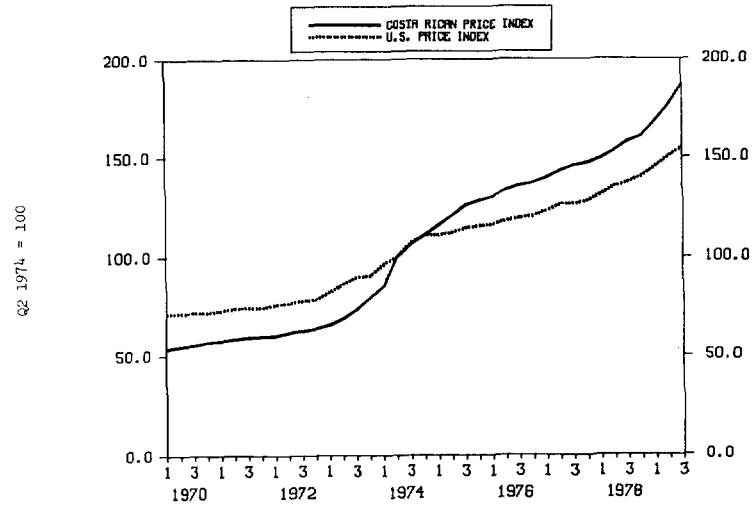
Figure 3.2: EXCHANGE RATE INDICES



COMPARISON OF COSTA RICAN AND WORLD PRICE INDICES



COMPARISON OF COSTA RICAN AND U.S. PRICE INDICES



Source: IFS, Banco Central. For methodology, see Annex 2.2.

currencies of Costa Rica's trading partners. When, for instance Costa Rica inflates more rapidly than the rest of the world, Costa Rican exporters will find their costs rising more rapidly than the prices they can charge customers; their margins become squeezed. If the exporters do raise their product prices in line with their costs they lose competitiveness. Either way there is a disincentive to exporting. Changing the exchange rate facing exporters can restore their margins. The real effective rate also indicates, therefore, the degree to which Costa Rica's devaluations against the dollar, and pari passu, the recent currency fluctuations of some of Costa Rica's trading partners (Germany, Japan, etc.) vis-a-vis the dollar, have compensated for the difference in inflation rates.

43. Between 1970 and the third quarter of 1979 Costa Rica has consistently inflated more rapidly than her trading partners (Costa Rican inflation is measured by the wholesale price index.) The period divides neatly, into two sub-periods from quarter one, 1970 to quarter two, 1974, and from thence to the third quarter of 1979. For much of the first period Costa Rica operated a multiple exchange rate system, finally unifying at the higher free market rate; in the second period the country maintained unchanged its parity against the dollar. In the first period, Q1 1970 to Q2 1974, prices in Costa Rica nearly doubled; prices in the trading partner countries increased by some 50%. In the second period Costa Rican prices increased by almost 90%; trading partner prices increased by 60%. At the end of the entire period the ratio of respective inflation rates was 1.49; in other words, Costa Rica had inflated at half again the pace of her major trading partners.

44. Changes in exchange rates did, to a degree, offset the difference in inflation rates. In the first period Costa Rican devaluations against the dollar coupled with overall trading-partner currency revaluations against the dollar (mostly OECD countries) offset the relative differentials in inflation such that the real effective exchange rate was 10% higher in Q2 1974 than in Q1 1970. Since Q2 1974, however, Costa Rica has not devalued against the dollar and her trading partners, on average have not revalued either. (Numerous fluctuations occurred in parities in this latter period. At the end of the period, some OECD countries, notably West Germany, Belgium, Sweden, the Netherlands, and Japan and revalued vis-a-vis the dollar, whilst the Latin American countries, notably Mexico, Colombia, Venezuela and other OECD countries, notably Canada and Italy had devalued against the dollar). Consequently, with no compensating exchange rate movements, the differential inflation rates did affect the real purchasing parity of the colon. If the 1974 devaluation parity is taken as the authorities' correct judgment of what the real exchange rate should be, then the real effective exchange rate at the end of the third quarter of 1979 was 15% below that level.

45. About 35% of Costa Rica's trade in 1975-77 was with the U.S. (The U.S., in fact, is Costa Rica's major trade partner. The combined CACM, whose parties are fixed to the dollar, had a trade ratio in 1975-77 of about 20%). The colone's purchasing power in relation to the dollar is therefore especially interesting. Over the whole period (1970 to Q3 1979) U.S. prices somewhat more than doubled where Costa Rican prices more than trebled. In the devaluationary first phase Costa Rica devalued against the dollar by 29.4%; the

relatively much greater Costa Rican inflation, however, dampened the rise of the real exchange rate in this period to at its maximum 9%. Since then, with no change in nominal parity the real exchange rate has declined since Q2 1974 by 17%. In fact the interesting phenomenon occurred that the devaluations of 1973 (rather than the unification of rates in 1974) actually placed the country on a higher real effective exchange rate than subsequently experienced. In essence the 1973 average devaluation was more than compensatory for historical differences in inflation between Costa Rica and the USA, whilst the 1974 unification of rates was not. As a result the 1974 unification failed to restore the country's earlier, and higher, real exchange rate against the dollar. In 1979 the average real exchange rate against the dollar had declined by 27% over the average prevailing real exchange rate in 1973. Since December 1973, in fact, Costa Rica has been facing a dollar exchange rate which in real terms has been lower than the exchange rate facing the country in Q1 1970 and considerably lower than the 1973, (or 1974), devaluation parities.

The Trade Regime Exchange Rate

46. In one sense currency overvaluation can occur when domestic inflation rates are much higher than in the rest of the world. In quite a different sense, the pattern of trade arrangements itself can lead to an overvalued exchange rate. When import restrictions outweigh, in quantitative impact, export subsidies, the demand for foreign exchange is dampened and the exchange rate that maintains equilibrium in the balance of payments is lower than it would otherwise have to be. This naturally acts as a general disincentive against exporting activity, as exporters systematically receive less (in domestic currency) for their exports than they would if trade were freed and the exchange rate devalued. At the same time, import substitution is encouraged for those imports which bear high tariffs; and duty free imports (the vast majority of intermediate and raw materials imports in Costa Rica), are subsidized by the low price of foreign exchange.

47. A conservative estimate of the bias against exporting imparted by Costa Rica's trade regime is that the colon is overvalued by at least 18%. This estimate is arrived at 1/ by quantifying the effect of all import restrictions, on the one hand, and all export subsidies on the other, on the demand for foreign exchange. The calculation starts from an assumption of equilibrium in the balance of payments and suggests that if all tariffs, export taxes and export subsidies were removed overnight the colon would have to be devalued by at least 18% to maintain the level of the present deficit. It is thus a measure of the "trade flow" effects of current trading arrangements, and quantifies the degree of bias against exports provided by the present amalgan of commercial policies. It is a conservative estimate for a variety of reasons, the most important of which is that it infers foreign exchange demand from actual import data and does not take into account therefore the effect of high tariffs which effectively reduce demand for certain imports (and hence for foreign exchange). Put differently, in deriving the overvaluation estimate, import-weighted nominal tariffs are used to quantify the flow effects of trade restrictions. If value-added weighted nominal tariffs are used instead, the

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1/ Annex 2.2 explains the methodology, and contains worksheets of the calculations.

degree of overvaluation is found to be 46%. Moreover, this measure of overvaluation does not say anything about the devaluation necessary to reduce the present large balance of payment deficit. If the large deficit were to be reduced, the eventual devaluation would have to be considerably greater. If, for instance, it is hypothesized that the Government "chooses" to reduce the level of the current account deficit from its present level of 14.5% of GDP to a "target" level of 7% of GDP, then an estimate of 34% overvaluation is derived. 1/ These estimates, though admittedly approximate, do point to the fact that the base estimate of 18% overvaluation is indeed highly conservative. Even so, a primary trade regime overvaluation of at least 18% represents a serious, structural disincentive for exporting activity, capturing, as it does the net effect of the entire pattern of Costa Rica's commercial policy.

B. TARIFFS

48. The tariff regime is the most important instrument providing protection to domestic industry in Costa Rica, and thus the chief instrument which fosters an inward-looking rather than externally oriented slant to the pattern of production. The elements of the regime derive, for the most part, from various common market agreements. On the one hand, the system consists of the series of charges that are, or can be, applied to imports from outside the region. On the other hand, the system exonorates from some or all of these charges, a vast number of extra-regional imports, usually on the grounds that they are intermediate or raw material or else capital good inputs to domestic productive activity. The net results are high levels of effective protection for Costa Rican industry, a high import intensity of industrial production, support of an overvalued exchange rate, and in general, the encouragement of import substitution activities at the expense of exporting. The characteristics of the regime are examined in this and the following sections.

Nominal Tariffs

49. In the Costa Rican context four types of charges are, or can be, applied against imports. These are (1) the Common External Tariff (CET) of the CACM; (2) the tariff surcharge of the protocols of San Jose; (3) selective discriminatory consumption taxes; and (4) temporary import surcharges. (1) The Common External Tariff (CET) is the basic building block of the tariff regime in Costa Rica as it has been the major instrument in fostering integration in Central America. Formally instituted at the inception of the market in 1960 the CET was designed to provide for a uniform degree of nominal protection, for market countries, against extra regional imports; by 1966 only 33 products in the standard trade classification did not have common external tariff levels. Each individual tariff in the code consists of two components -- an ad valorem element and a specific element which is a fixed dollar amount charged against each unit of import. The joint effect of the two elements are usually summarized by an "ad valorem equivalent." (2) The Protocol of San Jose was signed in 1969 and implemented in 1970, at a time when common market countries were facing balance of payments problems. The protocol allows for a tariff surcharge amounting to 30% of the total specific and ad valorem tariffs

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1/ This calculation uses import weighted nominal tariffs.

payable. (3) In 1972 Costa Rica introduced consumption taxes on a wide range of final goods. The taxes apply to both regional and extra regional imports with the tax rates generally higher for the latter. This differential between tax rates based on region of origin, acts as a pure tariff element, thus adding to domestic protection. Frequently the margin of discrimination is high. Cheese, fish products, dried fruits, wooden furniture, manufactured wood products, electric signs, microbuses, and refrigerators are all examples of goods where the consumption tax rate for imports exceeds that for CACM products by at least 50%; products with a margin of CACM preference in the 20%-30% range are numerous. (4) Temporary import surcharges are the final taxes discriminating against imports. The current surcharge, levied on CIF import values, apply to some 156 products imported from outside Central America and Panama. The rates vary from 10%-50%; 50% rates fall on such products as meats, cheese, fish, shell fish, bread products, fruit products, chocolate products, cigarettes and manufactured wood products. In general the products subjected to the temporary import surcharges tend to be consumer goods and are frequently those same items receiving discriminatory treatment under the selection consumption tax.

50. The taxes are administered in a cascaded fashion adding an important, though hidden, element of protection to local industry. The selected consumption tax on imported goods is levied on a base of the CIF price plus the relevant tariffs, including the San Jose protocol surcharge. Costa Rica's general sales tax of 8%, when applied to imports, is levied on the base of the CIF import price plus the CET, the San Jose protocol surcharge, and the consumption tax. The effect is a considerable stretching of explicit nominal protection levels. 1/

51. Adding up all the tariffs and related taxes providing protection from imports to domestic producers results in high levels of nominal protection. (High rank correlations exist between nominal and effective protection; See Appendix Table 4.6) 2/ Average tariffs for some 80 manufacturing product

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1/ Consider for instance a good which costs $100 whether produced locally or imported. If the sales tax is 8%, the consumption tax is 20% and the tariff 100%, the imported good will carry $59.2 in consumption and sales tax charges, whereas the local good will only carry $29.6 of the same charges.

2/ Tariff nomenclature is often confusing. "Nominal Legal Ad Valorem Tariff Equivalent" refers to the sum of all the charges that could be legally applied against imports, including tariffs, discriminatory consumption taxes, surcharges etc., expressed as a percentage "markup" on the value of imports. The "realized tariff rate" of Appendix Table 4.1 is the amount of actual duty collected as a percentage of actual imports; realized tariff rates will obviously be lower than the sum of legally applicable rates because a large quantity of imports do not bear these charges. The difference between "nominal" and "effective" rates of protection is well understood: "nominal rates" capture the sum of legally applicable charges to particular goods; the stimulus given to domestic activity by these nominal charges is better captured by measuring the proportional excess of domestic value added over value added which would obtain if trade were free. This latter protective measure is the "effective rate of protection".

groups, based on 1972 data 1/ are presented in Appendix Table 4.1 and the frequency distribution drawn up in Table 3.1 below. Twenty-four percent of the product groups have nominal tariff equivalents of more than 100%. A further 29% of the product groups are between 50% and 100%. The remaining products groups have nominal protection below 50% with the most frequent tariff incidence lying between 25% and 50%. When these estimates are aggregated further the average nominal tariff equivalent for manufacturing is 106%.

Table 3.1: NOMINAL AD-VALOREM TARIFFS, 1972

FREQUENCY DISTRIBUTION

Ranges	Nominal Legal Ad Valorem Tariff Equivalent, 1972 (#occurence)	%
$0 \leq t < 25$	12	15.0
$25 \leq t < 50$	26	32.5
$50 \leq t < 75$	15	18.8
$75 \leq t < 100$	8	10.0
$100 \leq t < 125$	7	8.8
$125 \leq t < 150$	5	6.2
$150 \leq t <$	7	8.7
TOTAL	80	100.0

Source: Table 3.2, Statistical Appendix

1/ Developing current or more up to date information on tariff protection is impossible under the present system because the development of tariff equivalent information requires time consuming, data intensive, unit value computations in order to estimate the specific tariffs. The Costa Rican government, for example, along with SIECA, is preparing for the upcoming CACM discussions on the CET by examining 1972 trade and tariff information. Unfortunately no more recent information is available.

52. Table 3.2 contains two sets of averages at the two digit CIUU classification level; the first is a simple ad valorem equivalent (including all tariff and tax elements) and the second is the ad valorem equivalent minus the tariff exemption granted in 1972. 1/ The manufacturing average is high and there is considerable variance in the tariff equivalent rates across industries. The manufacturing estimates range from 148% nominal protection for food products to 17% for basic metals. Within the food beverages and tobacco industries are heavily protected activities such as distilled spirits (388%), tobacco

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1/ The estimated levels of nominal protection presented in Table 3.2 and Appendix Table 4.1 are generally higher than those of previous studies for two reasons. First, previous studies have not adequately incorporated the San Jose protocol surcharge, the discriminatory selective consumption taxes, and the temporary import surcharge effects. These effects can be of considerable importance in discriminating against imports. Secondly, the previous studies have used import weights to compute tariff averages. Consequently, there is an underestimation of nominal protection. Those tariffs which effectively exclude imports are not measured at all, and those tariffs which most effectively impede imports are given the lowest weights. Present estimates, aggregating to the two digit level, use value-added weights, incorporating data from manufacturing census materials.

Table 3.2: NOMINAL AND NET NOMINAL TARIFF EQUIVALENTS FOR INDUSTRY GROUPS, 1972

CIIU	Description of Sector or Industry	Nominal 3/ Ad-valorem Equivalent %	Net 4/ Tariff Rate Equivalent %
11	Agriculture and Livestock 1/	59.6	47.5
12	Forestry 1/	22.6	12.7
13	Fishing 1/	26.1	25.6
21	Coal 1/	3.0	1.0
22	Petroleum and Natural Gas 1/	7.0	2.5
29	Other Mining 1/	60.6	43.9
31	Food Products, Beverages, and Tobacco	148.4	122.1
32	Textiles, Apparel, and Leather	103.9	83.0
33	Wood Products and Furniture	144.5	60.6
34	Paper Products and Printing	59.5	39.1
35	Chemicals	61.1	45.9
36	Non-Metallic Mineral Products	37.0	23.3
37	Basic Metals	17.0	7.1
38	Metal Products and Machinery	40.1	27.2
39	Miscellaneous Manufacturing	70.3	57.8
	Manufacturing Average 2/	106.0	80.5

1 Indicates that the weights for computing the average for the 2 digit CIIU level were the sum of exports and imports for the 4 digit levels. All other aggregations use value added weights.

2/ Value added weights at the 4 digit CIIU level were used.

3/ Includes all boarder and other taxes (San Jose Protocol, Specific Consumption etc.).

4/ Nominal legal ad valorem equivalent minus tariff exemptions.

Source: Bank Staff calculations based upon MEIC data. See Annex Table 3.2.

(267%), and bread products (207%). The wood products industry is also afforded high levels of tariff protection, 145%, with the most heavily protected product group within that category being wooden furniture and accessories (176%). The textiles industry in Costa Rica is important and, as seen in Table 3.2 heavily protected with an average nominal tariff equivalent of 104%. Within textiles the highest nominal protection is afforded to tapestries and carpets (201%) and knit fabrics (137%). Among those industries with the least amounts of nominal import protection are medicines and pharmaceuticals (19%). In general, those products not produced on a significant scale in Costa Rica exihibit the lowest rates of nominal import protection.

53. Three caveats should be borne in mind in interpreting these estimates. First, although these are estimates of full tariff equivalents, it does not follow that domestic prices are greater than international prices by the amount of the full legal protection. In Costa Rica there is much evidence of tariff redundancy in a wide range of products, including beer, textiles, apparel, leather shoes, wooden furniture, tires and refrigerators. Competition among firms in an industry within the CACM, technical progress and improved productive efficiency, and competition from imports exempted from tariffs, are all possible reasons why domestic prices might be lower than the "maximum" allowed by the protective regime. The phenomenon of redundancy serves no useful economic purpose and should, where identified, be eliminated.

54. The second caveat in interpreting these estimates is that the estimates are for 1972. There is reason to believe that the levels of nominal protection have been reduced since then. In the first place, some selective consumption tax rates have been lowered; second, a few of the temporary import surcharges have been lifted. And third, and most important, inflation has eroded the tariff equivalent of the CET. The CET, it will be recalled, consists of an ad valorem element which varies, in terms of import duties collected, with the prices of imports, and a specific element which remains a fixed charge irrespective of the level of import prices. As the region's import prices have risen with the general worldwide inflation, so the fixed charged portion of the tariff has gradually reduced the actual rates of tariff imposition, or, in other words, the "ad valorem equivalents," have declined. Inevitably also, the specific charges, although still important, have counted for progressively less in import duty collections. (In 1967 they amounted for 71% of total import duties payable, in 1977, 51%.) 1/ An indication of the effects of inflation on tariff rates is contained in Appendix Table 4.2. A rough guess would place the average legal tariff (value added weighted) at between 60-70% in 1979.

1/ One of the proposals of the SIECA in the reform of the CET is to eliminate the specific tariffs and rely instead on consolidated ad valorem tariffs. Whilst this would dramatically simplify the system, the use of ad valorem tariffs does not possess the same phase-out quality of specific tariffs, a quality of some merit in a situation where tariff reductions are politically difficult. Moreover, insofar as SIECA's proposals suggest conversion of specific tariffs into the ad valorem equivalent of 1972 levels, they will overstate the actual nominal protection which is obtained today.

55. The third caveat is that these are estimates of total legal nominal protection and do not necessarily bear much relation to the tariffs and taxes actually collected in practice. In fact, most imports are exonerated from paying tariffs. First, all CACM imports entry duty free; second, Government agencies, religious institutions, and foreign diplomats, pay no dues on their imports; third, firms which hold benefits from the CACM industrial incentive legislation import certain intermediate and raw material inputs and capital goods without paying tariffs. The last phenomenon is of considerable importance and to this we turn next. It should not be hastily surmised, however, that the exoneration of large quantities of imports from payment of duties weakens the protective impact of the CACM and national border tax arrangements. On the contrary, where the legal tariffs on final goods have been applied and where, at the same time, imported inputs have been exonerated, levels of effective protection have climbed very high indeed.

C. TARIFF EXONERATIONS AND INVESTMENT DEDUCTIONS

56. In addition to imposing the CET and other tariff charges of the CACAM, Costa Rica subscribes to, and implements, the Central America agreement on fiscal incentives for industrial development. 1/ These agreements were instituted by the desire to provide protection to the nascent industrialization effort of the member partners. The principal benefits to firms from the CACM fiscal incentives scheme involve (1) exoneration from tariff payment for raw material, intermediate and capital goods, which are imported from outside the region and (2) income tax exemptions and deductions for certain types of capital expenditure. Of these, the tariff exonerations have a higher fiscal importance. In 1975-76, for instance, 92% of the value of exemptions were exonerations from the payment of import taxes, whilst 8% was attributable to income tax exemptions and deductions. 2/ As in the case of the CET, so with the fiscal incentives: changes to the agreements have to be negotiated between the member partners of the community. The does impose the costs of rigidity and slowness to the process of change.

57. Several criteria regulate the exact benefits that individual firms enjoy. These are summarized in Table 3.3. In general, however, firms are classified according to the product produced, the use of local raw materials, the proportion of value added generated in the activity, and whether the firm or activity is new. On the basis of how they rank according to these criteria firms become eligible for different types of benefit. Once eligibility is established, firms negotiate and sign an Industrial Contract with the Government.

1/ The body of regulations governing the fiscal incentives are commonly known as REIFALDI (Reglamento de Incentivos Fiscales Para el Desarrollo Industrial).

2/ See Ministerio Hacienda-Cepal "Costa Rica: Incentivos y Exoneraciones Fiscales," unpublished report, February 1978. See also Joel, C. "Tax Incentives in Central American Development." Economic Development and Cultural Change," January 1971.

Table 3.3: SUMMARY OF PRINCIPAL BENEFITS UNDER THE CENTRAL AMERICAN AGREEMENT ON FISCAL INCENTIVES FOR INDUSTRIAL DEVELOPMENT

I. CLASSIFICATION OF FIRMS BY GROUPS

GROUP A

(a) Producers of industrial raw material or capital goods.
(b) Producers of consumer goods, containers, or semi-manufactured products, provided that at least 50% of the total value of raw materials, containers and semi-manufactured products utilized be of Central American origin.

GROUP B

(a) Producers of consumer goods, containers or semi-manufactured products which:
  (i) generate important foreign exchange benefits and a high value added in the industrial process.
  (ii) Utilize in high proportion, in terms of value, raw material, containers and semi-manufactured products of Central American origin.

GROUP C

(a) Those which do not fulfill the requirements of groups A or B.
(b) Those which only assemble, pack, can, cut, or mix products.
(c) Those specifically named in Annex I of the Agreement.

II. PRINCIPAL BENEFITS 1/

	GROUP A	GROUP B	GROUP C
1. Customs Duty exemption on machinery and equipment	100%	100%	100%
a. New	10 years	8 years 1/	-
b. Existing	6 years	5 years	3 years
2. Exemption of customs Duties on raw materials and semi-manufactured products and packaging materials	100%	100%	
	5 years	3 years	
	60%	50%	
	8 years	5 years	
	40%		
	10 years		
3. Tax exemption on fuel and lubricants	100%	100%	
	5 years	3 years	
		50%	
		5 years	
4. Income tax			
a. New	100%	100%	
	8 years	6 years	
b. Existing	100%		
	2 years		
5. Tax on net worth	100%	100%	
	10 years	6 years	
a. New	100%	100%	
	10 years	6 years	
b. Existing	100%		
	4 years		

1/ In practice these benefits are extended indefinitely.

2/ Extended to 10 years if involving the production of industrial raw material or capital goods using raw materials of which at least 50% is of Central American origin.

58. Ostensibly, firms enjoy their fiscal exonerations for limited periods of time. In practice, however, the time limits for import duty exonerations have no practical meaning. Extensions for individual firms have become a matter of course and in Costa Rica, no firm has ever been denied an extension. A protocol, signed in August 1977 by the members of the CACM in fact legally extends until 1983 the period of exoneration for firms whose benefits are about to expire. Subsidies which were thus originally intended to be temporary, to provide new firms and activities some start up advantages, have taken on a semi-permanent character.

59. Whilst the procedure for obtaining an industrial contract is cumbersome and time consuming practically all medium and large sized firms in Costa Rica have gone through the process. Approximately 800 manufacturing firms in Costa Rica possess industrial contracts with many firms possessing more than one contract. Each contract generally covers a product group or a line of production by a firm. The firms with contracts, accounting for the major share of Costa Rican industrial production, include some small firms. The current rate of new contract approvals is about 120 a year, and nearly all projects which are submitted are eventually approved. The provisions in an industrial contract are spelled out in rather great detail. When firms wish to alter lines of production or imports, in line with changing business conditions, contract modifications must be negotiated with the Ministry of Economy, Industry and Commerce (MEIC).

Import Duty Exemptions

60. In the last three years, more than three quarters of Costa Rica's imports have entered the country without paying any duties. About 18% have been imports from CACM countries, a further 16% have been exempted for reasons of institutional status (e.g., government agencies, foreign consulates, etc.) but the vast majority, 42%, of total imports, have been exempted from tariffs due to the industrial incentives program (Table 3.4). In view of the high prevailing tariffs this import duty incentive is especially important. It has allowed high levels of effective protection for certain finished products. It has fostered an import intensity of production for the local market. It has restrained the growth of intermediate goods industries in Costa Rica. Moreover, because the exchange rate is overvalued, and producers pay less for their imports than they otherwise would, the incentive contains an important subsidy component.

61. In 1978 a total of 685 firms -- about 85% of firms having industrial contracts -- benefitted from duty free imports. Most of the import duty exemptions are made for the imports of raw materials and other intermediate goods imports. The exoneration for these imports accounted for a full 87% of the total exemptions in 1978 (Table 3.5). Capital goods imports, while important in absolute terms and normally subject to lower tariff rates, accounted for 12% of the value of import duty exemptions. The industry benefiting most from the exemptions has been the chemicals industry, accounting for nearly one-half of the exonerations in 1978. The category for basic metals, metal products and machinery was the second most benefitted industrial group with 28% of the total import duty exonerations. In general, those industries where

Table 3.4: TOTAL IMPORTS UNDER DIFFERENT TRADING AND TARIFF EXEMPTION ARRANGEMENTS, 1976-1978
(Millions US$)

	1976	1977	1978
Imports subject to tariffs	182.7	234.0	295.5
(% of annual total)	(23.7)	(23.3)	(24.9)
Imports exempted from tariffs due to importation from CACM	136.1	172.2	210.5
(% of annual total)	(17.7)	(17.1)	(17.8)
Imports exempted from tariffs due to industrial incentive programs (REIFALDI)	313.5	440.5	506.7
(% of annual total)	(40.7)	(43.8)	(42.8)
Imports exempted from tariffs due to other legal exceptions	138.1	158.5	171.8
(% of annual total)	(17.9)	(15.8)	(14.5)
TOTAL IMPORTS	770.4	1,005.2	1,184.5

Source: Departamento de Transacciónes Internacionales del Banco Central.

Table 3.5: IMPORT CATEGORIES RECEIVING REIFALDI IMPORT TAX EXONERATIONS BY INDUSTRY CATEGORIES, 1978

Importing and Incentive Receiving Industry Categories	Number of Firms Receiving Duty Exemptions	Value of Imports on which Exonerations were Granted (US $000)	Import Tax Exonerations: for Packaging Materials (US $000)	for Raw Materials and other Intermediate Imports (US $000)	for Machinery and Equipment (US $000)	for Combustibles and Lubricants (US $000)	Total Import Tax Exemptions (US $000)
Food products, beverages and tobacco	87	35,514	550	4,064	1,556	583	6,170
Textile, apparel and leather	109	25,586	-	4,017	481	169	4,499
Wood and wood products	38	9,158	5	925	288		1,218
Paper, paper products, and printing	46	21,093	1	4,104	402		4,507
Chemicals and petrochemicals	162	193,228	412	43,021	3,258	397	46,692
Nonmetallic mineral products	32	26,663	-	808	2,601	84	3,410
Basic metals, metal products, and machinery	167	130,255	32	26,346	1,501	119	27,879
Other manufacturing	13	1,902	20	35	222	-	277
Cooperatives, special projects, and other laws	--	19,487	690	2,432	1,215	406	4,337
TOTAL	654	462,885	1,709	85,755	11,523	1,758	98,988

Source: Departamento de Control de Exenciones, MEIC.

Costa Rica appears to have a comparative advantage (food products, beverages, apparel, leather, wood and wood products) have benefitted least from the import tax exonerations; in 1977 they received only 10% of all exemptions. The subsidy component of the incentive has thus clearly been directed to support import substitution, and much less to those industries which over the medium to long term would provide the greatest net foreign exchange benefits to the economy.

62. The fiscal cost of import duty exonerations is substantial. In 1977, for instance, had all tariffs on extra regional imports been paid, the government would have received 22% of the value of extra regional imports as duties; in the event, with the exemptions available, the realized rate was 6.1%. These ratios represent declines from earlier years of the decade, because of the decline in the ad valorem equivalent of the CET (See Appendix Table 4.5). In 1978 the total value of import exemptions was US$99 million; adding the accompanying exempted San Jose protocol charges, the fiscal cost can be estimated at about US$132 million. This represents 4% of 1978 GDP, 28% of the current revenues of the central government in 1978, and about four-fifths of the overall deficit of the central government in 1978. Of course these are upper bound estimates; the actual fiscal cost would no doubt be smaller because of some goods would not have been imported if the duties had to be paid. 1/ Nevertheless the fiscal loss is considerable.

63. Not all intermediate and raw material imports are exempted from tariff payments. Certain of these inputs to productive activity are produced within the region and utilize the protection afforded by the instruments of the CACM. Naturally, decisions as to which imports are eligible for tariff imposition is one of the most important decisions in Costa Rican as well as CACM commercial policy. It is at this point that protection is extended to local intermediate goods production and it is at this point that would-be exporters and domestic producers may, because of local inefficiencies, face exaggerated costs in their purchases of inputs. Judging by the degree of intermediate sector development in Costa Rica, the process of intermediate goods protection has not advanced very far. As the system by which intermediate goods are protected is, however, an integral part of the trade regime any discussions on reform of the CET should simultaneously consider the consequences of a more rigid application of high tariffs on intermediate goods. One of the proposals of SIECA for consideration in the reform of the CET is that tariffs of up to 30% be imposed on intermediate goods entering the region.

1/ It is unfortunate to note that fiscal cost estimates do not exist in the Ministry of Finance. The information in this paragraph and the data in Tables 3.5 and Appendix Table 4.7 are computed from information collected in the Ministry of Economy, Industry and Commerce (MEIC). Yet the MEIC is no longer compiling such information for budgetary reasons. As of 1979 it will be impossible to ascertain what is transpiring with the REIFALDI import tax encentives and estimate their fiscal cost.

64. In order to achieve the favored position of producing intermediates for a guaranteed market, producers must get their products listed on one of two schedules of imports not eligible for tariff exemptions. The first schedule is a regional list (called the Resolution 26 List) and includes those products thought to be in sufficient supply to satisfy the entire regional demand. The second is a national list and includes a smaller number of products thought to be available in sufficient supply to satisfy Costa Rican, but not CACM, demands. The more important Resolution 26 List is made up of products of firms who successfully petition SIECA that in terms of quality, ampleness of supply, and price their products can satisfy the regional market. The important price criterion stipulates that the domestic price of the product should not exceed the CIF import price by more than the amount of the tariff. In other words, tariffs exercise an important role in determining permissible price differences and frequently, as has been demonstrated, the tariff levels are very high.

65. Several examples were given to the mission where prices of locally produced intermediate goods were higher than their international equivalents. Moreover, producers complained that once a product attains Resolution 26 status, it is difficult to remove it from the list, even though circumstances may have changed. If the existing firms producing a good can not satisfy all the CACM demand, if the quality of the product proves inadequate, if punctuality in meeting orders is not kept, rarely is permission granted to import the product duty free. Since imports are necessary, the full duties are paid. 1/ To the extent that tariff redundancy exists, a firm forced to import intermediate inputs, paying the full tariffs, is even more discriminated against by overall commercial policy. One manufacturer interviewed described his nascent extra-regional export drive as risky and uncertain due to the possible CACM production of one key component. Since the regional market was not large enough to justify a plant of economic scale, CACM production would result in pricing his product out of export markets. The operation of the system of intermediate goods protection thus occasionally gives rise to quite pernicious consequences, and if the system were more actively implemented, might prove fatal to the changes of developing a competitive extra-regional export thrust. 2/

1/ This situation has frequently occurred in the apparel industry, where local fabrics have sometimes been unavailable in sufficient quantity. As a consequence, apparel manufactures, producing for the local market, have had to import fabrics, paying tariff equivalents ranging up to 100%.

2/ Of course the point of this argument is that exporters should not have to face exaggerated costs of inputs. One may have less sympathy for highly protected producers of final goods for the domestic market who argue against extension of protection to intermediate good producers. This group would naturally prefer not to see their profits and effective protection rates reduced by a wider system of intermediate good protection.

Income Tax Incentives

66. Two legally sanctioned avenues exist for Costa Rican firms to reduce their income tax liabilities. The first is under the aegis of the CACM incentive schemes, where firms which sign industrial contracts obtain certain tax advantages; the second falls under Costa Rican national legislation. In the CACM case, the tax advantage may consist in simple tax credits against taxes payable (this is quite rare), a deduction for reinvested profits, and/or an allowance for depreciation. In the national scheme firms are allowed a deduction for reinvestment or a depreciation allowance. While the income tax incentives are dwarfed in relative importance by the import tax exoneration, firms can do much to finance expansion of plant through the income tax deduction. Moreover, these deductions can appreciably reduce a firm's tax liabilities. The CACM income tax incentives in recent years for instance, have reduced income tax liabilities by 12%-18% for those firms holding industrial contracts (Table 3.6).

Table 3.6: TOTAL INCOME TAXES AND EXEMPTIONS FOR FIRMS HOLDING INDUSTRIAL CONTRACTS 1974-76

(in millions of ¢)

		EXEMPTIONS			
Year	Income Tax Owed	By Contracts	For Reinvestments	Total	As % of Taxes Owed
1974	306.9	2.6	52.4	55.0	18
1975	325.6	1.5	36.0	37.5	12
1976	376.5	2.5 1/	53.9 1/	56.4	14

1/ Assuming exemptions by contracts and for reinvestments are 5% and 95% respectively of total exemptions.

Source: CEPAL and Bank staff estimates.

67. The clearest effort of the income tax incentives, and especially those granted in the CACM legislation, has been to foster capital intensive production methods. The reinvestment incentive of the CACM allows firms to deduct that part of their income dedicated to capital investment from their tax base. In effect, the reinvestment benefit is equivalent to a provision allowing firms to claim 100% capital depreciation on assets, in the same period as purchase. This represents, on the average, a 40% subsidy to capital (the average profit tax rate). The provision goes further however in that it then permits normal depreciation allowances to be claimed through the accounting life of the assets, thus granting the same benefits twice over. The benefits are not so generous under the national legislation; if the reinvestment benefit is taken normal depreciation allowances are not then allowed.

D. EXPORT INCENTIVES

68. The Costa Rican Government has established three distinct export incentive instruments. These are (a) the "CAT" (Certificados de Abono Tributario), a straight subsidy program for non-traditional exports outside the CACM, (2) the CIEX (Certificados de Incremento de las Exportaciones), a tax credit subsidy based upon the previous years increase of exports, and (3) various duty free import provisions involving drawback schemes. In general, these incentives are not of sufficient magnitude to offset the discrimination against exports resulting from the exchange rate overvaluation and export taxes. Only in unusual circumstances with drawback imports, at the overvalued exchange rate, can export incentives overcome the distortions militating against exports.

"CATS"

69. The CAT export subsidy is a tax credit of 15% of the export f.o.b. value (unlike schemes in other countries where it is granted on a basis of value added). 1/ The CAT is awarded to firms exporting non-traditional exports (with a few exceptions), to markets outside the CACM. The instrument is transferrable and can be sold in a well developed market (e.g., the stock exchange). CATs can only be used a year after the date of issue and thus they are sold at a discount, with the market prices reflecting present value. At current levels of interest of 15%-20%, the effective CAT rate is 12.5%. This is not in itself sufficient to overcome the cost disability imposed on exports through an exchange rate overvaluation estimated at about 18%. The CAT incentive, from a strictly economic viewpoint, should not be considered as a subsidy. Its economic function is to offset, although it does not do so sufficiently, other distortions in Costa Rican commercial policy.

70. The first CATS were issued in 1973. Since then the amount of CATs awarded has grown dramatically. CATs issued in 1977 had a face value of ¢ 90 million; the issue declined in 1978 to ¢ 79 million after roasted coffee was removed from the list of eligible products. The growth in non-traditional exports to countries outside the CACM accelerated in the period 1973-1978--after the CAT scheme was initiated--and several exporters mentioned to the mission that CATs were important for their export effort. Nonetheless, only part of Costa Rica's non-traditional export effort is presently being underwritten by CATs. In 1978 non-traditional exports were slightly over one billion colones; issued CATs were 79 million colones, giving a realized CAT rate of 7.7%, in contrast to 15% which would, in theory, apply if all non-traditional products received the incentive. Several reasons exist for this disparity. Some products have been ruled ineligible, some firms cannot qualify, some firms evidently do not apply for CATs because the application procedure necessitates divulging information considered sensitive. In 1978 it can be surmized that about half of Costa Rica's non-traditional exports were being exported with the full cost disability of the overvalued exchange rate, unmitigated by use of the CAT incentive. While the CAT is obviously useful, the example demonstrates the superiority, because of its generality, of the exchange rate incentive rather than specific subsidies.

1/ There is also a 12% rate, but this rate is not commonly used. Until 1978 only three exporting firms used a CAT rate of 12%; all other firms benefitting from the CAT subsidy enjoyed the 15% rate. Also it should be noted that if national transportation is used for the export, the base on which the CAT is calculated increases. In this case it exceeds the 15% export value by the amount of the transportation cost.

Table 3.7: REALIZED CATS RATES ON NON-TRADITIONAL EXPORTS TO EXTRA-REGIONAL MARKETS, 1974-78

Year	CAT Awarded (¢000)	Non-Traditional Exports to Extra Regional Markets 1/ (¢000)	Undiscounted Realized CAT 2/ Rate (%)	Discounted Realized CAT 3/ Rate (%)
1974	1,651	240,523	0.7%	0.6%
1974	6,581	395,243	1.7	1.4
1975	18,451	506.760	3.6	3.2
1976	40,223	745,877	5.4	4.7
1977	90,058	978,846	9.2	8.0
1978	79,030	1,026,098	7.7	6.7

1/ Non Traditional Exports eligible for CATS; CENPRO estimates.

2/ CATS awarded divided by non-traditional exports.

3/ Since the CATS are not redeemable as a tax credit for a one year they are sold at a discount in the market. A 15 percent rate of discount, has been used for making the calculations.

Source: CENPRO, Bank staff calculations.

71. A wide range of products have benefitted from the CAT export subsidies. As Table 3.8 shows, exports receiving CATs are by no means restricted to manufactured products. In fact beef products, agro-industry products, plants, flowers, and non-traditional agricultural export products were the categories receiving the most CATS in 1978.

72. Of the criteria governing the issue of CATs, several can be distinguished for comment. A necessary condition for approval is that the firm concerned would not be able to export without the CATs, or in other words, "need" must be demonstrated. 1/ The criterion effectively misses the point that the CAT is a remedy for a general economic disincentive, expressed by the trading regime overvaluation of the exchange rate, and not a specific mercantalist device to land exports outside the country or a welfare scheme. Moreover, the economic implications of this requirement is that efficient producers are, or should be, penalized. There should be no place for this attitude in

1/ This requirement has led to the creation of some ingenious accounting practices.

Table 3.8: CAT EXPORT INCENTIVES GRANTED BY SECTOR, 1973-78
(₡ 000)

Sector	1973	1974	1975	1976	1977	1978
Agro-Industry	43	2,381	2,517	3,148	6,735	11,222
Food Products		324	453	726	1,221	7,029
Electric and electrical products	36	711	2,240	2,997	4,268	5,056
Wood and lumber products	372	479	2,043	1,192	1,829	1,863
Leather	309	50	588	2,385	5,824	4,686
Textiles and apparel	29	171	199	916	1,126	971
Chemicals and pharmaceuticals		176	727	625	2,713	2,942
Metal products and machinery		87	1,763	2,703	3,253	4,289
Agricultural products		360	1,545	3,530	6,920	6,891
Plants and flowers	862	826	2,075	3,439	6,803	7,643
Shellfish				342	1,276	2,368
Beef products					7,345	15,394
Young heifers					5,528	2,685
Pure breed cattle		133	104	590	1,114	496
Ground and roasted coffee			2,478	13,998	30,339	
Plastics			20	56	1,015	1,587
Others		883	1,701	3,575	2,750	3,906
TOTAL	1,651	6,581	18,453	40,222	90,059	79,028

Source: CENPRO.

an export promotion effort. Other criteria governing the issue of CATs are that domestic value added has to be at least 35%, individuals applying for CATS must be Costa Rican or else residents of at least five years and companies must have at least 60% Costa Rican equity ownership. A foreign firm with perhaps 10% local value added but receiving a 15% subsidy on total sales through the CAT is the type of case which the rule is designed to avoid. In practice however the rules are both cumbersome and time consuming and lead on occasion to some financial minipulation by firms. Consideration should be given to introducing greater flexibility in the operation of the CAT system. Rather than focus on individual firms, a more reasonable procedure would be simply to indicate a range of products for which CATs are to be granted. To avoid possible resource misallocations, the range of products should be as wide as possible. Third, most firms which enjoy the CAT incentive receive the same single CAT rate of 15%. There has been some suggestion that this be changed to a multiple rate system to allow discrimination in favor of firms (or products) which are perceived to generate greater national benefits than others. It is recommended that this course not be taken and that a single rate be maintained. A multiplicity of rates is likely to slide into a bureaucratic nightmare as all firms attempt to justify their petitions for the highest rates. Moreover, excessive regulation, in this as in other fields, is likely to set the export promotion agency which administers the incentive in an adversary role with exporters--an effect well worth avoiding.

Drawback Scheme

73. The law creating the CAT incentives also established a drawback system for export-related imports. Under this system an approved firm can import raw materials and other components duty free as long as the final product is exported. Firms can also import capital goods tariff free if the equipment is to be used to produce exported products. Like the REIFALDI incentives, to receive the drawback incentive a firm must first present an application to the authorities. The application process can be exacting. There is a provision in the law stating that the Minister can and should deny tariff exemptions under the drawback scheme for the importation of any product which is produced under "satisfactory conditions" in Costa Rica. Such a restriction places a cloud over the intent of any drawback scheme which is or should be, to establish a free trading regime for exports. Moreover, the drawback is limited to a period of 90 days between the date of the import and the corresponding export. Furthermore, the exporter must give a guarantee in cash or negotiable securities, eqivalent to 100 percent of the customs duties payable on the goods imported. As these are presently constituted, the incentive components of the drawback provision differ little from some of the REIFALDI incentives. Given the fact that fewer restrictions apply to the REIFALDI incentives, the drawback has no special appeal. It is not surprising therefore to find only a small number of firms operating with drawback privileges. By the end of 1978 only 34 firms had been able to take advantage of the system.

"CIEXs"

74. The CIEX export incentive, is much less important that the CAT scheme is and provides a tax credit based upon an individual firm's increases in exports from one year to the next. In the first one and a half years of their existence, the total value of CIEX tax credits awarded amounted to a miniscule 3.7 million colones.

Export Taxes

75. While the CAT, the sales, and selective consumption tax exemptions for export, the CIEX, and the drawback scheme are all fiscal incentives for export, there are some explicit fiscal disincentives as well. Costa Rica applies export taxes to all exports. The highest taxes apply to the major traditional exports. There is a 9-1/4% tax on the exports of coffee, a 13% tax on cocoa, a 1% tax on bananas, and a variable export tax on sugar, depending on sugar prices, of up to 18%. All other exports pay a 1% export tax. In sum, export taxes contributed about 17% to Central Government revenues in 1978. 1/ Export taxes have for the most part been levied for revenue reasons; their rates have sometimes varied to tax windfall gains in the export sector, and to sterilize foreign exchange receipts when commodity export prices have risen suddenly. They do, however represent a disincentive to the export effort. In particular it is recommended that the universal 1% export tax be removed. It should be noted that only in the case of bananas and coffee do Costa Rican exports account for more than 1% of total world trade in these products. Costa Rican export taxes cannot therefore be levied to support international prices of export products, or to augment the total foreign exchange revenue received by the country.

Financial Incentives

76. Financial incentives, in the sense of preferential credit arrangements specifically for export activities, have not been amongst the most important instruments of policy addressed to encouraging exports of non-traditional goods outside the region. Until recently, Costa Rican financial policy has been to provide cheap credit for a variety of productive activities. The rate structure of the banking system has been a complicated ensemble of rates differing by subsector of lending, source of funds, size of loans, the size of the borrower's enterprise, the type of the project and the destination of the borrower's sales. Within this complex of rates, industry has not been especially favored vis a vis other productive activities (rather, the converse). On balance, however, the rate structure for all productive activity has consistently been well below the social opportunity cost of capital. During part of the seventies they were negative. The policy of cheap credit encouraged firms to accumulate fixed capital and as has been noted, substantial excess capacity now exists in Costa Rican industry. Low interest rates have also encouraged high leveraging in firms' financial structures.

77. The only forms of preferential credit (vis a vis lending in other productive sectors) that have existed in industry have been special export and pre-export credit lines. In the interest rate reform of October 1978, the small implicit subsidies involved in these credit lines were removed, and export financing is now available at the same terms enjoyed by other activities. Whilst suggestions for the reform of "old" system are thus moot, nevertheless it is instructive to examine how that system worked.

1/ It is worth noting that from 1975 to 1978, export taxes, average 18.5% of Central government revenue, whilst import taxes, over the sum period, averaged 15% of Central government revenue. Nearly 13 points of the export tax average were taxes on coffee, bananas and sugar.

78. Export credit instruments were first established in the early 1960's. Pre-export financing was established in 1970. These credits were available for export related financing for non-traditional exports to all countries (including the CACM). To obtain pre-export credits firms presented orders from prospective buyers to commercial banks which then provided credit of up to 100% of the value of the order; terms varied between 180 days to a year, but in essence pre-export credits were revolving credits which could be subsequently renewed on the presentation of new overseas orders. The export credit, on the other hand, was granted after presentation of export documents (export license, customs declaration, and the registration of foreign exchange earnings), with up to 100% provided by the commercial bank and with terms of 180 to 270 days. A firm which had previously received a pre-export credit could convert that into an export credit. Interest rates charged on these transactions were the same for each type of credit. In the 1960's, before the introduction of the pre-export credit, there was little deviation on the rates charged for financing export sales and the rates charged for other forms of industrial credit. These varied between 6% and 8%. From 1970 to 1976 the interest rate charged was 7%--a spread of about 1% to 3% below the highest rates charged for other industrial activities. The interest charges rose to 8% in 1976, and the favorable rate spread varied between 2% and 4%. Finally, after the interest rate reform of 1978 all industrial and export credit lending rates were unified at 3 points above LIBOR, and all implicit subsidies thus were removed. The export credit in essence allowed the exporter to grant normal trade financing to counterpart buyers. The risks of the operation were borne by the exporter. Guarantee practices varied between banks; all banks required a letter from the exporter to the amount of the transaction drawn in favor of the lending bank. Some banks required further fudiciary or mortgage guarantees, and some insisted that trade acceptances and the credit standing of the importing party be verified by correspondent banks.

79. The total amounts of credit provided by those lines grew quite rapidly. In 1965, for instance, export financing represented 6% of the value of non-traditional exports; in 1977 the ratio had climed to 18% of such exports. Pre-export financing in 1970 averaged 5% of exports made in that year and 8% of exports made in 1977. Unfortunately, no breakdown exists of the proportion of exports financed which were exports to the region or else to third countries. In 1977 pre-export and export credits represented slightly less than 40% of the total new non-investment credit extended by the commercial banks to the industrial sector. The credits were, however, preponderantly directed to a few large borrowers. In a 1978 survey of the operation of the export-credit facilities, the Central Bank noted that some 55 firms, which together accounted for 50% of the country's non-traditional exports, had received 90% of the export credits between 1974 and 1977 and about 80% of the pre-export credit. Within this sample further concentration was noted in that several large firms, about 20% of the sample, received 80% or more of their financing needs, whilst the remaining firms consistently received less. (In fact, several cases were noted of firms which had received export credits more than the value of their export sales.) The reasons suggested for this concentration were (a) that large firms were better informed about the existence of the export and pre-export credit programs, (b) larger firms had more established commercial contacts abroad and could more readily fill the documentation requirements, and (c) that these firms represented less of a credit risk to the lending banks.

80. The analysis does raise questions about the future of export credit lending in Costa Rica. First, it may be noted that the amount of exports financed by these lines have not been very large--less than 20% of the value of exports--despite the fact that the banks have had the capacity to lend up to 100% of the export value. Successful exporting abroad will require that exporters have much greater access to export finance, enabling them in turn to offer trade financing of reasonable duration and attractive terms to their counterpart buyers. Second, the instruments available are indeed limited in scope. The exporter bears all the risks and no insurance is available in the case of importing party default. Greater association in correspondent banking arrangements on the part of the banks, where correspondent banks verify the trade acceptances and even enter into the financing arrangements should be encouraged. Several countries, in fact, have developed export banks which discount trade acceptances and assume the task of collection, thus reducing the risks to the exporter. Third, it is clear that substantial distortions have existed in the allocation of export and pre-export credits. The channeling of credit to large well-established enterprises has discriminated against the medium and small-scale exporter. Short of granting incentives to the banks to service the needs of medium to small-scale exporters it is difficult to see how this problem can be solved. Nevertheless, procedures should be sought to improve the equity of access to export financing, for, as we saw earlier (Chapter II) medium and small firms vigorously participate in the export trade.

E. NET IMPACT OF THE INCENTIVE SYSTEM

81. One measure of the net impact of the incentive system has so far been provided by calculating the degree of overvaluation of the exchange rate. Effective protection and effective subsidy rates are a second measure, which indicate the degree of anti or pro export bias that may exist in the incentive system. In addition, effective protection rates -- that is the stimulus provided by protection expressed as a fraction of value added -- provide a rough indication of the strength and magnitude of resource pulls among the different sectors of the economy. For the more aggregative analysis of effective protection the first part of this section relies on recent work by CACM analysts. Unfortunately the mission was unable to underake a comprehensive review of effective protection in Costa Rica, as the data base for such an exercise was essentially lacking. A more limited analysis was performed, however, using as examples activities where local and international price comparisons could be made. This analysis is covered in the second part of this section.

82. Table 3.9 summarizes the results of the recent Brookings Institution's study, and Table 3.10 draws up the frequency distribution of effective protection rates for manufacturing activities in Central America, along with the recent proposals for change as presented by SIECA. Several points emerge. First, the levels of effective protection in Costa Rica are quite high. Based on full legal tariffs the Brookings estimate of effective protection for manufacturing was 164% (value added weighting). The Sieca figures, with arithmetically weighted averaging yield for Costa Rica an estimate of 101.4%; this is considerably higher than the average for the region of 70.0%; in fact, in 33 of the 69 industrial categories for which these rates have been calculated, Costa Rica has the highest rate of protection in the region. Second, both the Brookings data and an examination of SIECA's figures confirm the common wisdom

Table 3.9: EFFECTIVE RATES OF PROTECTION FOR MAJOR INDUSTRIAL SECTORS, 1972

Sector	Effective Rates of Protection Based on Full Nominal Tariffs (%)	Effective Rates of Protection Based on Realized Tariffs (%)	Nominal Ad-Valorem Tariff Equivalent (%)
Traditional manufacturing 1/	231	86	139
Intermediate goods 1/	77	20	55
Metal-mechanic 1/	62	21	39
Average 1/	164	59	106

Note: 1/ Value added weights were used in computing the averages.

Source: Columns 1 and 2. Alan I. Rapoport, "Effective Protection Rates in Central America," in William R. Cline and Enrique Delgado, editors, Economic Integration in Central America, (Washington, D.C.: The Brookings Institution, 1978), pp. 702-703. The nominal legal ad-valorem tariff equivalent estimates, presented in column 3 are Bank staff estimates based upon MEIC data.

Table 3.10: FREQUENCY DISTRIBUTION OF EFFECTIVE PROTECTION RATES FOR ECONOMIC SUBSECTORS IN CENTRAL AMERICA 1/

	Central America Present Rates %	Costa Rica Present Rates %	SIECA's Proposals %	SIECA's Proposals 2/ Adjusted (%)
ERP < 50	57.7	47.8	59.7	0.0
50 ≤ ERP < 100	21.8	9.0	20.8	44.2
100 ≤ ERP < 150	5.1	10.4	5.2	54.5
150 ≤ ERP < 200	6.4	14.9	5.2	1.3
200 ≤ ERP < 250	3.9	4.5	3.9	0.0
250 ≤ ERP	5.1	13.4	5.2	0.0
(Mean)	(70.0)	(101.4)	(67.9)	(103.6)

1/ SIECA compiled statistics for 92 subsectors of activity for the five Central American countries, yielding 346 data points of effective protection measurement. The frequency distribution for all Central American countries is shown in Columns 1, 3, and 4, whilst present rates for Costa Rica are shown in column 2.

2/ Adjusted for exoneration of import duties.

Source: SIECA, Anteproyecto de Sistema Tarifario Uniforme (Guatemala: SIECA, October, 1978). Current rates are 1972 estimates.

that the incentive system is most favorable towards protecting consumer goods industries and least favorable to capital goods industries. Third, both studies show substantial dispersion in effective protection rates signifying highly unequal resource pulls in the economy, departing quite significantly from a "second best" optimum of uniform effective protection for manufacturing. Fourth, the estimated levels of protection in both studies are unrealistically low. 1/

83. Recently SIECA has been charged with developing proposals for a new tariff regime. The main features of the SIECA proposal are (a) the elimination of the specific duty component of the tariff schedule expressing all rates on an ad valorem basis; (b) nominal tariffs ranging from 5% to 30% on raw materials and intermediate goods; (c) effective rates ranging from 50% to 150% for finished goods; and (d) adopting the Brussels tariff nomenclature. The summary results are contained in Table 3.10. It should first be noted that SIECA proposals are designed to produce a level and pattern of effective protection almost exactly the same as already exists. Second, proposed protection levels are very likely underestimates. (See footnote 1/ this page.) Adjusting the SIECA proposals for one source of underestimate--the exemption of tariff charges on imported intermediate inputs--results in an average effective protection of more than 100%, as opposed to an unadjusted average of less than 70%.

84. The use direct of price comparisons for both final products and intermediate inputs would overcome some of the inherent difficulties in making estimates of effective protection from tariff information. Table 3.11 below

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1/ The Brookings study presents estimates based on realized tariffs, and the SIECA study is entirely based on realized tariffs. Realized rates do not provide an accurate representation of domestic and international price differences. Both studies use implicit import weights in calculating nominal protection at the four digit level, both for legal tariffs and for realized tariffs; as noted before, this underestimates nominal protection levels. The San Jose surcharges, the selective consumption tax and the method of computing the sales tax have all evidently been neglected in the Brookings study, further underestimating nominal protection. The SIECA study makes the unwarranted assumption that all imported intermediate goods bear duties; removing this assumption will blow up the effective protection estimates considerably.

Table 3.11: MEASURES OF PROTECTION FOR SELECTED COSTA RICAN MANUFACTURING PRODUCTS, 1979[1/]

	Nominal Implicit Protection t_j (%)	Effective Rate of Protection g_j (%)	Maximum Total Export Subsidy Effect $c_j + d_j - t_j^x$ (%)	Effective Rate of Subsidy for Export s_j (%)	Effective Rate of Subsidy for Export, including Drawback Subsidy Effect s_j^E (%)	Net Effective Rate of Protection g_j' (%)	Net Effective Rate of Subsidy For Export s_j' (%)	Anti-Expo Bias (%)
Bottled baby food	55	148	16.0	35	52	106	12	113
Canned fruit	76	299	16.0	35	52	232	12	264
Beverage flavoring	66	159	13.7	26	32	115	5	133
Spun polyester and cotton fabrics	29	42	17.0	18	27	18	-2	24
Knitted fabrics	98	458	17.0	23	36	364	2	435
Athletic shoes	56	205	13.7	30	37	154	8	175
Plywood	17	25	12.9	19	21	4	-1	6
Leather, upholstered furniture	59	228	17.9	26	44	172	5	202
Nitrate ammonia	22	129	23.7	55	197	90	29	74
Formula fertilizer for coffee trees	105	v.h.[2/]	23.7	55	197	v.h.[2/]	29	v.h. [2/]
Small automobile tires	43	140	19.5	27	51	99	6	113
Fiber cement products	47	83	15.4	19	27	52	-1	64
Household refrigerator	25	64	20.1	29	57	36	7	35
Refrigeration system	34	106	20.8	33	71	72	11	73
Electric light bulbs	64	439	19.4	34	66	348	11	405
Small batteries	67	178	18.8	20	34	131	-0.2	158

1/ The methods of estimation and data collection are detailed in Annex 3.2
2/ Indicates very high effective protection. Value added in international prices was calculated to be negative.

Source: Bank staff calculations.

presents estimates of effective protection, using such price comparisons to the extent possible. 1/ The very high rates of effective protection observed in Table 3.11 are in great part due to the permission given to firms to import inputs duty free. Even after the exchange rate overvaluation is taken in to account, as presented in the estimates of net effective protection, the protection afforded to many manufacturing firms for producing for the domestic market can only be considered as overwhelmingly large. Only in the cases of plywood (4%) and spun polyester and cotton fabrics (18%) are the incentives for domestic market production not very high.

85. All the products listed, with the exception of coffee tree fertilizer, are exported. Nevertheless, the subsidies for export, while they can be significant, do not offset the incentives toward producing for the domestic market. The maximum total export subsidy effect (Column 3 of Table 3.11) consists of three components -- the present value of the CAT subsidy, the drawback subsidy, arising from the ability to import duty free at an overvalued exchange rate, and the prevailing export tax disincentive. In most cases, the sum of these subsidies is less than the degree of exchange overvaluation; only in the few cases where there are substantial imported components is there a net export subsidy. Considering the CAT and export tax subsidy effects on a value added basis, effective rate of subsidy for the products in question ranges from 18%-55%. 2/

86. Comparing the effective rates of protection and the effective rates of subsidy for export, it is clear that there exists an anti-export bias for all the products examined. This anti-export bias in the incentive system can be considerable. The incentives for industrial development in Costa Rica clearly favor import substitution activities to the detriment of being able to take advantage of export opportunities. Export activities for the same firms and products are simply not as profitable, on the average, as producing for the domestic market. For Costa Rican manufactured exports to experience rapid growth, the tilt in the incentive structure will need to be modified.

1/ These estimates were made by the IBRD mission and detailed methodology is contained in Annex 2.2. Interviews with firms producing most of the products were conducted. Detailed price information was collected on domestic product and import prices. In several instances where intereviews were not conducted, direct price comparisons were made from unit value information provided by the firm. In some cases gaps in knowledge on input price differences had to be filled with tariff information. Costs and input structure information, not generated through the interviews was obtained at the firm level from annual reports submitted to the MEIC. The products chosen for the exercise reported in Table 3.11 above were selected in order to present a wide range of manufacturing products. Consequently it is felt that the results possess something of a representative nature. On the other hand the firms producing these products for the most part tended to be large modern industrial firms; other smaller firms may have encountered greater difficulty in getting privileged access to exonerated imports.

2/ These estimates have been made with the assumption that all tradeable inputs can be imported duty free. To the extent that full drawbacks are not permitted, our effective export subsidy estimates are overestimates.

CHAPTER IV: EXPORT ADMINISTRATION

CENPRO

87. The various incentives stimulating import substitution activity are most usually administered directly by the Ministry of Economy, Industry and Commerce (MEIC). Export incentives on the other hand are usually administered by the Centro de Promociones de Exportaciones (CENPRO). In this section the broad institutional aspects of the export administration process are examined.

88. The CENPRO was created in February 1968, with widespread authority to develop the export sector in Costa Rica. This includes formulating export projects, providing technical assistance to exporters, coordinating private and public sector export activities, recommending export incentives to the Government, collaborating with the different branches of the Government on matters of commercial policy, and generally acting as the arm of Government defending and promoting export interests in Costa Rica. The management of CENPRO answers to a board comprised of the Ministers of Economy, Agriculture, Planning, and Foreign Affairs, a representative of the Central Bank, and representatives of the private sector. The Minister of Finance is not represented. The executive board appoints the executive director of CENPRO, and in practice the Ministry of Economy, Industry and Commerce has the most direct links in terms of oversight, administration and collaboration with the institution.

89. The first few years of CENPRO's existence were uneventful, and the institution only began to exercise a more powerful role after the passage of the law for the development of exports in 1972. This law established the CATS, the drawback and the CIEX systems. CENPRO became the institution which administers these incentives. Formally, the Minister of Economy, acting upon the recommendation of the board of directors of CENPRO grants the CATS and CIEX's and administers the drawback benefits. In practice, CENPRO's recommendation is equivalent to the actual decision. In addition to the granting of the various export incentives, CENPRO has recently begun to undertake certain promotion and export related activities. These include (a) providing exporters with information on foreign markets, (b) surveying exporters' needs and problems, and (c) promoting Costa Rican export products by particpating in foreign trade fairs and exhibitions. CENPRO maintains in several countries one or two officials, who, though formally attached to the corresponding embassy or consulate, are in fact CENPRO's representatives, working full-time under its guidance and instructions. Overseas offices of this kind have been established in Miami, New Orleans, New York, San Juan (Puerto Rico), and Panama. Diplomatic representatives double as export attaches in Madrid, Brussels, and Taiwan. CENPRO's main office in San Jose has a total complement of 55 persons, and the agency had a budget in 1979 of ¢ 5 million.

90. How successful has CENPRO been? Opinions differ. The mission heard several exporters who had used CENPRO's services say that the agency had provided valuable assistance by way of market information and of guiding them through

the paper work required to obtain export incentives. On the other hand, several expressions of disappointment were voiced--about the slowness of the effort to promote non-traditional exports, about the marginal role CENPRO appeared to be playing, about the "bureaucratization" of the agency, and about the effectiveness of such promotional instruments as participation of international fairs and the establishment of export attache and consular offices abroad. The divide appeared to be between those who had a direct and positive contact with the agency and those who did not and lamented its failure to exercise a wider and more decisive impact.

91. Limitations have existed to the role CENPRO has played. It has not, for instance, developed a thoroughgoing critique of the anti-export bias of the system, nor developed studies which would have brought to the attention of policymakers the pervasive difficulties to exporting in a highly protected environment. Lacking this systemic review, the institution's lobbying efforts have fallen short of being comprehensive. In lieu of a broad declaration of policy supported by background analysis, the institution has limited its export promotion to administrative actions, of the order of, for instance, shepherding exporters through the paper work of exporting and pointing exporters to the relevant sources of export credit. These activities are not without value. But if one of the major sources of "the export problem" is correctly diagnosed to be the system of incentives, a useful purpose could be served by the institution, in accordance with its legislative mandate, advising policymakers of this fact, and indeed, commenting from time to time on policy proposals that damage the exporting environment.

92. The effects of participating in international fairs and of setting up commercial attache offices abroad have not yet been analyzed by CENPRO and little hard information exists on this subject. Some export orders have been received from buyers who have viewed Costa Rican products abroad. CENPRO has indicated 1/ that it is well satisfied with the commercial attache offices in San Juan, Puerto Rico, and Miami, where export orders have been generated through attache efforts. It is not clear, however, that the objectives of the attache program have been well defined. The prevailing view is that attaches should, somehow, generate export sales for Costa Rica. In one manifestation--that of making attaches "salesmen" for Costa Rica products--the experiment is unlikely to succeed. The attaches do not have the direct contact with potential exporters in Costa Rica that will provide them with the intimate knowledge of products, prices, quality, delivery times, etc. to enable them to discharge this function properly. 2/ They could perhaps be better used as market researchers and to facilitate contacts between

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1/ Annual Report, 1978.

2/ It was recognized early, for instance, that attache efforts were hampered by a lack of information as to what was available for export from Costa Rica. Accordingly a list of products was drawn up with available supplies. Unfortunately, the list contains no price information, lacks an indication of quality of products offered, provides no information on the firmness of the supply figures. For overseas buyers this information is likely to be of some importance.

domestic producers and foreign buyers. Amongst objectives that might be considered for the program are: (a) the researching of selected product markets in different countries--this would include analyses of quality required, pricing of products, typical buyer contacts (be they wholesaler, retailer, government procurement agencies, etc.), brand policies (many overseas buyers prefer to market under their own brand names), and the minimum level of supply necessary to interest buyers; (b) facilitating contacts between Costa Rican exporters and their counterpart buyers and assisting Costa Rican buyers in seeking information that will help their export effort, such as customs procedures, etc.; and (c) encouraging foreign investment activity in Costa Rica. Naturally, fulfillment of these objectives entail, a particular professional expertise, and the staffing of attache posts should accordingly be reviewed.

93. On the positive side, CENPRO has correctly perceived that analysis of domestic supply conditions and remedying the specific problems that exporters face is an important component of a successful export thrust. Correspondingly, and in conjunction with the Ministry of Economy, they are engaged in a series of subsectoral analyses of the manufacturing sector to distinguish the key bottlenecks (be they technology, scale of plant, market organization, availability of credit, contact with foreign buyers, etc.) which hamper the export effort. These studies are likely to be extremely valuable, if well done. In this regard it is recommended that the team in the Ministry of Economy be strengthened with experts of a broad crosscountry experience in the sectors being examined, who can apply that experience to help set the subsectors on a competitive export footing.

94. It should be recognized, however, that CENPRO's budget has been small, and it has not had the manpower resources to excercise a more dynamic role in the export sector. Institutions such as CENPRO can play a useful role in subsidizing the flow of information to exporters and in acting as expediters of the exporting process. At the same time, institutional promotion and education of the private sector of export "opportunities" are no substitute for measures which reduce costs and increase the profitability of export activities. Accordingly, the success of export promotion agencies crucially depends upon the environment in which they operate. In Costa Rica, dissatisfaction with CENPRO's activities could more appropriately be directed at the significant anti-export bias implicit in the present policy environment than at any specific failings of the institution.

The Paperwork in Exporting.

95. A field that merits attention from the Government of Costa Rica in their efforts to expand the country's exports, is the reduction of the requirements and the simplification of the procedures for exporting. Though it is not possible to quantify their effects in terms of exports foregone, there can be little doubt that the numerous requirements that the exporters have to fulfill and the complex and lengthy procedures envolved in an export operation--especially when compared to sales in the domestic market - act as a deterrent to exporting and probably render less effective the fiscal incentives that are offered to certain types of exports. CENPRO has been recently attempting to improve the

existing situation. But the difficulties that exist and the actions necessary to overcome them are largely beyond CENPRO's statutory jurisdiction and authority, and therefore CENPRO's actions are necessarily limited. For this reason, it appears that a necessary condition for simplifying the present system will be for the Government to consider the problem an important matter of high level economic policy and take organizational steps to resolve it.

96. The present system is characterized by multiplicity of document requirements, each fulfilling a separate function, but which could easily be combined into general purpose forms. Moreover, there is no single place where exporters can obtain the forms they need, and exporters have to visit several agencies to process applications to export once the forms have been obtained. This too can be simplified.

97. Common to all exports is a requirement that an export license from the Central Bank be obtained; this procedure is very simple and the application, once approved, serves as a license to export. Having obtained the license, the exporter must engage a customs broker to prepare a "export policy;" these documents are given in turn to the transportation company which prepares the bill of landing and presents the documents and goods to the customs office for revision, inspection and final clearance of the shipment. Up to this point, the procedures are more or less common to most countries. Further delays occur in Costa Rica, for the most part, in additional documentation that must be provided prior to obtaining an export license. Different exports are treated differently depending (1) on destination of exports, (a) be it exports to the CACM or (b) be they exports to countries applying to generalized system of preferences (GSP), and (2) on the nature of the product.

98. Exports to the CACM require an additional custom form, made standard by the CACM to facilitate intra-regional trade and statistical registration. (This form is purchased at bookshops and presents no special problem.) Exports to GSP countries requires a certificate of origin of the product, which is issued by CENPRO. Neither documentation requirement is particularly cumbersome, though they should be included in the overall simplification suggested below. The most burdensome requirement is that certain exports requires specific permits from a variety of sources before goods may be shipped from Costa Rica. Products covered by these regulations include cattle, other kinds of livestock, beef, wood and wood products, and numerous others. The processing of specific permits is not centralized in any office, but involves a number of steps--ranging from four to six--from the presentation of application to the reception of the permit; moreover, the same agency will often use different forms for applications and permits, thus causing delays, increasing expenses, and multiplying the opportunities for error. The tabulation below summarizes the requirements and procedures involved in the simplest and most complex cases of an export operation. 1/

1/ The table is developed from a study done by CENPRO.

a) The simplest case: not requiring any additional document:

Document	Agency	No. of Steps
Export Licence	Central Bank	7
Export Policy	Customs Agent	1
Bill of Landing	Transporter	1
All three documents	Customs Office	4
		13

b) The most complex case: requiring Certificate of Origin and a specific permit:

Document	Agency	No. of Steps
Certificate of Origin	CENPRO	5
Specific Permit 1/	Ministry of Economy, Industry and Trade	9
Export License	Central Bank	7
Export Policy	Customs Agent	1
Bill of Landing	Transporter	1
All five documents	Customs Office	4
		27

1/ Product under export restriction.

99. There are several relatively easy steps the Government could take to simplify the procedures and requirements. The first would be to make the export license a document of multiple functions, serving as an application for the license--as at present, also allowing it to serve as an export policy. In Costa Rica, as in many other countries, the export license is used for recording the export for customs purposes, i.e. for purposes of tax and statistical registration. Currently the Central Bank sends a copy of every export license to the customs office of the shipping port, only to advise the customs authority that the license has been granted. There seems to be no particular difficulty for making the license--suitably modified if necessary--serve the function of an export policy as well. As the Central Bank is a fiscal agent of the Government, and collects the taxes on exports, the suggested change does not seem to involve any matter of jurisdiction or authority. Regular reporting from the custom office to the Central Bank as to whether a particular export has taken place already exists. A second set of measures would be (a) to make all special permits of the same format and a document of double function--application and permit at the same time-- and (b) to establish a central office where all special permits are distributed and approved. The Minstry of Economy, Industry and Commerce would be the logical place to locate such an office.

Further Elements in Export Promotion

100. Numerous areas could obviously be singled out for Government attention to improve the institutional and infrastructure environment for exporting. Unfortunately, the mission was unable to explore as many of these areas as appeared relevant. Two areas can, however, be distinguished for further study.

101. First, communications. Costa Rica is presently well-served by telephone, telex, and cable facilities; and airlinks to the U.S., Europe and Latin America are well established. However, transportation of goods from the country to overseas destinations often raises problems. The shipment of goods to the U.S. is accomplished in small cargo quantities, by ships calling in an other ports in the area to complete their cargoes. Links to Europe, Caribbean and to Latin America south of Panama are, however, more tenuous, as shippers require greater volumes of cargo than presently supplied to make their runs profitable. In this regard, the suggestion is made that formation of trading companies which can pool cargos of export orders may serve to reduce the reluctance of shippers to include Costa Rican ports on their regular runs.

102. The second area of interest is finance and insurance. As noted in the section on financial incentives, the country has developed local currency credit lines for financing pre-export and export activity. The export financing facility does allow exporters to offer credits to importers in buying countries, although it is not known how widespread the practice of offering credit abroad is. It would be useful to inquire into the use of this instrument and establish whether "suppliers credit" facilities need to be strengthened. As the lender of credit, the exporter assumes risks of default, and insurance against this hardly exists in Costa Rica. A second source of financing exports is through the medium of banks, which can directly or through correspondant arrangements offer credit to overseas buyers--with the banks assuming risks of default. Although this instrument is less common than the traditional trade financing, it is useful where the amounts of credit involved are large, the terms of credit are long, and where a significant strain would otherwise be placed on the exporters financial resources. The mission met no instances in Costa Rica where arangements of this nature had been entered into. Both the state-owned commercial banks, and the privae financieras in Costa Rica have a long tradition of financing import purchases, but much less experience in financing non-traditional export sales. Accordingly, it would be useful to develop these instruments to ensure that exporters are not penalized by lack of access to the traditional financing arrangements of trade. The subject of export credit insurance also deserves further study.

CHAPTER V: LIBERALIZATION

Introduction

103. The analysis presented thus far in this report has been building into one major theme. The incentive structure is highly distorted, forcing an inward looking import substitution development at the expense at an outward looking export effort. Whilst the strategy followed for the major part of two decades has yielded important benefits, there are signs that the first easy phase of import substitution has come to an end, and the common market can no longer provide the vigorous impulse for growth and development that motivated its creation in the first instance. (This, it should be stressed, is a conclusion of general application to all the market members.) 1/ Costa Rica is too small a country with too narrow a resource base to continue foregoing the advantages of a wider participation in international trade. The country has now developed some of the industrial, institutional, infrastructural and skill bases to fully devote its talents to diversifying its exports and compete for markets outside the region. This is not only a logical course, it is the only course which can reasonably assure continued high growth and the raising of welfare standards of the majority of the people. 2/

104. The principal recommendation of the Mission is that the Government should change the principal components of the present incentive system, remove the biases against exporting, and create a stable policy environment where there is an unquestioned perception of a strong Government commitment to expand exports and keep export activities profitable. 3/ This strategy has been followed with excellent results in a number of countries--particularly in Western Europe (Federal Republic of Germany, Italy, Norway) and in East Asia

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1 See, for instance "Central America: Current situation of the Common Market" IBRD 1979.

2/ It is not simply the particular conditions of the CACM which motivate this conclusion. In a recent summary of experience a reviewer noted "Import Substitution (IS) regimes tend to become increasingly biased toward IS over time as export earnings fail to grow as rapidly as demand for imports, as the incremental value of output per unit of investment decreases with small sizes of domestic markets, and as opportunities for further IS diminish rapidly. Also, IS regimes often tend increasingly toward quantitative restrictions upon imports, and fairly detailed quantitative controls over domestic economic activity. All of these phenomena seem to result in a fairly unsatisfactory rate of economic growth for the countries undertaking the policies. A simplistic summary of experience with IS for most developing countries would be that, after opportunities for "easy" IS were exhausted, growth rates have tended to slow significantly, either secularly, or in a stop-go pattern as foreign exchange availability has determined the rate at which the economy could grow." Anne Krueger: "Interaction between Inflation and Trade-Regime Objectives in Stabilization Programs". Unpublished manuscript.

3/ Again it must be emphasized this recommendation is of general application to all the members of the CACM.

(Japan, Taiwan, South Korea, Singapore)--since World War II. The essence of the strategy is to allow market mechanisms to signal profitable opportunities to producers, to encourage efficiency in resource use (with efficiency gains projecting the country on a higher growth path) and to allow the industrial structure to evolve in ways consistent with comparative advantage. The premise here is that the private sector will respond after an initial period of adjustment to a clearly declared strategy of export orientation backed by the requisite policy changes. Indeed, there is abundant evidence that the private sector in Costa Rica does respond to price and fiscal incentive schemes; the response of the manufacturing sector to the incentives of the common market is one example, and the rapid growth of non-traditional exports to third countries after the introduction of the CATS scheme is yet another (demonstrating, in effect, specific producer responsiveness to appropriate export incentives). 1/

105. The conditions for success in this strategy are several. First, the exchange rate must be kept at a level, relative to domestic wages and other costs, where exporting is profitable. Second, the anti-export bias of the trade regime should be removed by lowering tariff barriers and, at the inception of the export thrust, exporters should be assured access to duty-free imports. Third, macro-economic policies consistent with the objective of avoiding high domestic inflation (particularly after devaluations, but also over the longer term) should be followed. Fourth, the Government will need to adopt an active role in part to ameliorate the costs of transition and in part to assure that institutional and infrastructural developments keep pace with the changing needs of the economy.

106. The pace of the transition from an inward looking strategy to a liberalized trade regime deserves comment. On the one hand lies a sudden sharp break with past policies; on the other lie various degrees of gradualism. In some countries (eg. Chile, Turkey) which have had a history of difficult adjustment problems and, in addition, a history of failed liberalization attempts, it has been argued that only a sudden dramatic reorientation of policy is likely to command credibility, and indeed holds much chance of success. Minimizing the costs of adjustment is, however, an important objective in the transition period. Although all the evidence on this subject is not yet in, there is a presumption that a gradual phasing of policy changes is more consistent with this end. Firms in uncompetitive lines are allowed

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1/ The point deserves mention as the mission discovered strong private sector disquiet about the ability of Costa Rica to undertake a major effort to expand exports abroad. Reservations included the beliefs that Costa Rican products were uncompetitive, that entrepreneurs lacked an "export mentality," that the workforce was undisciplined, that the advantages gained from being a member of the CACM would be precipitately destroyed by a novel export orientation, and that any reform would be a passing phase engendering only severe short-term disruptions. These concerns, to which various degrees of credibility may be attached, and the strength with which they are held, underscore the need for a full and comprehensive effort to develop private sector support for any new initiative.

greater lead times to adjust to changing conditions, employment shifts to new competitive export enterprises are achieved more gradually and without sharp short-term declines in employment levels, the foreign exchange constraint is less binding if investment and raw material import needs are phased over a period of time, and real wage and income distribution consequences are less severe in the short term. In Costa Rica, where there is no history of failed liberalization attempts, where much of industry owes its development to protective instruments, and where there is a substantial integration in and orientation towards the regional market (and thus where the absolute costs of adjustment are likely to be high), the argument for gradualism is indeed the more compelling. The design of a transitional program allows flexibility in timing as well as in the order of policy change. This flexibility can be used to sequence adjustments in a manner that will minimize disruptions.

The Exchange Rate

107. The centerpiece of suggested reform is a change in the exchange rate. As has been demonstrated, the real effective parity of the colon has declined continuously since the last devaluation in 1974, and the system of incentives has led to a trade regime overvaluation of at least 18%. This represents a serious discentive to exporting. No comparable incentive to the exchange rate exists which in its power and simplicity can so effectively signal to producers the gains to be made in exporting.

108. Consequently it is recommended that a single discrete devaluation be instituted. An initial large devaluation has the virtue of clearly announcing the Governments's commitment to an export strategy, as well as securing the change in relative prices that is at the heart of a new incentive framework. Insofar, however, as devaluations bring in their wake inflations, and wage and cost inceases may over time erode the real effective parity of the exchange rate, the Government should stress its commitment to keeping the exchange rate at a level which makes exporting attractive. In practice this would mean the adoption of a crawling peg system. A crawling peg, with some discretion left in the hands of policy makers concerning the timing and magnitude of exchange rate changes (e.g. as in Brazil or Colombia) is preferable to a steady, advertised-in-advance depreciation in the process of liberalization (i.e. such systems as are or have been used in Argentina, Chile, Peru and Uraguay). These latter systems invite speculative capital movements and export deferrals. Further exchange rate changes should, however, promptly reflect changes in the underlying wage and cost environment.

Tariff Dismantling

109. The dearth of new import substitution opportunities (without recourse, that is, to even higher levels of protection), the small size of the regional market, the costs of protection to the regional consumer, the virtual condemnation of Central American economies to declining growth paths if the present pattern of protection continues, and the increasingly difficult external positions wrought by import substitution policies all unite to form a compelling case for tariff liberalization. Tariff dismantling will thus be a necessary complement to exchange rate changes in encouraging the flow of activity away from import substitution enterprises towards efficient, competitive, export oriented manufacturing concerns.

110. This said, it must be noted that obstacles exist to any rapid elimination of tariff barriers. The tariffs applied by Costa Rica derive from the general agreements of the Common Market, and tariff reductions will need to be negotiated at the level of member Governments. Even assuming agreement to reduce tariffs, this process of negotiation and change is likely to take time. Second, it has been noted in Chapter II that much of Costa Rican industry is reliant upon protection for continued profitability and on the regional market as an outlet for their products. These enterprises are likely to be particularily affected by any dramatic reduction in tariff levels, and the social costs of transition to a more liberal trading regime are thus likely to be exacerbated. Third, in Costa Rica's present circumstances of severe external disequilibrium, tariff cutting will have the undesirable side effect of reducing the domestic currency price of imports, leading to a worsening of the trade balance in the short run. In these circumstances, a program of graduated transition might best be advised. Indeed, import liberalization lends itself to a delayed sequencing in the series of adjustments, whilst other measures can act earlier and more directly to secure the desired increase in exports. 1/

111. Whilst wholesale tariff dismantling can not be recommended at the time of devaluation, nevertheless some tariff cutting can be pursued. As much of the point, it should be made clear by the Government that further tariff cuts are likely, but are being held in abeyance to allow producers to adjust to the new conditions.

1/ In the Brazilian and Colombian attempts to stimulate non-traditional exports, for instance (and even in Korea in 1964), there was little initial impetus to massively reduce protection to truly import competing industries. Rather the focus was on devaluation and on the provision of other export incentives (e.g. in the case of Colombia, CATS; in the case of Korea and to a lesser extent Brazil and Colombia, heavy credit subsidies to exporters plus tax rebates) Carlos Diaz-Alejandro makes many of these points in his review of liberalization and stabilization attempts in his survey article "Trade Policies and Economic Development" in "International Trade and Finance" edited by P. Kenen, 1975. See also Don Keesing "Trade Policy for Developing Countries" IBRD Staff Working Paper 1979 and Ronald McKinnon, "Foreign trade regimes and economic development: A review article" Jounal of International Economics, August 1979.

112. There are, in principal, two ways in which the initial tariff cut might be accomplished. The first is by across the board reductions, reducing all tariffs by a certain percentage (as was, for instance, practiced in the gradual elimination of industrial tariffs within the EEC). This method has the virtue of ensuring that all effective rates of protection will fall by the same percentage as the decline in nominal rates. The second method is to reduce the high effective protection tariffs first, and then progressively scale down other tariffs. This is useful if it is perceived that there are difficulties to reducing all tariffs at the same time. The very high dispersion of nominal and effective rates of protection and the fact that the Government may prefer to exercise some selectivity in tariff cutting to take account of higher adjustment costs in particular industries are reasons for preferring the second route. Naturally, in this exercise the full ad valorem tariff equivalents--including the San Jose protocol surcharge, the discriminatory consumption taxes, and the method by which the sales tax is computed--and not simply the nominal tariff or realized tariff level, should be focused on. In view of the variety of instruments affording protection, flexibility thus exists in the ways in which tariff protection may be produced, e.g., reduce the discriminatory element in consumption taxes and the protocol surcharge first.

113. Although highly detailed policy prescriptions on which tariffs to cut is beyond the scope of this report, one abritrary rule might be to scale down in the first instance full nominal ad valorem tariffs to a maximum range of 40%-50%. The sectors which would be most affected by this are agriculture, food products, textiles, wood products, leather and footwear, paper products, and chemicals; many of these sectors are ones in which it can be argued that Costa Rica is well placed to achieve export success. Such an initiative would not be too onerous for, it will be recalled, there is considerable redundancy in the specific tariffs on particular products in these sectors and that the full ad valorem equivalents on which this prescription are based have probably declined due to inflation since 1972. This measure could be followed by an announcement of further tariff cuts allowing a maximum ad valorem equivalent of, say, 30% in the following year and soon.

114. Even if full tariff cutting is not engaged upon at the inception of this exercise, it will be crucial to the success of the export promotion effort to ensure that exporters continue to have access to duty free raw material and intermediate good imports. Exporters will be placed at a significant disadvantage if they have to purchase inputs of low quality at inflated costs. The proposal to raise protection levels on intermediate goods should be resisted.

Macro-Economic Policies

115. Well planned and soundly conceived macro-economic policies play an extremely important role in ensuring the success of a liberalization program. If domestic demand pressures are not controlled by appropriate monetary and fiscal policies, the ensuing inflation and pressure on external accounts and the country's reserves can easily imperil the liberalization effort. 1/ Exporters are no longer able to predict their costs and earnings with reasonable degrees of certainity. Scarce financial and foreign exchange resources may become increasingly preempted by the public sector, and the need for stabilization creates uncertainty as to whether the commercial policies will not be suddenly and sharply reversed. The need for careful economic management once the liberalization process is underway is thus fairly well established.

116. A more fundamental question is, however, whether initial environments of severe macro-economic difficulty offer propitious conditions for attempting the liberalization of the trade regime. Since Costa Rica presently finds herself in such an environment, the point merits some attention. The question has no easy answers. Superimposing a stabilization program upon a liberalization program exacerbates in many ways the tensions of the latter. The restructuring of activity from import substitution to exporting involves many economic dislocations and social hardships and these, for instance, are not relieved by simultaneous deflationary policies aimed at reducing the level of demand. It is very difficult when running a stabilization program to engineer the relative

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1/ Several instances are documented in fact of countries which have begun liberalization programs, but which programs have failed because of inadequate macro-policies. (Chile 1959, 1965; Colombia 1957, 1965; Brazil 1957; Korea 1961 etc.) For an extensive analysis of stabilization and liberalization programs, see Krueger: "Foreign Trade-Regimes and Economic Development: Liberalization Attempts and Consequences." National Bureau of Economic Research 1978.

price changes which are at the heart of a successful liberalization. 1/ The desire to reduce import tariffs, for instance, runs counter to the need to reduce the level of imports. Stabilization programs usually begin with a depleted foreign exchequer and a strict need to control the expansion of credit. In shifting the structure of productive activity in a liberalization program, on the other hand, access to foreign exchange and to credit are vital necessities for existing and potential exporters.

117. At the same time, very few liberalizations have taken place which did not start in an atmosphere of difficulty. 2/ Although there have been many failures, there have been some important successes (Korea 1964, Chile 1975, Brazil 1964). Key to these successes have been the effective use of the exchange rate. The initial devaluations have been large and the real effective parities have been maintained at appropriate levels thereafter. (Conversely the failures have most often been due either to failures to devalue sufficiently at the beginning, or else too rigid an adherence to a fixed rate followed by a rapid overvaluation of the real value of the currency.) The successful "liberalizers" also show greater success in controlling inflation. In this respect, timing has been of some importance. When stabilization programs have already been rewarded by a slowing in the pace of inflation, subsequent liberalization programs (formed by devaluations cum removal of trade barriers) have stood a better chance of being sustained over the longer term.

1/ Devaluation is the key instrument to achieve the relative price changes that signal the enhanced relative profitability of exporting. The difficulty here is that stabilization devaluations have different desired effects from liberalization devaluations. Stabilization devaluations are, in their first round impact, inflationary. As import prices rise, pari passu with devaluation, the decline in purchasing power through this inflationary mechanism partially secures the deflation in aggregate demand which underlies the successful stabilization program. Liberalization devaluations on the other hand, prefer to avoid large rises in import prices; they are "compensatory" in intention with tariff cuts seeking to offset the import price rise of the exchange rate change. The reasons why a liberalization devaluation does not look towards a general increase in import prices are essentially two: (a) the liberalization devaluation seeks to lower the relative price of imports vis a vis exports as a major way of changing the bias of the regime. Keeping domestic currency import prices the same (by tariff cuts at the same time as devaluation) whilst raising the domestic currency price of exports (by devaluation) secures this effect. Put differently, the attempt is made to make the net devaluation for exports greater than that for imports; (b) an increase in import prices, unmatched by compensatory tariff cuts, directly increases costs of those imports which are necessary inputs to exporting as well as stimulates demands for higher wages. The resulting rise in producer costs erodes exporters' margins and to this extent stabilization defeats the purposes of liberalization. In sum, the devaluation instrument has two different ends to accomplish, depending on the purpose for which the devaluation is instituted, and these roles are not strictly compatible.

2/ See Krueger pps. 218-243 op. cit. Also Diaz-Alejandro op. cit.

118. Certain emphases and direction can be given to the standard instruments of deflationary policy when liberalization is attempted at the same time as stabilization. It would be useful to develop mechanisms for allocating scarce credit and foreign exchange to the export sectors. The starting point for this is, of course, to reduce the Government's domestic and foreign exchange budgets to a minimum so that the public sector does not preempt financial and foreign exchange resources from the private sector. In particular the Government should postpone expensive investment programs which have a large foreign exchange component. Of the credit and foreign exchange that is available to the private sector, however, priority should be given to making sure that the needs of exporters are met. Next, and again to temporarily ease the shortage of foreign exchange, the Government should concentrate on trying to raise export output through intensive use of existing capacity rather than through encouraging additional investment. In this regard, import surcharges (lasting from six to nine months perhaps) on investment goods might be considered. Changing the very generous investment allowances presently allowed under the CACM schemes should be accorded high priority; the more restrictive national legislation could in fact be made to subsitute for the CACM legislation. Finally, whilst awaiting for the stabilization instruments to achieve their desired effects and to augment import capacity in the short term, the Government might seek credits from institutional investors tied to the liberalization program.

"CATS"

119. Insofar as the devaluation/tariff dismantling excercise is unlikely to be fully compensatory, the incentive system may still register an implicit trade-regime anti-export-bias. Hence the CAT system should be retained, although the CAT rate may change. Currently the present discounted value of a "CAT" is 12% as compared to the trade regime overvaluation of 18%. A new CAT rate will obviously depend upon the degree to which the reform, reduces the present differential of 6%.

CACM Issues: The Challenge of New Industrial and Trade Policies

120. The countries that in 1960 joined together in creating the CACM have since demonstrated their determination to carry on their effort of regional economic cooperation in the face of all kinds of difficulties, some of them at times seemingly unsurmountable. Up to the outbreak of the conflict between El Salvador and Honduras, changes of Government in several of the countries did not in the least effect the operations of the CACM, indicating widespread support for the CACM by all political parties and influential groups of Central American society. Apart from this ability to withstand political change, there were during those years economic problems created by measures taken in individual countries. These were also absorbed and settled by accomodating compromises that did not significantly affect the regional trade arrangements nor disrupt inter-regional trade. The severest test for the CACM came with the Salvadorian-Honduran conflict of 1969 which seriously disrupted the institutional arrangements so laboriously built and reduced considerably the flow of intra-regional trade. But after two years of

difficulty, the initial impact of the shock was reduced by the working out of bilateral arrangements which, while failing to fully restore the previous status quo, have gone a long way in opening up again the trade channels between foreign countries. More recently, far reaching political changes have been occuring in the region, but the community of economic interests has continued to support and has, thus far, declined to take steps which would dismantle the institutions of the market.

121. With such a record of strength and resilience, the CACM countries face at present a challenge perhaps more serious and difficult than any encountered and overcome in the past. The challenge is more serious because failure to meet it successfully may result in indefinite economic stagnation, not only of the CACM as a whole, but of its individual member countries. It is more difficult to solve because the danger is more subtle than the clearly defined difficulties of the past.

122. The solution requires general acceptance of the propositions that import substituting industrialization has now run its course and that continuation of strengthened commitment to these policies is, on balance, likely to be more harmful than beneficial. The practical indications are that policymakers in each of the countries have become increasingly aware of the limitations of the "model" of development thus far pursued. A growing consensus is emerging, based on studies such as this and on the commentaries of other analysts, that the future of the region lies in an outward oriented thrust, capitalizing on the industrial gains hitherto achieved, but which opens for regional industry new export opportunities, which brings the benefits of competition and openess to the structure of production, and which will result in significant gains for the regional consumer.

123. A regional approach to liberalization of the instruments of integration will need to focus on the major areas of concern highlighted in this report viz. exchange rates, tariff policies, and the common agreement on fiscal incentives. Although detailed studies on the impact on individual countries of each of these instruments are not available, nevertheless the more broad brush approaches (the Brookings study, the 1979 IBRD study) yield much the same inferences for each of the member countries. Each country's adhesion to the regional incentives has resulted in substantial anti-export bias to the trade regime and the consequences of that bias show similar patterns across countries. 1/ Thus the

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1/ In each country resources have been preponderantly drawn to import substituting enterprises rather than to extra-regional export activities, and in these enterprises high profit levels have co-existed with high prices to consumers; high effective protection rates have been facilitated by excessive nominal protection on finished goods, coupled with import exhonerations for intermediate and raw material imports; the fiscal costs of these exonerations have been large; industrial structures are highly concentrated; capacity underutilization is extensive, etc.

prescriptions for change developed for Costa Rica do not alter when applied to the other member countries. The exchange rate should be recognized as an instrument of development policy, and as a first step the anti-trade bias should be reduced by changes in common market parities. Tariffs should be reduced in a sequence of graduated changes. The fiscal incentive law should be changed to reduce the incentives for excessive capital accumulation. Finally, each country will need to support these measures by positive pro-export initiatives. The similarity of the problem, the commonality of interest, the interdependence of much of the region's industrial capacity, all argue well for an effort of regional persuasion to alter the instruments of integration.

Role of a Strong Export Promoting Agency

124. Assuming that a set of policies in the fields of trade liberalization, export incentives, credit and exchange rate adjustment aimed at eliminating the existing anti-export bias are in fact taken by the Government, such policies should be complemented by a wide array of concrete measures designed for directly helping entrepeneurs to develop or expand production for export. A well designed incentive system provides, in a sense, a set of signals which serve or orient productive activity towards exporting. As is recognized, however, the transition from import substituting to exporting for third markets will neither be spontaneous nor will it be accomplished without calling for a variety of changes in the environment of production. Markets will need to be researched, resources will need to be reallocated, product lines developed, entrepeneurial talent redirected, sector policies examined and rationalized, infrastructure adequacy ensured, etc. It will be important for the Government to maintain daily contact with the problems faced by exporters and apply, where possible and where appropriate, the necessary remedies.

125. The Government needs a clearing house of information and analysis for all aspects of the export effort, just as the private sector needs a bridge to the Government to articulate and defend export interests as well as give assistance of a more direct nature. In this regard, it is recommended that the Government strengthen the role of CENPRO. 1/ CENPRO's legal authorities, as specified in the law creating this institution, are already wide and the broadening of powers and functions suggested here will not require legislative action. To begin with, CENPRO's board should be reorganized to include a greater representation of the private sector. Next, CENPRO's budgetary allocation should be increased to allow the agency the resources to more adequately discharge its responsibilities. Of these, particular areas deserve immediate emphasis: (a) surveying sectoral capacities and requisite policies to adapt to an export effort--in this respect the wooden furniture, textiles, leather and agro-industrial sectors should receive priority; (b) examine the possibility of organizing groups and associations of producers to pool available supplies for filling export orders that single firms cannot individually

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1/ The alternative of setting up a new export agency can be dismissed; CENPRO's relative inefficiency has been due more to overall Government policies than to particular failings of the institution. The institution is efficient and well run and has already acquired valuable experience in several aspects of the work of export promotion.

meet (likely to be important in the textile, agro-industry and furniture sectors); (c) assist producers in the formation of trading companies which can better handle problems of securing both adequate internal transportation and shipping facilities and in distributing products in foreign markets; (d) install a roster of management and industrial consultants who can actively assist producers in designing export promotion programs and projects in promising export lines; and (e) study and take steps to remedy the problems in export financing and export credit insurance.

126. A great part of any export promotion effort must necessarily involve creating a climate of confidence on the part of potential exporters and instilling what has been referred to as an "export mentality." Transactions in international markets do indeed possess elements of risk and uncertainty, frequently exacerbated by ill-advised Government policy. An important role of Government, if export promotion is to be successful, is to attenuate that risk and uncertainty. Export interests must have confidence that the Government will not undertake capricious policy changes deterimental to exporters, such as with the change in the exporting rules of the game or with measures adversely affecting export profitability. CENPRO is the institutional embodiment of the concern, currently expressed by the Government, about the need for expanding exports. Strengthening the agency will serve as a clear declaration of intent that the Government intends to take the export promotion drive seriously and will give the producers confidence that they have the ear of Government at the highest levels.

ESTIMATIONS OF THE SOURCES FOR MANUFACTURING DEMAND GROWTH

Following along the lines of Chenery's measure of import substitution, 1/ an identity measure of the sources of demand growth for an industry can be derived. This identity is written as:

$$(1) \quad \Delta X_i = \frac{E^1 CAi}{Z_i^1} \cdot \Delta E_{CAi} + \frac{E^1 ROWi}{Z_i^1} \cdot \Delta E_{ROWi} + \left(\frac{X_i^2}{X_i^2} - \frac{X_i^1}{Z_i^1} \right) \cdot Z_i^2$$

$$+ \frac{X_i^1}{Z_i^1} \cdot \Delta D_i$$

where

X_i = industry i's total output

M_i = imports of goods produced by industry i

Z_i = $X_i + M_i$ = total available domestic supply

D_i = domestic intermediate and final demand for industry i

E_{CAi} = industry i's exports to CACM countries

E_{ROWi} = industry i's exports to the rest of the world

and where the superscripts indicate two different time periods. Dividing (1) through by the change in output during the period in question (X_i), the sources of demand growth can be estimated. During so, the first two terms on the right hand side of the estimated equation depict the growth attributed

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1/ Hollis B. Chenery, "Pattgerns of Industrial Growth," American Economic Review," Vol. 40, No. 2 (June 1960), pp. 624-640.

to the export expansion to CACM countries and to the rest of the world. The third term represents a proportional measure of import substitution, which will positive if, and only if, X_i/Z_i is growing. The final term depicts the growth attributable to domestic demand growth. It is estimated as a residual, since D is unobservable.

ANNEX 2.1

COSTA RICAN EXCHANGE RATE REGIME, 1960-1978

Year	Regime (as of Dec. 31)	Rates (¢/$) (as of Dec. 31)	Application of Rates	Other Trade Measures
1960	Dual	Official:		
		buying - 5.60	Most exports, certain invisibles, registered capital	License required for exports. (This applies to all years in this table.) The license registers the prospective export, is necessary for customs clearance of the export, and serves as a check on the obligations to surrender foreign exchange earnings.
		selling - 5.67	Essential imports, some government payments, students' expenses registered capital	
		Mixing Rates:		
		buying (65% free)-6.27	Exports of vegetable oils and fats, certain other exports	
		buying (99% free)-6.62	Exports of cotton, cocoa and products, shrimp, lobster	
		Free:		
		buying - 6.63	All other receipts	
		selling - 6.65	Nonessential imports, all other payments	
1961	Unified (as of Sept. 3)	buying - 6.62	Most exports	
		selling - 6.65	Most imports	
		(buying - 5.60)	Exports of coffee from 1960/61 crop, subsequent crops to earn 6.62	1960/61 coffee crop pays 5% export tax, later crops 10% (to be reduced if average export price falls below $42.50/quintal).
		(buying - 5.958)	Exports of foreign-owned banana companies (effective rate due to 10% exchange surcharge)	
		(selling - 5.67)	Essential imports, if shipped or entered country before June 20, 1961 (effective until Jan. 3, 1962)	
1962	Unified	buying - 6.62	All exports and other foreign exchange receipts	Preferential trade agreement with Panama and Nicaragua
		selling - 6.65	All imports and other foreign payments	
1963	Unified	buying - 6.62	All exports and other foreign exchange receipts	Entry of Costa Rica into CACM (November 9)
		selling - 6.65	All imports and other foreign payments	
1964	Unified	buying - 6.62	All exports and other foreign exchange receipts	
		selling - 6.65	All imports and other foreign payments	
1965	Unified	buying - 6.62	All exports and other foreign exchange receipts	
		selling - 6.65	All imports and other foreign payments	
1966	Unified	buying - 6.62	All exports andother foreign exchange receipts	
		selling - 6.65	All imports and other foreign payments	
		Note: On Dec. 26, the Board of the Central Bank of Costa Rica approved a three-stage emergency economic program to restore balance of payments and budgetary equilibrium. These measures started into effect Jan. 2, 1967.		
1967	Dual	Official:		
		6.62	All exports, list of Essential Imports, imports from Central America and Panama when covered by trade agreements	Sales tax replaces consumption tax; rates were 5%, 10% and, for certain luxury goods, 25%.
		Free (pegged float):		
		buying - 7.77		
		selling - 7.80	Nonessential imports from rest of World	

Mixing rates also arise when the Central Bank allows exporters using raw materials that have been paid for in the free market to sell part of their export proceeds in the free market.

ANNEX 2.1

COSTA RICAN EXCHANGE RATE REGIME, 1960-1978

Year	Regime (as of Dec. 31)	Rates (c/$) (as of Dec. 31)	Application of Rates	Other Trade Measures
1968	Dual	Official:		
		6.52	All exports, List of Essential Imports, imports from Central America and Panama, when covered by trade agreements.	
		Free (pegged float):		
		buying - 7.32		
		selling - 7.35	Non-essential imports from Rest of World	
1969	Unified	buying - 6.62	All exports and other receipts	
	(as of Dec. 24)	selling - 6.65	All imports and other payments	
1970	Unified	buying - 6.62	All exports and other receipts	Exports of goods and services exempted from sales tax. Import surcharge of 30% of applicable duty imposed on imports from outside the CACM (San Jose Protocol).
		selling - 6.65	All imports and other payments	
1971	Dual	Official:		
	(as of June 19)	buying - 6.62	All exports and other receipts	
		selling - 6.65	List of Essential Imports, imports from Central America and Panama, when covered by Trade Agreements.	
		Exchange surcharges	(removed Feb. 1, 1972):	
		selling (15% of 6.62) - 7.60	List B of Semi-essential Imports	
		selling (30% of 6.62) - 8.60	List C of Semi-essential Imports	
		Free (fixed):		
		buying - 9.57		
		selling - 8.60	All other imports (non-essential, from Rest of World)	
1972	Dual	Official:		
		buying - 6.62	Most exports (traditional, agricultural)	Selective consumption tax of 10%-50% ad valorem levied on the c.i.f. value of goods imported from outside the CACM (and Panama). The same tax was applied at reduced rates to goods manufactured within the CACM (or in Panama). Sales tax unified at 5%.
		selling - 6.65	List of Essential Imports, imports from Central America and Panama, when covered by trade agreements.	
		Mixing rates (50% in official market, 50% in free):		
		buying - 7.5975	Nontraditional exports to the CACM	
		buying - 7.5950	Nontraditional exports to Rest of World	
		Free (fixed):		
		buying - 8.57		
		selling - 8.60	Non-essential imports from Rest of World	

ANNEX 2.1

COSTA RICAN EXCHANGE RATE REGIME, 1960-1978

Year	Regime (as of Dec. 31)	Rates (¢/$) (as of Dec. 31)	Application of Rates	Other Trade Measures
1973	Dual	Official:		
		buying 6.62	Exports of sugar, coffee, foreign-owned banana companies, and certain other traditional products	CATs introduced, negotiable tax credit certificates equivalent to 15% of proceeds (in colones) from nontraditional exports.
		selling - 6.68	List of Essential Imports, imports from Central America and Panama, when covered trade agreements.	
		Mixing Rates:		
		buying (50/50) - 7.5825	Nontraditional exports to CACM	
		buying (50 50) - 7.58	Nontraditional exports to Rest of World	
		buying (39% free) - 7.3688	Bananas exported by local growers	
		Free (fixed):		
		buying - 8.54		
		selling - 8.60	Non-essential imports from Rest of World	
1974	Unified (April 25)	buying - 8.54	Exports and other receipts	Export taxes introduced: coffee, 5%; cocoa and sugar, 13%; all others, 1%.
		selling- 8. 60	Imports and other payments	
1975	Unified	buying - 8.54	Exports and other receipts	Selective consumption tax rates increased (and coverage expanded) for imports, with increases smaller for imports from CACM.
		selling - 8.60	Imports and other payments	
1976	Unified	buying - 8.54	Exports and other receipts	Temporary import surcharge of 10%-50% applied to many goods; imports from CACM and Panama exempt. Coffee export tax raised from 5% to 8% ad valorem. CIEXs introduced, redeemable in cash at Central Bank, for 10% of firm's increase of precious year's exports (nontraditional).
		selling - 8.60	Imports and other payments	
1977	Unified	buying - 8.54	Exports and other receipts	Cotton eligible for CATs. Rice, beans, and corn added to list of traditional exports, ineligible for CATs.
		selling - 8.60	Imports and other payments	Sorghum, coffee beans, and roasted coffee added to listof traditional exports, ineligible for CATs.
1978	Unified	buying - 8.54	Exports and other receipts	Rates of selective consumption taxes lowered on television sets and automobiles. Removal of CATs for lobster, lobster tail, prawns, fish with scales. Ad valorem duties on exports of 1978/79 coffee crop raised to 9.4%.

ANNEX 2.2

Real Effective Exchange Rate Calculation (REXR)

1. To calculate Costa Rica's REXR, the following formula was used.

$$REX = \frac{\text{Costa Rica's XRI}}{\text{Costa Rican PRI}} \div \frac{Wi\ XRIi}{Wi\ PRI_1}$$

Where XRI_i represents the exchange rate index for country i, PRI_i, a Price Index for country i and Wi represents the weight applied to the relevant index.

2. The weights used are the average import/export shares in trade over the 1975-1977 period. These were derived from Table 2.5 of the Statistical Appendix with the residual "other" category allocated to the remaining eighteen countries according to their share in Costa Rica's trade.

3. Exchange Rate Indices are indices of dollar parities for each currency i.e., the dollar is used as numeraire. The Costa Rican exchange rate index presented a problem. Both the Banco Central and the IMF official publications publish average annual exchange rates for Costa Rica during the period of multiple exchange rates. These annual average exchange rates were used for the years 1970 to 1973. In April 1974, however, the exchange rate was unified at the higher "free market" rate. Using a lower annual "average" exchange rate for 1974 would first understate the extent of the 1974 devaluation and second, imply a devaluation in 1975. For this reason the average exchange rate for 1973 was carried over into Q1 1979 and the unification parity was used from Q2 1974 onwards.

4. For each country the price Index most nearly approximating a manufacturing price index was used. In most cases this meant an industrial price index or a wholesale price index. Insofar as most of Venezuela's trade with Costa Rica is in oil, an oil price index was used for Venezuela. For Costa Rica the Wholesale Price Index (WPI) was used. The available alternative--the Consumer Price Index for medium and low income households in metropolitan San Jose--contains a much less representative sample of manufactured goods than the WPI. The latter measure is far from perfect however. It contains several categories of non-traded goods as well as of traditional agricultural export goods; fortunately, these latter do not weigh heavily in the index. A further problem is that 20% of the goods in the WPI are imported. Again, fortunately, for the period under consideration, the domestic component of the WPI has risen in exactly the same proportion as the total index. In view of the lack of a manufacturing price index, and in part to assure consistency with measures of inflation in other countries, it was decided to use the WPI, despite its defects.

5. All indices were adjusted to make Q2 1974 = 100 as this quarter represented the first quarter of operation of the new unified Exchange Rate, the dollar parity of which has since remained unchanged.

Annex Table 2.2(1): TRADING PARTNER REAL EFFECTIVE EXCHANGE RATE

	Costa Rica Exchange Rate Index	Costa Rica Price Index	Trading Partner Ex. Rate Index	Trading Partner Price Index	Real Effective Exchange Rate
1970 Q1	77.281	53.611	109.031	67.539	89.294
1970 Q2	77.281	54.712	109.018	68.021	88.132
1970 Q3	77.281	55.447	108.968	68.290	87.348
1970 Q4	77.281	56.916	108.979	68.373	85.190
1971 Q1	78.075	57.650	108.973	69.552	86.437
1971 Q2	78.075	58.507	108.602	70.035	86.057
1971 Q3	78.075	59.119	107.628	70.496	86.501
1971 Q4	78.075	59.608	106.015	70.401	86.979
1972 Q1	85.531	59.853	104.513	71.463	97.712
1972 Q2	85.531	61.567	104.320	72.183	96.128
1972 Q3	85.531	62.424	104.348	73.059	95.932
1972 Q4	85.531	63.770	104.580	74.025	94.937
1973 Q1	88.798	65.606	102.763	77.766	102.427
1973 Q2	88.798	69.033	100.634	81.325	103.950
1973 Q3	88.798	73.684	98.693	84.090	102.681
1973 Q4	88.798	79.804	99.973	86.380	96.141
1974 Q1	88.798	85.557	101.885	96.102	97.897
1974 Q2	100.000	100.000	99.974	100.000	100.026
1974 Q3	100.000	106.242	101.007	104.401	97.287
1974 Q4	100.000	110.771	100.692	107.095	96.017
1975 Q1	100.000	115.667	99.097	107.681	93.944
1975 Q2	100.000	120.441	99.222	108.971	91.186
1975 Q3	100.000	125.459	101.114	110.497	87.104
1975 Q4	100.000	128.029	101.756	111.897	85.891
1976 Q1	100.000	129.743	101.904	113.686	85.987
1976 Q2	100.000	133.048	102.330	115.670	84.959
1976 Q3	100.000	135.373	102.403	118.183	85.253
1976 Q4	100.000	136.720	103.023	120.228	85.357
1977 Q1	100.000	139.412	102.816	123.707	86.304
1977 Q2	100.000	143.084	102.715	127.472	86.733
1977 Q3	100.000	145.655	102.331	127.747	85.708
1977 Q4	100.000	147.124	101.459	128.787	86.277
1978 Q1	100.000	148.960	100.087	130.703	87.667
1978 Q2	100.000	152.999	99.869	133.507	87.375
1978 Q3	100.000	157.650	98.517	134.900	86.857
1978 Q4	100.000	160.343	97.531	136.486	87.277
1979 Q1	100.000	167.931	97.696	141.005	85.946
1979 Q2	100.000	176.255	101.327	150.156	84.077
1979 Q3	100.000	186.169	100.546	158.531	84.692

Source: Banco Central, IFS, Bank staff estimates.

Annex Table 2.2(2): USA REAL EFFECTIVE EXCHANGE RATE

		Costa Rica Ex. Rate Index	Costa Rica Price Index	USA Ex. Rate Index	USA Price Index	Real Effective Ex. Rate
1970	Q1	77.281	53.611	100.000	71.008	102.360
1970	Q2	77.281	54.712	100.000	71.348	100.779
1970	Q3	77.281	55.447	100.000	71.801	100.075
1970	Q4	77.281	56.916	100.000	71.914	97.646
1971	Q1	78.075	57.650	100.000	72.820	98.619
1971	Q2	78.075	58.507	100.000	73.726	98.384
1971	Q3	78.075	59.119	100.000	74.292	98.113
1971	Q4	78.075	59.608	100.000	74.292	97.308
1972	Q1	85.531	59.853	100.000	75.764	108.268
1972	Q2	85.531	61.567	100.000	76.557	106.356
1972	Q3	85.531	62.424	100.000	77.690	106.448
1972	Q4	85.531	63.770	100.000	78.482	105.264
1973	Q1	88.798	65.606	100.000	82.333	111.438
1973	Q2	88.798	69.033	100.000	86.297	111.005
1973	Q3	88.798	73.684	100.000	89.807	108.229
1973	Q4	88.798	79.804	100.000	90.600	100.811
1974	Q1	88.798	85.557	100.000	96.602	100.262
1974	Q2	100.000	100.000	100.000	100.000	100.000
1974	Q3	100.000	106.242	100.000	107.135	100.840
1974	Q4	100.000	110.771	100.000	110.872	100.091
1975	Q1	100.000	115.667	100.000	110.872	95.854
1975	Q2	100.000	120.441	100.000	112.005	92.996
1975	Q3	100.000	125.459	100.000	114.383	91.171
1975	Q4	100.000	128.029	100.000	115.629	90.314
1976	Q1	100.000	129.743	100.000	116.195	89.558
1976	Q2	100.000	133.048	100.000	117.894	88.610
1976	Q3	100.000	135.373	100.000	119.366	88.175
1976	Q4	100.000	136.720	100.000	120.385	88.052
1977	Q1	100.000	139.412	100.000	122.990	88.220
1977	Q2	100.000	143.084	100.000	126.048	88.093
1977	Q3	100.000	145.655	100.000	126.161	86.616
1977	Q4	100.000	147.124	100.000	127.746	86.829
1978	Q1	100.000	148.960	100.000	130.691	87.736
1978	Q2	100.000	152.999	100.000	134.655	88.010
1978	Q3	100.000	157.650	100.000	136.806	86.779
1978	Q4	100.000	160.343	100.000	139.864	87.228
1979	Q1	100.000	167.931	100.000	144.960	86.321
1979	Q2	100.000	176.255	100.000	150.057	85.136
1979	Q3	100.000	186.169	100.000	154.813	83.157

Source: Banco Central, IFS, Bank staff estimates.

SHADOW EXCHANGE RATE CALCULATIONS

The methodology used in making the shadow exchange rate estimations involves the assumption of a free trade regime on the part of the country and asks the question--what is the exchange rate required to support that regime under existing balance of payments conditions? That is to say, it is hypothesized that the country removes all tariffs and export subsidies (with export taxes counted as negative subsidies) and liberalizes its trade regime; the question addressed is to what extent the exchange rate will have to change to eliminate the deficit which develops. A regime of import tariffs and export subsidies allows an exchange rate to be maintained at an unrealistic level by depressing the net demand for foreign exchange, thus substituting, as it were, for a devaluation. At the same time such a regime, it is well recognized, introduces distortions and inefficiencies in the pattern of production and consumption. This calculations of the shadow exchange rate is thus an attempt to quantify the trade flow effects of these distortions. The formula for estimating the shadow exchange rate (R*) can be written as 1/

$$(1) \qquad \frac{R^*}{R} = \frac{\sum_i e_i^f X_i (1+S_i) + \sum_i e_i^m M_i (1 + T_i)}{\sum_i e_i^f X_i + \sum_i e_i^m M_i}$$

1/ The procedure employed known as the Bacha-Taylor method, is derived in Edmar Bacha and Lance Taylor, "Foreign Exchange Shadow Prices: A Critical Review of Current Theories," Quarterly Journal of Economics, Vol. 85, No. 2 (May 1979), pp. 197-224. For additional discussions see Bela Balassa, "Estimating the Shadow Price of Foreign Exchange in Project Appraisal," Oxford Economic Papers, Vol. 26, No. 2 (July 1974), pp. 147-168.

where

R^* = the shadow exchange rate

R = the official exchange rate

e_i^f = the price elasticity of foreign exchange for product i

or

$$= \frac{e_i^s \left(e_i^d - 1 \right)}{e_i^s + e_i^d}$$

e_i^s = supply elasticity of individual export products

e_i^d = effective price elasticity of export demand facing product i. This will be defined as the inverse of Costa Rica's share of world exports of i times the world price elasticity of demand.

e_i^m = price elasticity of demand for imports of i

x_i = 1977 exports of i (outside CACM)

M_i = 1978 imports of i (from outside CACM)

S_i = Subsidy rate on exports of i (negative with tax)

T_i = rate of nominal protection on imports of i, including the effects of tariffs and other import restrictions.

As is indicated in Equation (1), the relevant foreign trade elasticities are explicitly considered. Such a consideration is meaningful in particular where a country has not faced an infinite demand elasticity for all of its export products. Costa Rica's share in the world banana market imply that it is not a passive price taker in that market.

For the purpose of the shadow exchange rate estimates elasticity estimates have been taken from various Bank and other studies. Annex Tables 2.3(1) and 2.3(2) present the worksheet computations. It should be noted that the computations have been done for Costa Rica's extra regional trade. In other words, Costa Rica's trade with the CACM has been netted out on the grounds that such trade has in effect become internal trade through the formation of the CACM and its closely related commercial policies.

The trade data used in the calculations are for 1977, but little change in the estimates would have been apparent had the 1978 data been available. The tariff, export tax, and subsidy information also is for 1977, but few changes have been observed in those trade distorting measures since then. Consequently, while the shadow exchange rate estimate is for 1977, it can be viewed as being representative of present conditions as well.

Depending upon the assumptions made about the various elasticities and with the calculation of the trade distortions, the estimated magnitude of shadow exchange rate premium approximates 17.6 percent. This means the shadow exchange rate falls around ¢ 10.1 per US$1.00. Alternative estimates under slightly different elasticity estimates do not alter the estimated exchange rate premium appreciably. For the purpose of our calculations a figure of 18.0 percent has been selected as the base shadow exchange rate premium. This represents our best estimate.

Three qualifications should be borne in mind concerning the 20 percent estimate of exchange rate overvaluation. First, estimates made under the chose procedure are generally considered to be lower bound estimates (of $R^*/_R$). The partial equilibrium nature of the estimating procedure ignores the structural dimensions in the economy that would place a high scarcity value on foreign exchange even if trade distortions were eliminated. Structural adjustment, alleviating the pressures associated with a high import content of production and some rigidities in the export market, would take time, during which foreign exchange would possess a scarcity premium. A second difficulty in the shadow exchange rate calculation arises from the estimation of import restrictions. To the extent that some tariffs and trade policies, such as associated with the CACM industrial incentives, are actually prohibitive of imports, there is a resultant underestimate of the degree of nominal protection when that estimate is based upon actual import data and implicit imort weights. This in turn serves to understate the amount of the shadow exchange rate premium. A third qualification to the undertaken shadow exchange rate estimation is that exchange rate estimation is that it assumes equilibrium in the Balance of Payments, and does not address the size of a devaluation, if devaluation is the instrument chosen, to reduce the level of the external deficit.

Two approaches can be used to correct the floor estimate of average overvaluation. First, instead of using import weighted nominal tariffs, which as pointed out, lead to an underestimate of foreign exchange demand in the economy, one can use value-added weighted tariffs. Employing a value-added nominal tariff of 60% (the estimate arrived at in the text for the present level of nominal protection in manufacturing) for the category of "Other imports" in the formula yields an exchange overvaluation of 46%. Secondly one can attempt to incorporate a reduction in the present large external deficit into the calculation. In 1979 the current account deficit in the Balance of Payments was approximately 14.5% of GDP. If a deficit of 7% of GDP is "chosen" by the authorities as a long-term sustainable target deficit in the external sector then the present degree of overvaluation is estimated to be 34%. If 10% of GDP is the target deficit on current account then the present overvaluation is about 27%. These approaches are admittedly approximately and should be treated with due caution. What they do exemplify however is that the base estimate of 18% is indeed highly conservative.

ANNEX TABLE 2.3(1)

SHADOW EXCHANGE RATE CALCULATIONS

EXPORT SIDE WORKSHEET

Product	1977 Exports Outside CACM Xi (US Million)	Costa Rica's Share of World Exports	World Price Elasticity of Export Demand	e_1^d	Domestic Long Run Price Elasticity of Export Supply e_1^{sx}	e_1^f	e_1^f	$1 + S_i$	$e_i X_i(1 + S_i)$
Coffee	319.2	.024	.25	10.42	.35	.31	99.0	.92	91.1
Bananas	150.3	.136	.35	2.57	.50	.26	39.0	.99	38.6
Sugar	15.6	.0023	.50	217.39	.50	.50	7.8	.925	7.2
Beef	51.3	.0044	.70	159.09	.40	.40	20.5	.99	20.3
Cocoa	17.1	.0059	.20	33.90	.40	.38	6.5	.87	5.7
Nontraditional Agricultural Exports	53.5	0	-		2.0	2.0	107.0	1.12	119.8
Nontraditional Manufacturing Exports	34.1	0	-		2.0	2.0	68.2	1.12	75.4
TOTAL	641.1						348.0		359.1

SHADOW EXCHANGE RATE CALCULATIONS

IMPORT SIDE WORKSHEET

Product	1977 Extra Regional Imports Mi (US$ million)	Price Elasticity of Import Demand e_i^m	e_i^m Mi	1 + Ti	e_i^m Mi (1 + T_i)
Petroleum and Derivatives	100.8	0.9	90.8	1.095	99.4
Foodstuffs	43.6	1.0	43.6	1.247	54.4
Other Imports	698.6	2.0	1397.2	1.215	1697.6
TOTAL	843.0		1531.6		1851.5

Annex Table 2.3(2)

Shadow Exchange Rate Premium

Formula

$$\frac{R^*}{R} = \frac{\sum e_1^f X_1(1+Si) + \sum_i e_1^m(1+T_1)}{e_1^f X_1 + e_1^m Mi}$$

Base Case

$$\frac{R^*}{R} = \frac{359.1 + 1851.5}{348 + 1351.6} = 1.176$$

Case 2

Adjusting the import tariff on "Other Imports" from an import weighted 21.5% to a value-added weighted 60% yields an estimate for $e_1^m M (1+T_i)$ of 2389.3, and a corresponding estimate of $\frac{R^*}{R}$ of 1.462.

Case 3

For the current account deposit to be reduced from 14.5% of GDP to 7% of GDP, the present deficit of $601.6 million must fall by $311.2. This sum can be added to the numerator of the base case and the degree of overvaluation is then estimated at 34.2%.

ESTIMATES OF EFFECTIVE PROTECTION AND EFFECTIVE SUBSIDIES FOR EXPORT

The standard procedures have been employed to estimate effective protection for certain products in the domestic market, and analogous procedures wee used in the estimation of the effective rates of subsidy for export. 1/ Measuring the protection of domestic value added relative to value added in world prices, the effective rate of protection can be written as

$$g_j = \frac{t_j - \sum_i a_{ij} t_i}{1 - \sum_i a_{ij}}$$

where

g_j = the effective rate of protection for product j

t_j = the nominal rate of protection for product j

a_{ij} = the technical coefficient for input i used in the production of final product j, as measured in world price

t_i = the nominal rate of protection for input i.

Since the a_{ij}'s are expressed as ratios calculated for international price values, an adjustment has to be made if the technical coefficient information available was computed from domestic prices. Accordingly, the estimating formula employed is written as

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1/ See Bela Balassa and Associates, The Structure of Protection in Developing Countries (Baltimore: The Johns Hopkins Press, 1971), pp. 324-332 and W.M. Corden, The Theory of Protection (London: Oxford University Press, 1971).

$$g_j = \frac{t_j - \sum a'_{ij} \frac{1+t_j}{1+t_i} t_i}{1 - \sum a'_{ij} \frac{1+t_j}{1+t_i}}$$

where the a_{ij}'s represent the technical coefficients as measured from domestic price and value information.

The estimates presented in Column 2 of Table 3.11 were estimates made with equation (2). The technical coefficients were computed from information from individual firm cost information. A modified Corden procedure was used in the treatment of nontradable inputs so that the protected value added includes the protection afforded to nontradables. If the Balassa method were used the reported rates of effective protection would have been higher.

As noted in the text, the estimates were carried out to the extent possible with direct price comparison. In all cases in Table 3.11 the nominal protection on the products in question (t_j) was taken as an implicit tariff computed from direct price comparisons. Most of the nominal protection on inputs (t_i) was calculated in a similar fashion. Where this was not possible, tariff equivalent information was used. If intermediate inputs were imported, the tariff equivalents paid by the importing firm were included. In many instances, because of the REIFALDI import duty exemptions, the tariff equivalents for imported components were recorded as zero.

In order to take the effects of exchange rate overvaluation into account, the net effective rates of protection (g_j') for domestic market production were computed (Column 5 of Table 3.11). They were calculated as

$$g_j' = \frac{R}{R^*} (1 + g_j) - 1$$

where R and R* are the official and shadow exchange rates respectively. The shadow exchange rate has been estimated in Annex 2.3 at a premium of 18% over the official rate.

To compute the impact of different policies on export profitability the concept of an effective rate of subsidy for export has been used. It can be written as

$$S_j = \left[\frac{1 - \sum_i a'_{ij}}{\frac{1}{1+c_j - t_j^x} - \sum_i \frac{a'_{ij}}{1+t_i}} \right]$$

where c_j = the present value CAT subsidy rate, estimated as the nominal CAT rate of 15% discounted by 20% for 1 year.

t_j^x = export tax rate, currently at 1%.

With full drawbacks operating, $t_i = 0$. If the full drawbacks in fact are not in effect, the effective rate of subsidy is consequently reduced. For the calculations the assumption has been made that full import duty exemptions are permitted.

Taking the exchange rate overvaluation into account can be done with the net effective rate of subsidy for export. Similar to the adjustment made with the effective rate of protection, the net effective rate of subsidy for export can be written as

$$(6) \qquad s'_j = \frac{R}{R^*} (1+s_j) - 1$$

The drawback effect is omitted in this formulation since this measure deals with a net effect.

Comparing the effective protection provided to production for the domestic market with the effective subsidy provided for exportation of the same product, a measure of an anti- or pro-export bias can be devised. An anti-export bias (AEB) is written simply as

$$(7) \qquad AEB_j = g_j - s_j$$

If $g_j < s_j$, a pro-export bias for product j exists. The anti-export bias bias is the percentage increase in domestic value added permissable as a result of producing for the domestic market over that possible for export production.

STATISTICAL APPENDIX

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IV. PROTECTION

Appendix Table 1.1: GDP AT MARKET PRICES BY ECONOMIC ACTIVITY, 1957-1978
(Millions of Current Colones)

ACTIVITY	1957	1960	1963	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978 1/
Agriculture, Forestry, Hunting, Fishing	754.4	744.7	832.8	1,302.9	1,469.3	1,443.4	1,601.6	1,962.9	2,522.4	3,417.8	4,212.9	5,762.6	5,944.3
Manufacturing, Mining, and Quarrying	323.8	404.9	512.2	1,004.5	1,192.2	1,325.0	1,507.1	1,903.3	2,677.9	3,427.3	4,072.1	5,000.3	5,428.2
Electricity, Gas, and Water	23.8	33.7	43.0	94.3	109.8	127.8	147.0	160.3	205.9	303.7	409.6	521.4	577.4
Construction	110.7	124.4	171.8	245.6	277.4	343.3	123.8	507.1	692.6	868.9	1,193.4	1,367.1	1,617.1
Commerce, Restaurants, Hotels	527.6	600.1	696.4	1,116.3	1,371.3	1,502.0	1,651.3	2,054.5	2,754.7	3,203.6	3,832.2	5,134.6	6,002.3
Transportation, Storage, Communications	99.3	116.8	143.7	250.5	274.2	316.0	362.0	435.6	590.7	788.6	954.7	1,091.2	1,271.2
Finance, Insurance	85.7	104.9	129.5	236.9	302.7	321.0	404.5	508.5	635.3	816.6	1,040.8	1,291.6	1,545.1
Real Estate	244.9	290.6	357.8	467.6	498.7	524.9	553.4	625.5	784.8	1,123.8	1,371.1	1,661.8	1,856.2
General Government	187.4	255.7	322.3	514.5	693.2	813.6	998.0	1,196.6	1,575.4	2,083.7	2,682.2	3,402.0	4,218.3
Other Personal Services	122.5	155.2	194.7	302.6	335.7	375.2	420.1	495.9	626.7	770.6	906.6	1,098.1	1,304.1
TOTAL	2,471.1	2,832.0	3,404.2	5,635.7	6,524.5	7,092.2	8,069.7	9,851.2	13,067.4	16,804.6	20,675.6	26,330.7	29,764.2

1/ Preliminary figures.

Source: Banco Central, Cifras de Cuentas Nacionales de Costa Rica.

Appendix Table 1.2: GDP BY ECONOMIC ACTIVITY, 1957-1978
(Millions of Constant 1966 Colones)

Activity	1957	1960	1963	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978 1/
Agriculture, Forestry, Hunting, Fishing	652.0	780.6	856.4	1,290.6	1,343.6	1,405.6	1,481.8	1,565.5	1,539.0	1,585.7	1,593.6	1,628.7	1,688.9
Manufacturing, Mining and Quarrying	377.0	428.3	495.7	947.0	1,036.3	1,120.3	1,238.3	1,364.8	1,538.4	1,587.1	1,679.2	1,893.0	2,006.6
Electricity, Gas, and Water	29.2	39.3	42.5	93.2	106.4	120.3	131.6	139.6	152.6	156.1	169.8	181.6	199.9
Construction	122.3	140.3	176.9	219.5	229.1	268.6	327.6	337.7	364.0	384.7	464.7	482.8	510.8
Commerce, Restaurants, Hotels	552.8	629.8	694.0	977.7	1,109.5	1,159.3	1,248.0	1,354.8	1,345.0	1,288.0	1,402.0	1,653.2	1,732.1
Transportation, Storage, Communications	115.5	143.0	147.4	239.8	247.7	275.6	307.5	356.7	407.0	432.2	457.3	512.2	571.1
Finance, Insurance	85.5	105.7	127.5	196.3	216.1	235.7	257.1	283.3	329.2	359.5	380.4	410.1	449.5
Real Estate	282.3	316.1	360.6	441.6	447.7	470.1	485.0	519.9	546.4	564.8	582.7	603.1	626.6
General Government	323.4	348.2	379.6	503.6	549.2	594.4	642.6	678.5	746.1	769.8	799.1	839.1	891.1
Other Personal Services	134.6	165.2	194.9	275.2	287.9	301.4	318.5	333.5	351.1	344.6	356.0	383.1	402.6
TOTAL	2,674.6	3,096.5	3,475.5	5,184.5	5,573.5	5,951.3	6,438.0	6,934.3	7,318.8	7,472.5	7,884.8	8,586.9	9,079.2

1/ Preliminary figures.

Source: Banco Central, Cifras de Cuentas Nacionales de Costa Rica.

Appendix Table 1.3: GDP BY EXPENDITURE, 1960-1978 (MILLIONS OF CURRENT COLONES)

ITEM		DISTRIBUTION 1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	DISTRIBUTION 1970	1971	1972	1973	1974	1975	1976	1977	1978
CONSUMPTION	1	2,496.1	2,496.1	2,671.6	2,936.2	3,176.1	3,574.9	3,722.6	4,029.5	4,440.2	4,821.3	5,626.3	6,141.5	6,934.9	8,344.1	11,639.3	14,572.3	16,996.4	21,350.7	24,763.2
PRIVATE	2	2,200.0	2,155.7	2,306.0	2,523.3	2,719.1	3,080.1	3,185.7	3,444.0	3,804.2	4,115.6	4,806.5	5,151.5	5,752.9	6,927.0	9,750.3	12,014.4	13,690.0	17,142.6	19,721.0
GENERAL GOVERNMENT	3	296.1	340.4	365.6	412.9	457.0	494.8	536.9	585.5	636.0	705.7	819.8	990.0	1,182.0	1,417.1	1,889.0	2,557.9	3,306.4	4,208.1	5,042.2
GROSS DOMESTIC INVESTMENT	4	500.0	553.0	619.9	639.8	577.1	746.2	817.3	897.0	924.2	1,132.7	1,339.9	1,736.9	1,809.7	2,436.3	3,533.7	3,636.7	4,892.3	5,390.4	7,477.3
FIXED	C	460.4	504.3	590.6	620.8	544.9	729.6	735.9	834.0	882.1	1,023.5	1,269.8	1,578.5	1,600.2	2,251.6	3,174.8	3,694.8	4,846.0	4,888.8	7,270.8
PRIVATE	5	358.7	394.3	462.8	485.8	434.9	495.6	539.9	620.0	686.1	751.5	961.8	1,120.5	1,224.2	1,656.6	2,351.8	2,591.8	3,113.4	3,741.8	7,270.8
PUBLIC	6	101.7	110.0	128.0	132.0	156.0	234.0	196.0	214.0	196.0	272.0	308.0	458.0	576.0	595.0	823.0	1,103.0	1,732.6	1,147.0	-
CHANGE IN STOCKS	7	40.2	48.7	29.1	19.0	-13.8	36.6	81.4	63.0	42.1	109.2	70.1	158.4	9.5	186.7	358.9	-58.1	46.3	501.6	206.5
GROSS DOMESTIC EXPENDITURE	C	2,996.7	3,049.1	3,291.5	3,576.0	3,753.2	4,391.1	4,539.9	4,926.5	5,364.4	5,954.0	6,966.2	7,876.4	8,744.6	10,782.4	15,173.0	18,209.0	21,888.7	26,741.1	32,240.5
RESOURCE BALANCE	8	-136.2	-119.8	-104.9	-171.8	-145.0	-412.6	-251.5	-292.6	-237.7	-298.7	-441.7	-741.4	-528.6	-620.0	-1,957.3	-1,404.4	-1,213.1	-1,465.4	-2,604.9
EXPORTS OF GOODS AND NFS	9	612.6	616.8	728.6	755.0	887.1	896.2	1,072.1	1,188.3	1,485.1	1,522.7	1,841.2	1,945.0	2,519.7	3,162.6	4,431.3	5,107.0	6,081.5	8,279.5	8,686.9
IMPORTS OF GOODS AND NFS	10	748.8	736.6	833.5	926.8	1,032.1	1,308.8	1,323.6	1,480.9	1,682.8	1,821.4	2,282.9	2,686.4	3,048.5	3,782.6	6,388.6	6,511.4	7,294.6	9,744.9	11,291.8
GDP AT MARKET PRICES	11	2,860.5	2,929.3	3,186.6	3,404.2	3,608.2	3,978.5	4,288.4	4,633.9	5,126.7	5,655.3	6,524.5	7,137.0	8,215.8	10,162.4	13,215.7	16,804.6	20,675.6	25,275.7	29,635.6
NET FACTOR INCOME	12	-23.1	-26.3	-56.3	-50.8	-67.0	-83.4	-93.3	-109.3	-124.8	-106.4	-87.6	-98.3	-253.1	-284.8	-327.9	-543.6	-626.9	-655.2	-849.4
GNP AT MARKET PRICES	13	2,837.4	2,903.0	3,130.3	3,353.4	3,541.2	3,885.1	4,195.1	4,524.6	5,001.9	5,548.9	6,436.9	7,038.7	7,962.7	9,877.6	12,887.8	16,261.0	20,048.7	24,620.5	28,786.2
GROSS DOMESTIC SAVINGS	14	364.4	433.2	515.0	468.0	432.1	353.6	565.8	604.4	686.5	834.0	898.2	995.5	1,280.9	1,816.3	1,576.4	2,232.3	3,679.2	3,925.0	4,872.4
NET CURRENT TRANSFERS	17	28.4	36.4	33.1	50.3	58.1	50.2	50.1	52.7	39.9	25.3	23.1	38.1	32.3	51.5	80.3	82.8	113.4	132.3	139.7
GROSS NATIONAL SAVINGS	18	369.7	443.3	491.8	467.5	423.2	320.4	522.6	547.8	601.6	752.9	833.7	935.3	1,060.1	1,585.0	1,328.8	1,771.5	3,165.7	3,402.1	4,162.7
PRIVATE	15	275.6	415.4	427.7	426.3	359.1	248.9	447.8	492.7	448.2	604.4	591.2	745.2	821.2	1,215.1	624.8	980.0	2,279.8	2,283.4	-
PUBLIC	16	94.1	27.9	64.1	41.2	64.1	71.5	74.8	55.1	153.4	148.5	242.5	190.1	238.9	369.9	704.0	791.5	885.9	1,118.7	4,162.7
MEMO ITEMS:																				
EXCHANGE RATE (COLONES/$100)	19	619.0	621.0	662.5	662.5	662.5	662.5	662.5	680.4	703.0	675.0	662.3	691.0	733.0	761.0	828.4	857.0	857.0	857.0	857.0
DEPRECIATION	20	167.5	176.1	191.4	205.4	216.6	236.2	255.8	284.5	324.0	353.5	415.5	449.7	503.6	567.1	697.6	891.9	1,123.2	1,359.5	..

ROW VALUES ARE: DISTRIBUTION VALUES.
SOURCE: CENTRAL BANK, EXCEPT FOR PUBLIC INVESTMENT, 1965 THROUGH 1975: FROM TABLE 5.7; PUBLIC SAVINGS, 1971-75: FROM TABLE 5.8;

Appendix Table 1.4: COSTA RICA: BALANCE OF PAYMENTS, 1970-1978
(MILLIONS OF US DOLLARS)

ITEM		(DISTRIBUTION								
		1970	1971	1972	1973	1974	1975	1976	1977	1978
CURRENT ACCOUNT										
EXPORTS OF GOODS AND NFS	1	280.2	283.8	346.4	422.2	544.7	606.1	720.5	969.5	1,017.2
MERCHANDISE FOB	2	231.2	225.4	280.9	344.5	440.3	493.3	592.9	828.2	863.6
NON-FACTOR SERVICES	3	49.0	58.4	65.5	77.7	104.4	112.8	127.6	141.3	153.6
IMPORTS OF GOODS AND NFS	4	346.5	390.7	418.2	503.2	782.0	772.6	866.1	1,137.1	1,317.6
MERCHANDISE CIF	5	316.7	349.7	372.8	455.3	719.7	694.0	770.4	1,027.3	1,190.4
OTHER NON-FACTOR SERVICES	6	29.8	41.0	45.4	47.9	62.3	78.6	95.7	109.8	127.2
RESOURCE BALANCE	7	-66.3	-106.9	-71.8	-81.0	-237.3	-166.5	-145.6	-167.6	-300.4
FACTOR INCOME, NET	8	-13.6	-14.6	-34.9	-37.9	-38.6	-60.8	-69.1	-73.5	-103.4
INTEREST, NET	9	-9.8	-11.2	-13.8	-21.7	-28.7	-41.1	-49.9	-44.2	-83.6
(OF WHICH ON PUBLIC LOANS)	10	-7.1	-8.2	-10.1	-12.8	-18.1	-23.4	-27.4	-35.7	-62.6
DIRECT INVESTMENT INCOME, NET		-3.8	-3.4	-21.1	-16.2	-9.9	-19.7	-19.2	-29.3	-19.8
TRANSFERS, NET	12	5.9	7.5	6.7	7.0	9.7	9.7	13.2	15.5	16.1
CURRENT ACCOUNT BALANCE	13	-74.0	-114.0	-100.0	-111.9	-266.2	-217.6	-201.5	-225.6	-387.7
CAPITAL ACCOUNT 1/										
DIRECT INVESTMENT, NET	14	26.4	21.2	23.4	32.9	44.3	69.0	63.3	63.2	47.1
CAPITAL GRANTS	15	3.8	2.7	2.6	5.2	6.4	11.0	-	..	-
PUBLIC M&LT LOANS, NET	16	9.0	32.2	40.3	40.7	53.7	111.5	117.6	187.7	213.0
DISBURSEMENTS	17	29.6	52.8	64.1	71.2	87.1	152.5	157.1	238.8	386.2
AMORTIZATION	18	-20.6	-20.6	-23.8	-30.5	-33.4	-41.0	-39.5	-51.1	-173.2
OTHER M&LT LOANS, NET	19	10.3	2.5	4.1	12.7	34.2	57.9	42.6	7.9	37.6
DISBURSEMENTS	20	12.6	13.0	17.7	35.4	64.0	117.7	122.7	84.9	144.0

Appendix Table 1.4: COSTA RICA: BALANCE OF PAYMENTS, 1970-1978
(MILLIONS OF US DOLLARS)

ITEM		DISTRIBUTION								
		1970	1971	1972	1973	1974	1975	1976	1977	1978
AMORTIZATION	21	-2.3	-10.5	-13.6	-22.7	-29.8	-59.8	-80.1	-77.0	-106.4
TRANSACTIONS, NET	22	-2.2	5.7	-	-	23.0	13.5	2.7	-3.5	-
SHORT-TERM CREDIT, NET	23	24.2	44.0	-21.8	-2.0	28.9	-36.3	36.6	34.1	22.4
CAPITAL TRANSACTIONS, NEI	24	9.2	17.2	57.2	40.3	57.1	11.3	3.4	44.1	40.8
CHANGE IN RESERVES (-=INCREASE)		11.7	-11.5	-5.8	-17.9	22.9	-20.9	-64.7	-107.9	26.8
CAPITAL ACCOUNT BALANCE	C	92.4	114.0	100.0	111.9	270.5	217.0	201.5	..	387.7
MEMO ITEMS:										
RESERVES - END OF PERIOD	26	26.0	37.5	43.3	61.2	38.3	59.2	123.9	232.5	200.9
AVG. EFFECTIVE EXCHANGE RATE 2/		6.6	6.9	7.3	7.6	8.3	6.27	8.6	8.6	8.6

ROW VALUES ARE: DISTRIBUTION: VALUES.
1/ ITEMS IN CAPITAL ACCOUNT FOR 1960-66 INCLUDED IN CAPITAL TRANSACTIONS, NEI (NOT ELSEWHERE INCLUDED).
2/ IN COLONES PER US DOLLAR.
.. NOT AVAILABLE.
SOURCE: CENTRAL BANK OF COSTA RICA; WORLD BANK FOR PUBLIC M&LT LOANS; IMF BALANCE OF PAYMENTS YEARBOOK FOR OTHER ITEMS IN CAPITAL ACCOUNT.

Appendix Table 2.1: COSTA RICAN IMPORTS, 1963-1978
(Thousands of Current Dollars)

ECONOMIC CATEGORY CLASSIFICATION	1963	1966	1969	1970	1971	1972	1973	1974	1975	1976	1977 1/	1978 1/
Raw Material for Industry and Mining	30,287	46,221	78,490	102,199	111,357	128,348	170,938	307,325	264,821	269,570	308,896	345,392
Raw Material for Agriculture	9,274	9,420	8,509	9,243	9,020	9,406	11,926	19,328	20,939	22,803	64,653	62,719
Non-Durable Consumer Goods	23,672	37,283	53,441	69,735	74,141	71,859	76,855	112,206	97,614	112,756	155,092	183,734
Durable Consumer Goods	13,630	23,136	28,126	33,327	37,611	32,601	38,499	57,252	46,429	56,080	84,040	96,781
Capital Goods for Industry and Mining	10,234	14,571	17,507	25,697	25,427	26,667	42,418	51,328	52,581	65,460	70,204	83,590
Capital Goods for Agriculture	2,722	3,514	5,294	6,173	9,013	9,427	10,670	12,411	19,734	21,981	40,594	37,950
Capital Goods for Construction	4,216	5,471	6,655	10,161	13,081	14,622	13,471	19,756	22,297	18,158	19,473	23,187
Capital Goods for Transportation	8,784	12,275	21,116	23,164	30,721	36,609	36,054	47,061	51,878	59,428	63,888	79,106
Other Capital Goods	5,337	7,842	8,769	13,355	15,733	20,463	21,632	33,640	31,012	48,241	51,737	61,602
Construction Materials	8,673	10,430	12,879	17,312	16,756	15,239	18,271	24,422	35,756	32,987	53,624	87,259
Fuel and Lubricants	7,018	8,290	4,352	6,320	6,863	7,534	12,447	33,339	47,075	48,145	90,738	120,466
Others	-	-	-	-	-	-	2,145	1,595	3,833	4,803	2,248	2,750
TOTAL	123,847	178,453	245,138	316,687	349,743	372,775	455,326	719,663	693,969	770,412	1,005,187	1,184,536
NAUCA CLASSIFICATION												
0 Food Products	10,357	15,661	20,293	28,782	35,921	32,064	40,844	74,057	59,207	55,645	70,642	75,734
1 Beverages and Tobacco	1,131	1,142	1,474	1,645	1,577	1,524	1,321	1,684	2,489	3,034	5,789	7,303
2 Inedible Raw Materials, except Fuel	740	1,754	4,161	6,603	6,457	7,529	8,892	15,320	13,451	16,028	19,622	20,855
3 Fuels, Lubricants, and Related Products	7,617	9,099	10,574	12,266	15,815	20,079	31,454	65,095	73,758	73,851	93,780	123,217
4 Oils and Lards, Animal and Vegetable	1,059	2,392	2,903	3,331	4,245	2,994	4,153	5,374	6,019	7,195	7,249	8,830
5 Chemical Products	19,155	26,920	40,555	49,434	53,836	60,675	77,445	130,588	133,052	129,463	173,315	189,263
6 Manufactures Classified by Material	42,265	55,631	72,782	96,402	96,991	102,703	123,910	199,748	175,168	197,072	243,422	292,748
7 Machinery and Transport Equipment	33,200	50,865	68,009	89,301	105,368	116,395	134,302	182,351	186,158	234,365	317,522	374,727
8 Other Manufactures	8,312	14,953	24,322	28,842	29,459	28,627	30,683	43,649	40,699	48,617	71,950	88,381
9 Live Animals, nei, and Special Transactions	11	36	65	81	74	185	2,322	1,797	3,968	5,142	1,896	3,478

1/ Estimates.

Source: 1963-76: MEIC, Comercio Exterior de Costa Rica.
1977-78: Central Bank, Informacion Estadistica Mensual, December, 1978.

Appendix Table 2.2: COSTA RICAN EXPORTS, 1957-78

(values in millions of dollars)

Exports in Current Dollars	1957	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Coffee	40.6	45.3	48.0	45.6	52.6	54.8	55.3	55.8	73.1	59.3	77.9	94.0	124.8	96.9	153.9	319.2
Banana	32.2	25.8	28.3	28.3	29.2	30.9	42.8	51.5	66.8	64.0	82.8	90.7	98.4	144.1	148.7	150.3
Cocoa	4.0	4.3	4.1	2.2	3.1	3.1	3.0	7.1	1.9	1.5	3.0	4.4	5.9	5.3	6.9	17.1
Cattle and Unprocessed Beef	2.2	5.7	8.0	5.2	7.1	9.6	12.5	15.2	18.1	20.8	30.5	33.3	34.3	38.0	45.5	51.3
Sugar	0.1	5.1	5.1	4.7	8.7	8.4	8.7	9.1	10.1	12.9	12.1	21.5	24.4	48.2	24.7	15.6
Total Traditional Products	79.1	86.2	93.5	87.0	100.7	106.8	122.3	138.7	170.0	158.5	206.3	243.9	287.8	332.5	379.7	553.5
Fertilizer	0.0	0.6	6.8	3.6	2.4	2.8	4.4	3.0	2.4	3.9	5.9	7.6	12.9	18.3	16.7	13.7
Other	4.3	8.3	13.9	21.3	32.6	34.1	44.4	48.1	58.8	63.2	68.0	93.7	139.8	142.8	196.6	278.6
Total	83.4	95.1	114.2	111.9	135.7	142.7	171.1	189.8	231.2	225.6	280.2	345.2	440.5	493.6	593.0	845.8
Exports in Constant 1970 Dollars																
Coffee	31.1	57.8	54.0	51.1	58.0	70.0	72.5	71.6	73.1	67.6	91.0	77.1	95.3	81.4	68.0	71.5
Banana	25.8	20.6	22.6	25.1	29.2	30.9	42.8	58.9	66.8	73.1	82.8	90.7	87.4	88.7	84.9	80.2
Cocoa	4.5	5.9	5.6	4.1	4.7	4.4	2.8	4.9	1.9	2.2	3.7	2.9	2.7	3.1	2.6	3.4
Cattle and Unprocessed Beef	9.1	9.8	15.5	11.2	11.9	13.5	1.6	17.5	18.1	12.5	27.1	23.0	29.1	34.6	35.6	41.4
Sugar	0.1	5.6	5.4	5.7	9.7	9.4	9.4	9.5	10.1	12.5	10.8	17.0	10.5	10.6	11.1	10.3
Total Traditional Products	70.6	99.7	103.1	97.2	113.5	128.2	129.1	162.4	170.0	174.9	215.4	210.7	225.0	218.4	202.2	206.8
Fertilizer	0.0	0.6	6.1	3.2	2.2	2.3	3.9	3.1	2.4	4.6	5.7	6.2	5.2	5.0	7.8	8.0
Other	n.a.	10.1	17.8	29.2	36.2	37.7	49.2	51.4	58.8	59.4	58.9	68.4	83.3	75.3	102.2	134.7
Total	n.a.	110.4	127.0	122.6	151.9	168.2	182.2	216.9	231.2	238.9	290.0	285.3	313.5	298.7	312.2	349.5
Price Indices 1/ (1970=100)																
Coffee	130.4	78.4	88.9	91.3	90.7	78.4	76.2	78.0	100.0	87.7	85.5	121.9	130.8	119.1	226.4	446.3
Banana	125.0	125.0	125.0	112.5	100.0	100.0	100.0	87.5	100.0	87.5	100.0	100.0	112.5	162.5	175.0	187.5
Cocoa	89.1	72.4	72.1	53.7	65.7	71.7	105.0	144.2	100.0	71.0	80.8	150.6	221.6	171.3	272.5	498.9
Cattle and Unprocessed Beef	23.8	58.0	51.4	46.8	59.7	71.1	76.6	86.8	100.0	107.1	112.6	144.5	117.8	109.8	127.8	123.9
Sugar	75.3	91.1	94.9	81.4	89.3	89.2	92.5	96.1	100.0	103.2	112.3	126.1	232.2	455.8	221.9	152.5
Total Traditional Products	113.2	95.2	99.3	93.9	90.7	86.7	86.9	84.5	100.0	90.4	95.6	116.3	129.3	155.8	196.0	293.5
Fertilizer	-	99.7	111.4	112.9	112.3	122.5	114.0	97.4	100.0	84.5	102.9	122.2	248.2	363.5	214.9	170.8
Other 1/	n.a.	82.1	77.7	72.9	90.0	90.6	90.2	93.5	100.0	106.3	115.4	136.9	167.7	189.4	192.3	206.9
Total	n.a.	86.1	89.9	91.3	89.3	84.8	93.9	87.5	100.0	94.4	96.6	121.0	140.5	165.2	189.9	242.0

1/ Constant revenues were calculated from unrounded current data. Discrepencies between the price indices and the current/constant ratios are due to rounding.

Source: Banco Central, Algunas Estadisticas del Sector Externo, and Bank Staff calculations.

Appendix Table 2.3: EXPORTS OF MANUFACTURED PRODUCTS BY INDUSTRY FOR SELECTED YEARS
1963-1977
(US$ Thousands)

CIIU	INDUSTRY	1963 Total	1963 To Central America	1963 To Rest of World	1967 Total	1967 To Central America	1967 To Rest of World	1971 Total	1971 To Central America	1971 To Rest of World	1976 Total	1976 To Central America	1976 To Rest of World	1977 Total	1977 To Central America	1977 To Rest of World
311-312	Food Products	1,253.8	1,132.9	120.9	4,441.1	4,199.4	241.7	8,277.9	7,537.8	740.1	16,334.9	13,723.7	2,611.2	21,229.5	16,955.5	4,274.0
313	Beverages	1.5	1.5	0.0	15.1	15.1	0.0	30.2	30.2	0.0	70.3	70.3	0.0	58.5	56.2	2.3
314	Tobacco Manufactures	3.0	1.5	1.5	30.2	30.2	0.0	30.2	0.0	30.2	802.0	19.3	782.7	1,891.0	0.0	1,891.0
321	Textiles, including Carpet and Lace	268.9	247.7	21.2	3,247.7	3,172.2	75.5	5,876.1	5,815.7	60.4	24,414.6	23,879.9	534.7	24,496.5	24,262.3	234.2
322	Clothing	55.9	55.9	0.0	1,501.5	1,500.0	1.5	1,057.4	1,042.3	15.1	3,215.6	3,082.0	133.6	4,742.4	4,590.2	152.2
323	Leather Products, except Clothing and Shoes	117.8	110.3	7.5	347.4	342.9	4.5	347.6	373.1	1.5	3,810.0	902.9	2,907.1	4,683.8	1,967.2	2,716.6
324	Footwear	60.6	60.4	0.2	468.3	468.3	0.0	489.6	489.0	0.6	1,690.0	1,159.7	530.3	1,370.0	1,346.6	23.4
331	Wood Products, including Cork	968.3	380.7	587.6	1,148.0	1,027.2	120.8	1,827.8	1,389.7	438.1	4,255.0	2,946.5	1,308.5	6,639.3	4,953.2	1,686.1
332	Wooden Furniture and Accessories	23.1	22.7	0.4	528.7	513.6	15.1	120.8	105.7	15.1	1,803.6	644.6	1,159.0	1,791.6	784.5	1,007.1
34	Paper, Printing, and Related Products	268.9	160.1	108.8	800.6	785.5	15.1	2,371.6	2,356.5	15.1	4,734.0	3,549.1	1,184.9	5,995.3	5,936.8	58.5
351-352	Chemicals	1,267.4	731.1	536.3	7,039.3	6,525.7	513.6	14,305.1	12,099.7	2,205.4	48,817.3	36,171.0	12,646.3	52,927.4	47,166.3	5,761.1
353-354	Petroleum and Carbon Products	-	-	-	157.1	132.9	24.2	1,933.5	1,253.8	679.7	936.8	175.6	761.2	1,194.4	503.5	690.9
355	Rubber Products	6.0	6.0	0.0	136.0	136.0	0.0	3,549.8	2,613.3	936.5	6,323.2	6,322.0	1.2	6,112.4	6,089.0	23.4
356	Plastic Products	192.6	191.4	1.2	649.5	643.5	6.0	2,225.1	2,222.1	3.0	6,804.8	6,784.3	20.5	8,676.8	8,231.9	444.9
36	Other Non-Metallic Mineral Products	59.8	59.7	0.1	426.0	424.5	1.5	205.1	204.8	0.3	1,245.6	1,214.9	30.7	1,534.0	1,487.1	46.9
37	Basic Metals	13.6	13.6	0.0	1,842.9	1,827.8	15.1	2,602.7	2,592.1	10.6	10,433.3	10,408.6	24.7	12,704.9	12,576.1	128.8
381	Metal Products, except Machinery and Transport Equipment	129.4	199.4	0.0	2,160.1	2,137.5	22.6	3,685.8	3,549.8	136.0	8,140.2	7,491.5	648.7	12,189.7	11,815.0	374.7
382	Mechanical Machinery	9.0	6.0	3.0	740.2	734.1	6.1	2,477.3	2,386.7	90.6	5,434.4	5,242.4	192.0	9,039.8	8,805.6	234.2
383	Electrical Machinery	199.9	129.9	0.0	2,975.8	2,974.3	1.5	5,256.8	5,151.1	105.7	16,768.7	12,334.6	4,434.1	19,929.7	14,719.0	5,210.7
384	Transport Equipment	6.6	4.4	2.2	15.1	15.1	0.0	75.5	75.5	0.0	694.1	227.4	466.7	726.0	199.1	526.9
39	Other Manufactures	483.4	90.6	392.8	1,314.2	1,072.5	241.7	2,885.2	1,586.1	1,299.1	10,538.6	3,466.0	7,072.6	17,880.6	9,285.7	8,594.9
	Total	5,389.5	3,605.8	1,783.7	29,984.8	28,678.3	1,306.5	59,658.1	52,875.0	6,783.1	177,267.0	139,816.3	37,450.7	215,813.6	181,730.8	34,082.8

Source: Bank staff estimates; Comercio Exterior de Costa Rica, various years.

Appendix Table 2.4: EXPORTS OF PRINCIPAL COMMODITIES BY DESTINATION, 1976
(US$ 000)

NAUCA	DESCRIPTION	TOTAL	CENTRAL AMERICA	U.S.	CARIBBEAN	MEXICO	VENEZUELA	OTHER LATIN AMERICA	EUROPE	CANADA	U.S.S.R.	JAPAN	OTHER
	TRADITIONAL PRIMARY PRODUCTS												
07101	Coffee	153,908.1		21,598.4	168.1				122,846.2	466.2	2,817.6	5,316.7	694.9
07201	Bananas	148,659.1		108,113.5					35,716.0	24.5		509.5	4,295.6
00101, 01101	Beef and Cattle	45,469.3	214.0	33,025.4	6,402.4		5,370.4	88.5	250.3			3.8	114.5
06101	Sugar, Unrefined	24,722.2		24,722.2									
0510101	Cocoa	6,947.5	758.8	5,158.9					65.3			964.5	
	Sub-Total	379,706.2 (100.0%)	972.8 (0.26%)	192,618.4 (50.73%)	6,570.5 (1.74%)		5,370.4 (1.41%)	88.5 (0.02%)	158,877.8 (41.84%)	490.7 (0.13%)	2,817.6 (0.74%)	6,794.5 (1.79%)	5,105.0 (1.35%)
	NON-TRADITIONAL PRIMARY PRODUCTS												
07102	Roasted Coffee	11,230.5	0.6	11,229.9									
03	Fish, Crustaceans, etc.	5,204.0	1,152.2	3,664.6	37.6				59.2			119.6	170.8
292	Inedible Vegetable Products 1/	3,855.3	263.9	1,901.8	42.2		0.3	5.0	1,632.0			6.8	3.3
0540201	Frijoles (Black Beans)	1,985.2			1,985.2								
05409	Other Vegetables for Human Consumption	1,218.3	405.2	688.7	49.6		0.8	41.4	32.6				
05403	Vegetables used as Raw Materials	1,048.7	0.6	806.0	196.2			3.4	22.7	19.8			
0510115	Plantains	1,010.9	76.4	850.6	5.0			1.0	77.9				
2728	Mining, Minerals, stone	159.3	159.3										
	Other 2/	10,255.7	7,781.6	830.8	525.3		87.0	290.9	599.6			4.1	136.4
	Sub-Total Non-Traditional Primary Products	35,967.9 (100.0%)	9,839.8 (27.36%)	19,972.4 (55.53%)	2,841.1 (7.90%)		28.1 (0.24%)	341.7 (0.95%)	2,424.0 (6.74%)	19.8 (0.05%)		130.5 (0.36%)	310.5 (0.87%)
	Sub-Total Primary Products	415,674.1 (100.0%)	10,812.6 (2.60%)	212,590.8 (51.11%)	9,411.6 (2.27%)		5,458.5 (1.31%)	430.2 (0.10%)	161,301.8 (38.81%)	510.5 (0.12%)	2,817.6 (0.68%)	6,925.0 (1.67%)	5,415.5 (1.30%)
	MANUFACTURED PRODUCTS												
561	Fertilizers	16,656.3	6,190.8	168.3		10,297.2							
54109	Medicines and Pharmaceuticals	13,046.1	12,129.1	112.9	300.2	0.1	3.2	471.8	1.5				27.3
59902	Insecticides, Fungicides, etc.	8,789.6	7,548.5	32.5	264.4			935.6					8.6
65305	Synthetic Textiles	8,505.4	8,470.8	10.5	17.7				6.4				
84102, 03, 04, 05	Exterior and Interior Clothing	7,161.0	6,666.4	404.2	4.2		86.2						
68107	Galvanized Metal Sheets	6,969.5	6,969.5										
89911	Plastic Products, n.e.c.	6,629.0	6,511.8	21.2	66.1		13.3	0.2	16.4				
6290102	Tires and Inner Tubes	5,575.9	5,575.5	0.2				0.2					
65307	Knit and Crochet Textiles	5,492.9	5,469.7		4.9				18.3				
7161202, 89908	Refrigerators, Freezers	4,911.2	4,833.9	0.1	77.2								
72113	Electric Cables and Insulated Wire	3,907.9	2,333.4		31.1		17.6	1,525.8					
0990905, 55102	Syrups and Concentrates for Non-Alcoholic Beverages	3,869.0	3,867.2					0.7	1.1				
7210105	Electrical Control Mechanisms	3,856.6	1,597.3	910.5	16.4		34.7	49.8	1,146.0	8.4			93.5
61101	Tanned Leather, except Fine Skins	3,582.9	887.5	658.5	55.8		16.8	59.3	1,862.0				43.0
69921	Metal Cases, for transport and storage	3,571.4	3,462.4		103.9		0.2	3.1	1.8				
72102	Batteries and Dry Cells	3,531.1	3,171.9	0.1	41.3		3.9	313.9					
821	Furniture and Accessories	3,029.2	1,604.9	1,151.7	259.9	0.9	5.3		3.1	3.4			
631	Plywood	2,889.7	2,260.0	35.3	594.4								
64209	Paper Products	2,796.7	2,796.7										
091	Margarine, Lard	2,168.8	2,164.6					4.2					
053	Preserved Fruits and Preparations	2,163.0	1,898.5	254.1	10.4								
0880402	Biscuits and Crackers, all types	2,086.1	2,018.7	0.1	67.3								
55201	Perfume, cosmetics, toiletries, not including soap	1,964.7	1,964.1		0.6								
851	Shoes of all types	1,805.9	1,308.5	489.1	8.1		0.2						
68113	Pipe and Tubing, Steel and Iron	1,702.7	1,691.9	10.8									
7210401	Transmitters and Receivers	1,694.2	1,694.0					0.2					
07203	Cocoa Butter and Paste	1,604.0	308.0	1,253.6					42.4				
5990104	Other Synthetic Plastics and Resins	1,598.9	1,596.7					2.2					
533	Pigments, Paint, Varnish and related products	1,461.9	1,459.6	0.1	1.2				1.0				
8910202	Phonograph Records	1,424.4	1,423.2	1.2									
055	Preserved Vegetables and Preparations	1,400.6	1,090.6	204.1	105.9								
55203	Wax, Polish, Paste, for cleaning and preserving leather, wood	1,336.0	1,336.0										
651	Thread, Yarn, etc.	1,285.7	1,285.7										
68104	Concrete Reinforcers	1,150.4	1,150.4										
013	Packed Meat and Meat Products	1,065.3	1,059.2	5.8				0.3					
062	Sweets and Other Sugar Products	1,051.8	897.6					0.8	153.4				
8990701	Kitchen and Table Utensils, including Plastic	1,001.9	1,001.8		0.1								
	Other Manufactures	34,529.3	22,119.9	9,630.8	778.1	159.2	360.1	167.1	469.3	11.2		64.9	768.7
	Sub-Total Manufactures	177,267.0 (100.0%)	139,816.3 (78.87%)	15,355.7 (8.60%)	2,809.2 (1.59%)	10,457.4 (5.90%)	541.5 (0.31%)	3,535.2 (1.99%)	3,722.7 (2.10%)	23.0 (0.01%)		64.9 (0.04%)	941.1 (0.53%)
	Total	592,941.1 (100.0%)	150,628.9 (25.40%)	227,946.5 (38.45%)	12,220.8 (2.06%)	10,457.4 (1.76%)	6,000.0 (1.01%)	3,965.4 (0.67%)	165,024.5 (27.83%)	533.5 (0.09%)	2,817.6 (0.48%)	6,989.9 (1.18%)	6,356.6 (1.07%)

1/ Plants, seeds, flowers.
2/ Includes NAUCA categories: 00104, 01104, 01109, 02, 042, 0510199, 05107, 07202, 074, 075, 08103, 08104, 121, 21, 22, 23, 24, 25, 26, 291, 4 and 92.

Source: Comercio Exterior de Costa Rica, 1976, Ministerio de Economia, Industria, y Comercio, Direccion General de Estadistica y Censos

Appendix Table 2.5: 1975-77 DIRECTION OF TRADE

Countries	Exports to Country Div. by Total Exports (%)	Imports from Country Div. by Total Imports (%)	(Exports to + Imports from) Country Divided by (Total Exports + Imports)
Total CACM	21.5	16.8	18.9
Guatemala	6.4	5.3	6.0
El Salvador	5.7	5.0	5.3
Honduras	2.3	0.9	1.5
Nicaragua	7.1	5.2	6.1
Panama	3.0	1.2	2.0
Unites States	33.8	35.2	34.6
Canada	0.3	1.9	1.2
Mexico	1.2	2.8	2.1
Colombia	0.1	0.7	0.4
Venezuela	1.4	5.7	3.8
West Germany	11.5	5.6	8.2
Belgium, Luxembourg	2.4	0.9	1.5
Finland	3.7	0.1	1.2
Great Britain	0.2	2.7	1.6
Italy	1.9	1.3	1.6
Netherlands	4.9	0.9	2.7
Sweden	2.4	1.1	1.6
Japan	1.2	11.5	7.0
Others	10.5	11.6	11.1
TOTAL	100.0	100.0	100.0
Memo Item:			
Trade Totals, 1975-77 (millions of dollars)	1,914.4	2,485.8	4,400.2

Source: Banco Central, Algunas Estadísticas del Sector Externo.

Appendix Table 2.6 : COSTA RICAN TRADE BALANCE WITH THE CACM COUNTRIES, 1960-1979
($ 000)

	GUATEMALA			EL SALVADOR			HONDURAS			NICARAGUA			TOTAL		
	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
1960	855.6	486.0	369.6	559.4	925.2	-365.8	65.9	99.8	-33.9	940.5	2,002.8	-1,062.3	2,421.4	3,513.8	-1,092.4
1961	936.3	1,053.1	-116.8	687.7	1,609.4	-921.7	161.8	401.0	-239.2	402.3	982.9	-580.6	2,188.1	4,046.4	-1,858.3
1962	102.2	326.0	-223.8	1,193.8	2,016.4	-822.6	148.1	173.5	-25.4	276.2	792.2	-516.0	1,720.3	3,308.1	-1,587.8
1963	446.2	573.2	-127.0	1,977.8	2,301.6	-323.8	265.7	145.4	120.3	1,255.3	797.2	458.1	3,945.0	3,817.4	127.6
1964	3,185.2	2,716.8	468.4	7,287.3	2,908.1	4,379.2	1,497.8	734.5	763.3	3,418.2	1,925.1	1,493.1	15,388.5	8,284.5	7,104.0
1965	4,323.2	5,321.1	-997.9	4,674.7	4,788.1	-113.4	2,964.7	1,415.3	1,549.4	6,269.0	3,167.2	3,101.8	18,231.6	14,691.7	3,539.9
1966	4,740.9	9.103.2	-4,362.3	6,091.5	7,653.3	-1,561.8	4,379.0	2,031.1	2,347.9	9,945.4	4,368.2	5,577.2	25,156.8	23,155.8	2,001.0
1967	5,594.9	11,323.2	-5,728.3	6,101.1	12,343.2	-6,242.1	4,364.1	3,197.9	1,166.2	10,849.0	7,356.3	3,492.7	26,909.1	34,220.6	-7,311.5
1968	8,018.2	15,816.8	-7,798.6	8,630.9	16.013.9	-7,383.0	6,099.9	5,185.4	914.5	13,479.4	11,833.1	1,646.3	36,228.4	48,849.2	-12,620.8
1969	8,870.1	17,640.3	-8,770.2	8,692.1	14,243.0	-5,550.9	7,809.1	5,770.9	2,038.2	12,477.5	13,565.6	-1,088.1	37,848.8	51,219.8	-13,471.0
1970	11,071.9	21,546.7	-10,474.8	10,485.5	20,072.1	-9,586.6	11,639.8	7,091.1	4,548.7	12,892.6	19,948.3	-7,055.7	46,089.8	68,658.2	-22,568.4
1971	15,406.6	27,063.2	-11,656.6	11,476.9	21,530.1	-10,053.2	4,769.8	1,559.2	3,210.6	15,306.4	26,345.6	-11,039.2	46,959.7	76,498.1	-29,538.4
1972	16,702.3	28,248.9	-11,546.6	12,659.2	22,808.0	-10,148.8	4,582.0	1,814.2	2,767.8	17,480.9	26,584.6	-9,103.7	51,424.4	79,455.7	-28,031.3
1973	21,175.1	32,777.1	-11,602.0	17,050.4	23,990.1	-6,939.7	6,311.5	2,921.4	3,390.1	25,921.6	23,982.8	1,938.8	70,458.6	83,671.4	-13,212.8
1974	30,122.5	40,047.3	-9,924.8	24,986.0	33,051.6	-8,065.6	9,644.5	7,720.1	1,924.4	39,513.1	33,201.7	6,311.4	104,266.1	114,020.7	-9,754.6
1975	31,161.5	39,736.0	-8,574.5	27,947.8	31,929.8	-3,982.0	12,793.1	5,981.5	6,811.6	35,323.6	37,073.1	-1,749.5	107,226.0	114,720.4	-7,494.4
1976	38,424.1	44,111.3	-5,687.2	33,227.5	39,988.1	-6,760.6	13,758.1	7,312.9	6,445.2	45,243.6	44,220.6	1,023.0	130,653.3	135,632.9	-4,979.6
1977	1/ 54,698.2	58,021.5	-3,323.3	47,494.2	50,389.2	-2,895.0	16,894.1	9,217.9	7,676.2	55,049.5	48,290.4	6,759.1	174,136.0	165,919.0	8,217.0
1978	2/60,960.0	70,500.0	-9,600.0	48,600.0	61,400.0	-12,800.0	21,500.0	12,800.0	8,700.0	45,600.0	56,800.0	-11,200.0	176,600.0	201,500.0	-24,700.0
1979	2/ 60,900.0	85,100.0	-24,200.0	48,000.0	70,100.0	-21,500.0	26,300.0	14,900.0	11,400.0	39,800.0	42,000.0	-2,200.0	176,600.0	213,000.0	-36,500.0

1/ Preliminary figures.

2/ Estimates.

Source: Banco Central, Folleto de Algunos Indicadores Economicos del Sector Industrial, 1977.

Appendix Table 3.1 : GROSS VALUE OF PRODUCTION IN COSTA RICAN INDUSTRY, 1957-1978
(Millions of Current Colones)

CIIU	INDUSTRY	1957	1960	1963	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978 1/
	Consumer Goods	922.0	1,066.5	1,257.2	2,117.0	2,488.0	2,702.4	2,900.1	3,820.3	5,163.2	6,005.6	7,770.3	10,551.7	n.a.
311-312	Food Products	688.0	766.9	891.1	1,417.1	1,654.9	1,766.5	1,891.6	2,500.4	3,393.2	3,924.4	5,211.7	7,371.3	n.a.
313	Beverages	65.9	80.2	91.7	152.1	185.2	208.2	247.6	347.5	438.8	545.7	646.2	838.4	n.a.
314	Tobacco Manufactures	28.8	38.5	49.8	80.6	86.4	91.1	96.1	122.9	144.4	179.5	226.0	269.7	315.8
322	Clothing	36.8	55.9	55.2	133.9	171.7	190.1	198.8	214.2	286.6	364.0	413.7	530.8	554.2
324	Footwear	27.8	34.5	39.8	47.8	45.6	51.2	51.1	70.9	93.9	95.1	112.2	109.1	131.4
332	Furniture and Fixtures	23.4	27.8	42.9	61.2	59.8	66.7	75.7	89.4	126.7	174.8	247.8	283.3	n.a.
342	Printing, Publishing	20.2	21.1	32.5	44.3	70.7	71.7	71.6	106.5	161.3	134.4	188.4	218.4	271.5
3522	Medicines and Pharmaceuticals	6.9	10.3	15.2	44.6	62.6	80.0	92.7	119.4	161.2	195.5	265.0	306.0	378.2
3523	Soaps, Perfumes, Cosmetics	10.2	14.9	26.9	45.1	49.9	54.1	54.8	89.0	113.0	135.1	146.1	181.7	216.6
384	Transport Equipment	10.3	10.9	3.9	69.8	74.1	94.8	95.1	131.1	196.8	220.7	269.0	393.5	500.1
39	Other Manufactures	3.7	5.5	8.2	20.5	27.1	28.0	25.0	29.0	47.3	36.4	44.2	49.5	50.1
	Intermediate Gpods	158.4	205.3	287.8	808.5	909.3	1,060.7	1,234.7	1,626.9	2,815.3	3,634.6	3,657.3	4,381.1	n.a.
321	Textiles	26.5	40.8	55.3	115.8	129.2	149.0	165.3	263.3	423.7	454.3	540.4	633.6	687.5
323	Leather Products	12.9	14.0	14.7	19.3	17.0	21.1	21.1	25.1	51.0	67.3	73.5	76.8	n.a.
331	Wood Products	65.8	73.3	83.9	143.5	140.3	156.7	177.7	209.8	297.3	410.6	506.9	500.4	n.a.
341	Paper Products	4.8	6.5	21.3	70.4	82.9	98.5	124.8	169.0	251.1	310.5	350.4	425.5	479.3
351	Industrial Chemicals	10.6	12.2	15.6	77.7	73.0	96.3	124.8	195.4	372.0	581.0	446.9	519.9	n.a.
3521	Paints, Varnish, Lacquer	1.3	5.1	11.6	20.6	23.0	30.5	29.1	40.6	54.9	65.3	86.8	103.2	n.a.
3529	Other Chemicals, nei	3.8	4.5	5.5	14.0	21.2	25.4	31.8	44.1	57.2	63.6	81.4	101.3	n.a.
353	Petroleum Refining	-	-	-	58.3	66.2	82.6	109.1	120.7	412.7	631.5	357.9	495.8	556.3
354	Petroleum and Coal Products	-	-	-	3.5	4.1	4.1	3.4	3.3	5.2	4.6	3.1	4.8	n.a.
355	Rubber Products	4.5	6.7	9.0	42.5	51.9	65.4	66.1	90.9	157.3	183.5	209.6	245.0	n.a.
356	Plastic Products, nei	1.0	7.2	12.4	49.7	75.3	78.6	94.8	126.0	186.3	233.1	247.3	314.1	360.0
361	Clay and Porcelain Products	-	0.8	1.5	3.4	4.1	4.5	4.9	6.4	17.6	13.7	16.4	22.3	25.7
362	Glass Products	3.6	5.1	4.5	7.6	9.6	10.8	11.5	13.2	21.7	20.8	21.7	28.1	n.a.
369	Other Non-metallic Mineral Products	20.3	22.6	27.6	68.1	79.7	88.5	103.8	114.5	161.7	227.2	270.6	338.6	n.a.
371	Iron and Steel	-	-	-	15.3	18.4	22.1	26.9	41.8	83.0	84.6	119.0	127.5	143.6
381	Metal Products	3.3	6.5	24.9	98.8	113.4	126.6	139.6	162.8	262.6	283.6	325.4	414.2	466.8
	Capital Goods													
382	Mechanical Machinery	-	-	7.4	97.5	127.3	148.1	167.6	257.7	328.0	339.9	420.7	571.7	n.a.
383	Electrical Machinery	-	-	6.0	36.0	47.2	57.7	65.6	73.8	109.1	119.6	127.9	170.0	n.a.
				1.4	61.5	80.1	90.4	102.0	183.9	218.9	220.3	292.8	401.7	485.7
	TOTAL	1,080.4	1,271.8	1,552.4	3,023.0	3,524.6	3,911.2	4,302.4	5,704.9	8,306.5	9,980.1	11,848.3	15,504.5	16,682.8

1/ Preliminary figures.

Source: Banco Central, Cifras Sobre Produccion Industrial, 1957-1977.

Appendix Table 3.2: VALUE ADDED IN COSTA RICAN INDUSTRY, 1957-1977
(Millions of Current Colones)

CIIU	INDUSTRY	1957	1960	1963	1969	1970	1971	1972	1973	1974	1975	1976	1977
	Consumer Goods	242.3	302.4	370.1	616.5	738.6	808.7	881.7	1,117.1	1,512.1	1,871.2	2,293.0	2,885.4
311-312	Food Products	121.2	150.1	187.5	294.2	357.1	382.6	415.8	515.0	738.5	901.2	1,081.6	1,397.8
313	Beverages	45.9	55.2	62.7	97.3	118.9	133.4	157.4	210.8	280.6	349.6	411.1	524.8
314	Tobacco Manufactures	19.2	25.7	33.1	53.7	57.5	60.6	63.9	81.8	96.2	120.3	151.9	182.7
322	Clothing	11.5	17.5	17.3	42.0	53.9	59.7	62.5	58.9	67.9	117.9	134.0	161.9
324	Footwear	11.2	13.9	16.0	19.2	18.4	20.6	20.6	26.3	35.6	36.0	42.5	44.3
332	Furniture and Fixtures	11.4	13.6	21.0	29.9	29.2	32.6	37.0	43.7	62.0	85.5	121.2	138.5
342	Printing, Publishing	8.0	8.3	12.9	17.6	28.0	28.4	28.4	46.1	64.5	58.8	82.8	97.4
3522	Medicines and Pharmaceuticals	2.6	3.8	5.6	16.6	23.3	29.7	34.4	42.2	53.5	68.8	90.7	110.6
3523	Soaps, Perfumes, Cosmetics	3.5	5.2	9.4	15.8	17.5	18.9	19.2	29.7	23.8	30.0	39.3	49.7
384	Transport Equipment	6.4	7.0	1.5	22.8	25.0	32.1	33.4	53.0	72.8	90.1	121.9	159.8
39	Other Manufactures	1.4	2.1	3.1	7.4	9.8	10.1	9.1	9.6	16.7	13.0	16.0	17.9
	Intermediate Goods	61.1	79.4	109.9	296.0	337.8	390.4	447.4	543.2	847.7	1,098.7	1,225.0	1,410.9
321	Textiles	11.4	18.1	24.8	52.9	59.0	67.9	75.5	107.0	152.3	182.9	223.8	266.3
323	Leather Products	5.2	5.6	5.9	7.8	6.8	8.4	8.4	9.7	19.7	26.0	28.4	31.2
331	Wood Products	21.8	24.2	27.7	47.5	46.4	51.9	58.8	74.1	148.4	204.6	243.6	213.7
341	Paper Products	1.5	2.1	6.7	22.0	25.6	30.0	36.8	49.7	48.9	61.5	70.5	94.8
351	Industrial Chemicals	2.0	2.4	3.2	14.7	14.0	19.0	24.4	41.1	78.3	121.9	95.5	109.8
3521	Paints, Varnish, Lacuqer	0.4	1.5	3.5	6.1	6.8	9.1	8.6	13.8	18.1	21.6	28.6	33.5
3529	Other Chemicals, nei	2.0	2.4	2.9	7.3	11.0	13.2	16.6	23.0	18.8	26.1	33.4	40.7
353	Petroleum Refining	-	-	-	13.4	15.3	19.1	25.2	3.3	75.9	116.2	97.8	127.6
354	Petroleum and Coal Products	-	-	-	1.3	1.6	1.6	1.3	0.9	1.6	1.4	1.2	1.9
355	Rubber Products	2.5	3.7	5.0	22.4	27.4	34.3	34.6	51.5	54.6	64.7	73.3	87.9
356	Plastic Products, nei	0.4	2.6	4.5	18.2	27.5	28.7	34.6	43.7	58.7	73.5	83.7	104.3
361	Clay and Porcelain Products	-	0.3	0.7	1.5	1.8	1.9	2.0	2.7	7.4	5.7	6.9	9.0
362	Glass Products	0.9	1.3	1.1	1.9	2.4	2.7	2.9	3.1	4.5	5.1	5.1	7.0
369	Other Non-metallic Mineral Products	11.9	13.1	16.1	45.8	54.0	60.1	70.7	65.2	71.7	101.3	125.1	167.2
371	Iron and Steel	-	-	-	3.2	3.8	4.6	5.6	11.7	12.9	13.2	18.6	12.0
381	Metal Products	1.1	2.1	7.8	30.0	34.4	37.9	41.4	42.7	65.9	73.0	89.5	104.0
	Capital Goods			3.5	33.2	43.2	51.5	58.6	65.5	94.0	98.3	112.6	152.1
382	Mechanical Machinery	-	-	3.1	18.6	24.3	29.7	33.8	24.5	31.7	35.9	37.5	47.5
383	Electrical Machinery	-	-	0.4	14.6	18.9	21.8	24.8	41.0	62.3	62.4	75.1	104.6
	TOTAL	303.4	381.8	483.5	945.7	1,119.6	1,250.6	1,387.7	1,725.8	2,453.8	3,068.2	3,630.6	4,448.4

Source: Banco Central, Cifras Sobre Produccion Industrial.

Appendix Table 3.3: COSTA RICAN INDUSTRIAL PRODUCTION AND VALUE ADDED, 1957, 1969, and 1977

CIIU	INDUSTRY	SHARE OF TOTAL PRODUCTION 1957 (%)	1969 (%)	1977 (%)	REAL COMPOUND GROWTH RATES 1957-1969 (%)	1969-1977 (%)	SHARE OF TOTAL VALUE ADDED 1957 (%)	1969 (%)	1977 (%)	REAL COMPOUND GROWTH RATES 1957-1969 (%)	1969-1977 (%)
311-312	Food Products	63.7	46.9	44.2	4.4	7.8	39.9	31.1	30.8	5.8	8.2
313	Beverages	6.1	5.0	5.5	5.4	9.7	15.1	10.3	11.3	4.6	9.7
314	Tobacco Manufactures	2.7	2.7	1.8	7.1	3.4	6.3	5.7	4.2	7.1	4.3
321	Textiles	2.4	3.8	4.5	11.1	11.0	3.8	5.6	6.0	11.7	9.2
322	Clothing	3.4	4.4	3.5	9.4	5.6	3.8	4.4	3.6	9.5	5.5
323	Leather Products	1.2	0.6	0.6	1.6	8.5	1.7	0.8	0.7	1.6	6.3
324	Footwear	2.6	1.6	0.9	2.8	1.9	3.7	2.0	1.1	2.8	0.9
331	Wood Products	6.1	4.8	4.2	4.9	6.9	7.2	5.0	6.5	4.9	12.0
332	Furniture and Fixtures	2.2	2.0	2.1	6.5	8.8	3.8	3.2	3.3	6.5	8.8
341	Paper Products	0.4	2.3	3.0	22.9	12.3	0.5	2.3	1.9	22.9	5.6
342	Printing, Publishing	1.9	1.5	1.6	4.9	10.0	2.6	1.9	2.3	4.9	11.1
351	Industrial Chemicals	1.0	2.6	4.0	16.0	14.7	0.7	1.6	2.7	16.0	15.8
352	Other Chemical Products	2.0	4.1	5.1	13.4	11.7	2.8	4.8	5.3	13.1	9.7
353	Petroleum Refining 1/ (67)	0.0	1.9	2.4	44.8	11.6	0.0	1.4	2.1	44.7	14.1
354	Petroleum and Carbon Products 1/ (68)	0.0	0.1	0.1	4.2	-8.2	0.0	0.1	0.1	3.2	-6.7
355	Rubber Products	0.4	1.4	1.8	18.5	12.1	0.8	2.4	1.9	18.0	5.9
356	Plastic Products 1/	0.1	1.6	2.2	20.4	12.8	0.1	1.9	2.3	20.3	11.3
361	Clay and Porcelain Products 1/ (58)	0.0	0.1	0.2	21.0	12.7	0.0	0.2	0.3	21.3	12.4
362	Glass Products	0.3	0.3	0.2	4.6	5.6	0.3	0.2	0.1	4.6	3.8
369	Other Non-Metallic Mineral Products	1.9	2.3	2.4	8.7	9.4	3.9	4.9	3.7	9.9	4.8
371	Iron and Steel 1/ (68)	0.0	0.5	0.8	6.0	14.6	0.0	0.3	0.5	6.9	13.7
372	Other Metals	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-
381	Metal Products	0.3	3.3	2.8	30.4	6.5	0.4	3.2	2.5	29.4	5.2
382	Mechanical Machinery 1/ (63)	0.0	1.2	1.1	30.7	7.3	0.0	2.0	1.0	30.6	-0.01
383	Electrical Machinery 1/ (63)	0.0	2.0	2.4	50.1	11.1	0.0	1.5	2.1	52.1	12.7
384	Transport Equipment	1.0	2.3	2.2	15.2	8.2	2.1	2.4	3.3	9.2	12.7
390	Other Manufactures	0.3	0.7	0.4	13.3	0.8	0.5	0.8	0.4	12.9	0.7
	TOTAL	100.0	100.0	100.0	7.1	8.6	100.0	100.0	100.0	8.0	8.4
Memo Item:	Total Production or Value Added (Millions of Current Colones)	1,080.4	3,023.0	14,915.3			303.4	945.7	4,582.5		

1/ Industries for which first-year production was quite low. In calculating real growth rates to 1969, the average of the first two years' production or value added was taken as the initial value. Dates in parentheses show first year of production.

Sources: Industrial Production and Value Added, in current prices, are from Banco Central, Cifas Sobre Produccion Industrial, 1957-1977; for real growth rates, a manufacturing price index supplied by the Banco Central was used.

APPENDIX TABLE 3.4: EXPORT PERCENTAGE OF OUTPUT BY MANUFACTURING INDUSTRY FOR SELECTED YEARS, 1963-1977

CIIU	INDUSTRY	EXPORTS TO CENTRAL AMERICA 1963	1967	1971	1976	1977	EXPORTS TO REST OF WORLD 1963	1967	1971	1976	1977
311-312	Food Products	0.9	2.4	3.0	2.8	2.8	42.5	40.2	35.2	39.0	56.0 1/
	less Coffee, Meat, Sugar	2.2	5.8	6.6	4.5	4.4	0.2	0.3	0.7	0.9	1.1
	Beverages	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
314	Tobacco Manufactures	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.2	2.9	6.0
321	Textiles, including Carpet and Lace	3.0	21.1	25.8	37.8	30.5	0.3	0.5	0.3	0.9	0.3
322	Clothing	0.7	9.7	3.6	6.5	7.5	0.0	0.0	0.1	0.2	0.3
323	Leather Products, except clothing & Shoes	5.0	13.6	11.8	10.5	17.8	0.3	0.2	0.1	31.4	24.5
324	Footwear	1.0	8.9	6.3	8.8	8.2	0.0	0.0	0.0	4.0	0.1
331	Wood and Products	3.0	6.2	5.9	5.0	6.8	4.6	0.7	1.9	2.2	2.3
332	Wooden Furniture and Accessories	0.4	7.2	1.1	1.8	2.2	0.0	0.2	0.2	4.4	2.8
34	Paper, Printing, and Related Products	2.0	5.5	9.2	7.8	7.3	1.3	0.1	0.1	0.2	0.1
351-352	Chemicals	6.5	26.7	28.0	30.1	29.7	4.8	2.1	5.1	10.5	3.6
353-354	Petroleum and Coal Products	-	13.3	9.6	0.4	1.2	-	2.4	5.2	1.8	1.6
355	Rubber Products	0.4	4.2	26.5	25.8	19.4	0.0	0.0	9.5	0.0	0.1
356	Plastic Products	10.2	13.3	18.7	23.4	21.3	0.1	0.1	0.0	0.4	1.2
36	Non-metallic Mineral Products, nei	1.2	4.4	1.3	4.1	3.1	0.0	0.0	0.0	0.2	0.1
37	Basic Metals	-	-	77.6	74.7	92.8	-	-	0.3	0.2	1.0
381	Metal Products	5.3	19.0	18.6	20.4	24.3	0.0	0.2	0.7	1.0	0.8
382	Mechanical Machinery	0.7	25.4	27.4	35.3	46.8	0.3	0.2	1.0	1.0	1.2
383	Electrical Machinery	61.4	49.3	37.7	35.9	34.6	0.0	0.0	0.8	11.4	12.2
384	Transport Equipment	0.8	0.2	0.5	0.7	0.5	0.4	0.0	0.0	1.5	1.4
39	Other Manufactures	7.3	45.5	37.5	45.7 2/	47.3 2/	31.7	10.3	30.7	36.2 2/	42.8 2/
	Total, less Coffee, Meat, Sugar	2.4	11.5	12.1	13.1	13.3	1.2	0.5	1.6	3.3	2.5
	Total	1.6	8.1	9.0	10.4	10.7	25.1	20.5	16.9	19.5	26.5

1/ The large increase from 1976 to 1977 is primarily due to increases in coffee prices.
2/ Estimates.
Source: Bank staff calculations; MEIC, Comercio Exterior de Costa Rica, various years, and Banco Central, Cifras sobre Produccion Industrial, 1957-1977.

Appendix Table 3.5: COSTA RICAN INDUSTRIAL VALUE ADDED, EMPLOYMENT AND PRODUCTIVITY
1963 and 1973

CIIU	INDUSTRY	VALUE ADDED 1/ (Millions of 1966 colones 2/)		EMPLOYMENT 3/		PRODUCTIVITY 4/ (Thousands of 1966 colones)		ANNUAL COMPOUND GROWTH RATES (%)		
		1963	1973	1963	1973	1963	1973	VALUE ADDED	EMPLOYMENT	PRODUCTIVITY
31	Food Products, Beverages, Tobacco	274.2	579.1	11,862	17,827	23.1	32.5	7.8	4.2	3.5
	Food Products	181.5	369.3	10,338	15,419	17.6	24.0	7.4	4.1	3.2
	Beverages	60.7	151.2	258	1,898	235.3	79.7	9.6	22.1	-10.3
	Tobacco	32.0	58.6	666	510	48.0	114.9	-6.2	-2.6	-9.1
32	Textiles, Clothing, Shoes, Leather	61.9	144.8	14,046	19,786	4.4	7.3	8.9	3.5	5.2
	Textiles	24.0	76.7	1,779	4,318	13.5	17.8	12.3	9.3	2.8
	Clothing, Shoes	32.2	61.1	11,570	14,571	2.8	4.2	6.6	2.3	4.1
	Leather	5.7	7.0	697	897	8.2	7.8	2.0	2.6	-0.5
33	Wood, Furniture	47.1	84.5	3,910	8,707	12.0	9.7	6.0	8.3	-2.1
	Wood	26.8	53.1	1,435	3,491	18.7	15.2	7.1	9.3	-10.7
	Furniture	20.3	31.3	2,475	5,216	8.2	6.0	4.4	7.7	-3.1
34	Paper, Printing	19.0	68.7	1,734	3,545	11.0	19.4	13.7	7.4	5.8
	Paper	6.5	35.6	314	1,079	20.7	33.0	18.6	13.1	4.8
	Printing	12.5	33.1	1,420	2,466	8.8	13.4	10.2	5.7	4.3
35	Chemicals, Petroleum and Coal Derivatives, Rubber and Plastic Products	33.0	178.7	1,751	6,301	18.8	28.4	18.4	13.7	4.2
	Chemicals	23.8	107.5	1,559	3,773	15.3	28.5	16.3	9.2	6.4
	Petroleum and Coal Derivatives	0.0	3.0	0	319	-	9.4	-	-	-
	Rubber Products	4.8	36.9	146	753	32.9	49.0	22.5	17.8	4.1
	Plastic Products	4.4	31.3	0	1,456	-	21.5	21.8	-	-
36	Non-Metallic Mineral Products	17.3	50.9	1,060	3,055	16.3	16.7	11.4	11.2	0.2
37	Basic Metals	0.0	8.4	215	461	0.0	18.2	-	7.9	-
38	Metal Products, Machinery and Equipment	12.4	115.6	6,432	7,279	1.9	15.9	25.0	1.2	23.7
	Metal Products	7.5	30.6	771	2,838	9.7	10.8	15.0	13.9	1.1
	Mechanical Machinery	3.0	17.6	191	1,060	15.7	16.6	19.3	18.7	0.6
	Electrical Machinery	0.4	29.4	723	1,992	0.6	14.8	54.2	10.7	37.8
	Transport Equipment	1.5	38.0	4,747	1,245	0.3	30.5	38.6	-12.5	58.8
	Scientific Equipment	0.0	0.0	0	144	-	0.0	-	-	-
39	Other Manufactures	3.0	6.8	1,066	1,336	2.8	5.1	8.7	2.3	6.2
	TOTAL	467.9	1,237.5	42,077	68,297	11.1	18.1	10.2	5.0	5.0

1/ Banco Central, Cifras Sobre Produccion Industrial, 1957-1977.

2/ Manufacturing price index fromBanco Central, Cifras de Cuentas Nacionales.

3/ MEIC and OFIPLAN, Empleo y Comercio Exterior en Costa Rica: El papel del Desarrollo Industrial, Cuadro 40.

4/ Productivity = Value Added / Employment.

Appendix Table 3.6 : CAPACITY UTILIZATION IN DIFFERENT COUNTRIES

		Percentage of Firms Working 1, 2, or 3 Shifts		
		1	2	3
BRAZIL	1974	35.60	25.00	39.40
COLOMBIA	1973	58.79	20.46	20.75
COSTA RICA	1974	66.56	11.00	22.44
PERU	1971	63.70	16.50	19.80
VENEZUELA	1974	73.80	12.70	13.50

Source: Daniel M. Schydlowsky, Capital Utilization, Growth, Employment, Balance of Payments and Price Stabilization (Boston University: Center for Latin American Development Studies, Discussion Paper Series, Number 22, December 1976), page 4.

Appendix Table 3.7: DISTRIBUTION OF PLANTS BY SECTOR AND SHIFTS WORKED

ISIC	COLOMBIA 1973			COSTA RICA 1974			PERU 1971			VENEZUELA 1974			BRASIL 1974		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
31 Food, Bev. & Tobacco Ind.	45	25	30	60	17	23	51	20	29	66	18	16	47	29	24
32 Clothing & Leather	65	19	16	59	12	29	55	22	23	74	13	13	36	19	45
33 Wood & Woodwork	100	-	-	92	-	8	92	4	4	89	8	3	37	16	47
34 Paper, Printing & Publish.	44	26	30	64	22	14	59	23	18	59	25	16	-	-	-
35 Chemicals & Coal	53	18	29	66	13	21	66	10	24	62	10	28	35	15	50
36 Non-Metalic Mineral	57	20	23	55	9	36	70	11	19	79	9	12	24	11	65
37 Basic Metals	43	14	43	50	-	50	42	29	29	71	10	19	28	27	45
38 Metal Working	66	24	10	28	4	18	83	15	2	83	11	6	36	42	22
39 Miscellaneous	72	14	14	86	-	14	54	15	31	85	12	3	28	36	36

Source: Schydlowsky, Daniel M., op cit., page 5.

Appendix Table 3.8: **SHIFTWORK BY SIZE OF FIRM**

NUMBER OF WORKERS PER SHIFT:	1 - 20			21 - 50			51 - 100			> 100		
SHIFTS WORKED	1	2	3	1	2	3	1	2	3	1	2	3
	PERCENT OF FIRMS											
COLOMBIA	73	18	9	71	21	8	47	29	24	36	16	48
COSTA RICA	73	9	18	73	6	20	50	15	35	67	20	14
PERU	n. a.			61	18	21	68	15	17	67	12	21
VENEZUELA	n. a.			75	13	12	77	11	12	67	15	18

Source: Schydlowsky, Daniel M., op. cit., page 10.

Appendix Table 3.9: INCREASES IN THE GROWTH RATE DUE TO MULTIPLE SHIFTING

	BRAZIL	CHILE	COLOMBIA	COSTA RICA	PERU	VENEZUELA
Share of industry	.24	.28	.225	.19	.239	.171
Ratio of industrial to total output/capital ratio (assumed)	2	2	2	2	2	2
Proportionate shift increase to two shifts	.16	.40	.61	.5	.31	.46
Proportionate increase in growth rate at two shifts	.08	.22	.275	.19	.148	.157
Absolute increase in growth rate at two shifts	.83%	.35%	2.01%	1.3%	.90%	.82%
Proportionate shift increase to three shifts	.99	1.40	1.33	1.67	1.31	1.16
Proportionate increase in growth rate at three shifts	.48	.78	.599	.635	.63	.40
Absolute increase in growth rate at three shifts	4.99%	1.25%	4.37%	4.32%	3.84%	2.08%

Source: Schydlowsky, Daniel M.,op. cit., page 38.

Appendix Table 3.10: **STABILIZATION POTENTIAL OF CAPITAL UTILIZATION**

		ANNUAL EXCESS SUPPLY				ONE TIME EFFECT			
		ABSOLUTE (MILLIONS)		% OF GNP		ABSOLUTE (MILLIONS)		% OF GNP	
		2 Shifts	3 Shifts	2 Shifts	3 Shifts	2 Shifts	3 Shifts	2 Shifts	3 Shifts
(1974)	BRAZIL	3566	21320.	.5	3.04	5301	31696.	.8	4.5
(1970)	CHILE	1476.5	5130.0	1.6	5.5	1494.7	5193.1	1.6	5.6
(1972)	COLOMBIA	1874.6	4068.5	1.1	2.2	5254.5	11403.6	2.8	6.2
(1972)	COSTA RICA	184.1	463.9	2.2	5.6	258.3	650.8	3.1	7.9
(1971)	PERU	1123.7	3912.5	.4	1.5	3577.5	12456.4	1.4	4.7
(1971)	VENEZUELA	171.71	544.5	.3	1.0	685.7	2174.0	1.2	3.9

Source: Schydlowsky, Daniel M., op. cit., page 58.

Appendix Table 3.11: SURVEY INFORMATION AND AGGREGATE PARAMETERS FOR MEIC REGISTERED MANUFACTURING FIRMS, 1976

Number of Firms Covered in January (N)	433
Number of 4 digit CIIU Sectors Covered	60
Total Labor Employed (L)	35,142
Total Value Added at Factor Cost (V)	US$144.8 million
Average Number of Employees per Firm (L)	81
Aggregate Capital Labor Ratio (K/L)	US$6,803/employee
Average Salaries and Wages Paid ($\bar{w}$)	US$2,2265/year
Total Exports to Sales Ratio (E/S)	.270
Ratio of Extra Regional Exports to Sales (E_{row}/S)	.069
Ratio of Total Net Profits to Sales (π/S)	.064
Rate of Return of Capital (π/K)	.206
Capital Output Ratio (K/V)	1.76
Average Number of Shifts Worked per Firm	1.29

Source: Bank staff computations from a sample of 433 firms which present information to MEIC to obtain industrial contracts.

Appendix Table 3.12: COSTA RICAN FIRM SIZE DATA

Firm Size (Number of Employees)	Modal Value of Production	Average Value of Production	Median Value of Production
Less than 10	¢50,000-249,999	¢193,641	¢50,000-249,999
10 - 29	¢1,000-4,999,999	¢1,962,263	¢500,000-999,999
30 - 49	¢1,000,000-4,999,999	¢4,831,731	¢1,000,000-4,999,999
50 - 99	¢1,000,000-4,999,999	¢10,017,480	¢5,000,000-9,999,999
100 - 149	¢10,000,000-29,999,999	¢15,108,696	¢10,000,000-29,999,999
150 and over	¢30,000,000 and more	¢21,728,395	¢10,000,000-29,999,999

Firm Size (Production in Colones)	Modal Number of Employees	Average Number of Employees	Median Number of Employees
less than 1,000,000	1-4	8.1	5-9
1,000,000 - 4,999,999	10-29	33.3	10-29
5,000,000 - 9,999,999	10-29	66.1	50-69
10,000,000 - 29,999,999	150 and more	99.6	70-99
30,000,000 and over	150 and more	131.6	150 and more

Source: IV Censo de Manufactura, 1975, Tomo 3, Ministerio de Economiá, Industria, y Comercio, Direccioń General de Estadiśtica y Censos.

Appendix Table 3.13: EXPORTS BY SIZE OF FIRM

Firm Size (Number of Employees)	Production (thousand colones)	Total Production (%)	Exports / Produc.	(1) Reg. Expts. / Total Expt. (%)	Share of Total Reg. Expt. (%)	Extra-Reg. Expt. / Total Expt. (%)	Share of Total Extra-Reg. Expts. (%)
Less Than 10	308,450	4.36	.0758	14.01	0.35	85.99	3.05
10 - 29	579,611	8.19	.2608	25.93	4.15	74.07	16.96
30 - 49	524,823	7.41	.2251	52.45	6.56	47.55	8.51
50 - 99	1,192,957	16.85	.2264	58.23	16.65	41.77	17.07
100 - 149	964,335	13.62	.1889	66.84	12.88	33.16	9.14
150 and over	3,510,493	49.57	.2451	65.25	59.41	34.75	45.27
TOTAL	7,080,669	100.00	.2267	58.87	100.00	41.13	100.00
Firm Size (Value of Production, in colones)							
Less than 50,000	24,906	0.35	.0329	100.00	0.09	0.0	0.0
50,000 - 249,999	103,080	1.46	.0014	75.86	0.01	24.14	0.01
250,000 - 499,999	102,521	1.45	.0149	74.09	0.12	25.91	0.06
500,000 - 999,999	127,802	1.80	.0400	64.64	0.35	35.36	0.27
1,000,000 - 4,999,999	623,961	8.81	.1492	45.26	4.46	54.74	7.72
5,000,000 - 9,999,999	649,032	9.17	.2490	47.01	8.04	52.99	12.97
10,000,000 - 29,999,999	1,585,756	22.40	.3098	52.68	27.39	47.32	35.21
30,000,000 and over	3,863,611	54.56	.2204	66.06	59.54	33.94	43.76
TOTAL	7,080,699	100.00	.2267	58.87	100.00	41.13	100.00

Notes: (1) CACM and Panama.

Source: IV Censo de Manufactura, 1975, Tomo 3, Ministerio de Economia, Industria, y Comercio, Direccion General de Estadistica y Censos

Appendix Table 3.14: FIRM CHARACTERISTICS OF COSTA RICAN INDUSTRY

CIIU	INDUSTRY	CAPITAL-LABOR RATIO 1/	AVERAGE NO. WORKERS PER FIRM	RAW MATERIAL SHARE OF OUTPUT	INDEX OF SKILL INTENSITY 2/	3RD AREA EXPORT SHARE OF SALES
3111	Beef Products	78,282	197.333	.751	.157	.768
3112	Milk and Dairy Products	18,490	51.000	.685	.373	.000
3113	Fruit and Vegetable products	37,585	65.500	.656	.195	.007
3116	Mill Products	85,353	87.200	.824	.171	.000
3117	Bread Products	34,697	160.167	.477	.130	.030
3119	Cocoa and Chocolate Products	41,885	203.500	.499	.226	.151
3121	Misc. Food Products	51,281	21.333	.571	.255	.026
3122	Animal Food	55,132	17.667	.858	.208	.000
3131	Distilled Spirits	10,554	18.667	.190	.321	.000
3134	Non-alcoholic Beverages	81,516	193.000	.292	.272	.000
3211	Spinning and Weaving	97,846	190.900	.384	.147	.026
3213	Knit Fabrics	33,080	158.300	.412	.202	.002
3214	Tapestries and Rugs	84,489	44.000	.633	.352	.000
3215	Cordage	187,634	292.000	.552	.055	.000
3219	Textile Manufactures, n.e.c.	27,795	32.500	.460	.205	.000
3220	Clothing, except Shoes	19,942	218.650	.422	.095	.114
3232	Preparing and Dying of Furs and Skins	76,891	76.000	.631	.135	.290
3233	Leather, except Shoes and Clothing	20,805	20.500	.398	.130	.001
3240	Footwear, except Rubber and Plastic	24,408	106.000	.486	.124	.078
3311	Cutting and Planing of Wood	89,855	128.111	.399	.067	.075
3319	Wood and Cork Products, n.e.c.	6,025	80.000	.259	.050	.000
3320	Wooden Furniture Accessories	33,209	47.250	.429	.164	.122
3412	Wood, Paper, and Cardboard Pulp	64,074	44.286	.665	.174	.000
3419	Pulp, Paper, and Cardboard, n.e.c.	88,879	48.900	.512	.225	.038
3420	Printing, Publishing, etc.	38,584	47.944	.423	.203	.001
3511	Industrial Chemicals, except Fertilizers	56,376	38.600	.575	.142	.000
3512	Fertilizers, Insecticides, Fungicides	114,629	101.222	.790	.451	.223
3513	Plastics, Synthetic Resins and Fibers except Glass	59,706	89.000	.556	.341	.000
3521	Paints, Varnish, Lacquer	25,110	113.167	.708	.377	.000
3522	Medicines and Pharmaceuticals	45,279	45.467	.444	.478	.089
3523	Soaps, Perfumes, Cosmetics, etc.	32,612	49.739	.504	.298	.001
3529	Chemicals, n.e.c.	27,822	26.000	.469	.385	.000
3540	Carbon and Petroleum Products	40,646	32.000	.446	.281	.001
3551	Tires and Inner Tubes	118,420	120.750	.570	.342	.040
3559	Rubber Products, n.e.c.	65,204	117.667	.502	.093	.039
3560	Plastic Products, n.e.c.	63,191	70.462	.596	.188	.005
3610	Earthenware, Porcelain	60,460	87.000	.402	.172	.003
3620	Glass and Products	36,402	82.000	.291	.061	.000
3692	Cement, Lime, Gypsum	763,248	307.000	.124	.251	.000
3699	Other, non-Metalic Mineral Products, n.e.c.	62,437	127.636	.386	.217	.005
3710	Iron and Steel	144,467	137.000	.710	.124	.000
3720	Basic, non-Ferrous Metals	20,416	67.333	.391	.267	.000
3811	Cutlery, Hand Tools, Hardware	49,877	14.250	.463	.298	.000
3812	Metal Furniture and Accessories	32,219	45.200	.359	.146	.011
3813	Structural Metal Products	32,467	30.667	.325	.337	.000
3819	Other Metal Products, n.e.c.	80,222	78.333	.643	.163	.014
3823	Wood and Metal-Working Machinery	18,556	36.000	.370	.083	.000
3824	Industrial Machinery and Equipment	43,437	27.833	.413	.335	.000
3829	Other, non-Electrical Machinery, n.e.c.	53,396	69.889	.611	.211	.071
3831	Industrial Machinery and Equipment, Elec'l	34,782	70.333	.395	.412	.000
3832	Radio, Television, and Communication Equip.	38,789	29.000	.414	.353	.000
3833	Domestic Machinery and Equip. Electrical	26,453	21.333	.466	.281	.017
3839	Electrical Apparati, n.e.c.	62,152	121.000	.575	.264	.267
3841	Ship Construction and Repair	13,717	53.000	.517	.236	.712
3843	Automobiles	31,586	56.333	.213	.180	.000
3844	Motorcycles, Bicycles	22,559	9.833	.608	.356	.000
3849	Other Transport Equipment	3,500	4.000	.599	.000	.000
3851	Prof. and Scientific Equipment n.e.c.	2,970,536	28.000	.493	.357	.000
3903	Sport and Athletic Equipment	20,333	21.000	.472	.167	.000
3909	Other Manufactures, n.e.c.	35,732	48.571	.429	.224	.005

1/ Total investment in colones over total number of workers.

2/ No. Skilled workers divided by total personnel.

Source: Bank Staff calculations from a sample of 433 firms which present information to MEIC to obtain industrial contracts.

Appendix Table 3.1[c]. SPEARMAN RANK CORRELATION COEFFICIENTS[(1)] FOR ASSORTED INDUSTRY CHARACTERISTICS, 60 INDUSTRIES

	Industry Growth Rate 1957-69	Industry Growth Rate 1969-76	Ratio of Raw Material Imports to Industry Output $\left(\frac{\sum_i M_{ij}}{X_j}\right)$	Average size of Firm $\left(L_j/N_j\right)$	Average Number of Shifts	Return on Invested Capital $\left(\pi_j/K_j\right)$	Ratio of Skilled Employees to Total Employees	Capital to Labor Ratio $\left(K_j/L_j\right)$	Average Wages $\left(w_j\right)$	Ratio of Extra Regional Exports to Sales $\left(E_{row j}/S_j\right)$	Value Added per Employee $\left(V_j/L_j\right)$
Industry Growth Rate, 1957-69	1.0										
Industry Growth Rate, 1969-76	+(3)	1.0									
Ratio of Raw Material Imports to Industry Output, $\left(\frac{\sum_i M_{ij}}{X_j}\right)$	.43(2)		1.0								
Average Size of Firm in Industry as Measured by Number of Employees $\left(L_i/N_j\right)$		+(3)	-(3)	1.0							
Average Number of Shifts		.34		.57(2)	1.0						
Return on Invested Capital $\left(\pi_j/K_j\right)$				-.37(2)		1.0					
Ratio of Skilled Employees to Total Employees	.31			-.28	-.25		1.0				
Capital to Labor Ratio $\left(K_j/L_j\right)$		.53		.43	.52	-.38		1.0			
Average Wages $\left(w_j = \frac{W_j}{L_j}\right)$	.40(2)	.31					.53	.39	1.0		
Ratio of Extra Regional Exports to Sales $\left(\frac{E_{row j}}{S_j}\right)$				.38						1.0	
Value Added per Employee $\left(V_i/L_j\right)$			.25	+(3)		.33	.40				1.0

Notes: (1) All the included Spearman rank correlations coefficients (r's) were statistically significant at the 5 percent level with a two tailed test. Otherwise, the (r's) are not reported.

(2) Also indicates that the simple (Pearson) correlation coefficient (r) was statistically significant at the 5 percent level in a two tailed test.

(3) Indicates the Pearson correlation coefficient was significant at the 5 percent level, with the indicated sign. However, the Spearman rank correlation coefficient, while processing the same sign, was not statistically significant.

Appendix Table 4.1: NOMINAL, REALIZED AND EFFECTIVE RATES OF PROTECTION IN COSTA RICAN MANUFACTURING, 1972 and 1974

CIIU Industry Number		Nominal Legal Ad Valorem Tariff Equivalent 1/ 2/ (%) (1972)	Realized Tariff Rate Equivalent 1/ (%) (1972)	Nominal Tariffs Based on Legal Ad Valorem Equivalents (%) (1974)	Realized Tariffs 3/ (%) (1974)	Effective Rate of Protection Based on Full Legal Tariffs (%) (1974)	Effective Rate of Protection Based on Realized Tariffs (%) (1974)
3111	Beef products	91.8	78.4	29.3	2.3	35.4	-8.1
3112	Milk and dairy products	47.5	28.0	37.4	8.0	121.5 4/	52.7
3113	Fruit and vegetable products	132.4	104.2	128.3	13.1	-911.4 4/	44.1
3114	Fish products	108.1	104.5	64.4	63.1	-4,987.7	461.9
3115	Animal and vegetable oils	26.7	13.9	23.6	1.3	382.2	-9.1
3116	Mill products	59.4	30.5	89.7	7.4	211.4	2,224.0
3117	Bread products	201.8	196.8	99.6	97.7	-6,984.9 4/	2,879.9
3118	Sugar and sugar products	62.6	47.7	34.1	8.9	121.3	9.9
3119	Cocoa and chocolate products	140.7	135.8	68.4	62.2	193.0	167.9
3121	Misc. food products	83.0	63.2	57.5	17.0	1,273.8	86.5
3122	Animal food	72.3	70.0	15.0	6.4	10.0	-20.0
3131	Distilled spirits	388.0	254.5	372.7	80.0	401.1	74.0
3132	Wine	161.0	126.0	145.4	114.3	3,996.8	659.4
3133	Malt beverages	172.0	162.5	21.8	21.6	n.a.	n.a.
3134	Nonalcholic beverages	50.0	50.0	52.0	51.9	58.1	62.0
3140	Tobacco	267.3	255.3	203.2	173.8	234.4	179.6
3211	Spinning and Weaving	66.7	48.4	23.9	5.0	46.9	14.6
3212	Textile Products other than Clothing	120.6	89.3	73.1	29.2	97.4	81.0
3213	Knit fabrics	137.2	114.3	123.2	91.3	300.8	93.0
3214	Manufacture of tapestries and rugs	211.3	126.0	110.5	47.8	382.1	163.8
3215	Cordage	26.0	13.7	28.0	8.4	43.7	36.1
3219	Manufacture of textiles, n.e.c.	42.6	28.9	25.0	17.4	115.1	50.7
3220	Clothing, except shoes	98.3	86.0	76.6	51.8	180.6	136.5
3231	Tanning and finishing	115.9	40.1	51.9	22.2	10.4	8.1
3232	Preparing and dyeing of furs and skins	68.0	32.0	68.1	20.6	111.9	70.5
3233	Leather, except shoes and clothing	101.7	92.9	49.0	40.3	59.9	57.4
3240	Footwear, except rubber and plastic	106.3	74.0	111.1	39.1	-1,536.6	251.9
3311	Cutting and planing of wood	130.4	54.4	62.0	7.7	314.5	45.9
3312	Wooden cartons	112.6	82.8	47.3	4.6	38.0	6.7
3319	Wood and cork products, n.e.c.	75.6	54.2	69.7	22.9	115.1	51.6
3320	Wooden furniture and accessories	171.2	68.7	142.2	86	-1,215.3 4/	47.0
3411	Wood, paper, and cardboard pulp	31.4	20.0	31.3	2.6	49.7	2.0
3412	Paper and cardboard cartons	36.0	11.3	47.0	2.0	36.5	8.1
3419	Pulp, paper, and cardboard, n.e.c.	70.8	56.8	29.4	15.8	2.5	29.0
3420	Printing, publishing, etc.	81.5	64.0	11.7	6.5	3.5	6.6
3511	Industrial chemicals, except fertilizers	28.1	10.9	21.1	3.5	26.2	4.1
3512	Fertilizers, insecticides, fungicides	14.5	8.4	10.1	2.0	0.5	1.9
3513	Plastics, synthetic resins and fibers, except glass	44.4	21.5	15.2	1.2	n.a.	n.a.
3521	Paints, varnish, lacquer	51.3	39.1	40.5	14.7	50.8	21.9
3522	Medicines and pharmaceuticals	19.4	7.8	11.9	6.2	6.8	8.2
3523	Soaps, perfumes, cosmetics, etc.	147.7	125.5	68.1	36.7	200.8	56.8
3529	Chemicals, n.e.c.	52.9	33.8	44.7	13.5	169.7	28.9
3530	Petroleum refining	25.4	4.8	30.4	6.5	n.a.	n.a.
3540	Carbon and petroleum products	27.2	19.6	30.2	5.2	n.a.	n.a.
3551	Tires and inner tubes	98.5	84.0	21.8	13.7	31.1	19.3
3559	Rubber products, n.e.c.	36.3	26.1	24.4	16.3	26.7	17.7
3560	Plastic products, n.e.c.	99.0	81.8	65.3	16.3	384.3	35.2
3610	Earthenware, porcelain	75.9	62.0	65.6	60.6	258.8	147.2
3620	Glass and products	44.6	34.6	27.1	17.5	66.0	46.1
3691	Clay products for construction	53.3	45.8	28.9	18.2	46.7	9.8
3692	Cement, lime, gypsum	26.0	8.3	32.3	9.0	38.7	15.4
3699	Other non-metallic mineral products, n.e.c.	41.3	29.9	18.1	9.5	24.5	11.3
3710	Iron and steel	17.0	7.1	11.2	2.3	19.3	3.6
3720	Basic, non-ferrous metals	15.4	6.5	18.0	1.2	87.0	4.5
3811	Cutlery, hand tools, hardware	42.4	35.1	27.6	22.4	40.1	36.2
3812	Metal furniture and accessories	115.5	78.0	42.7	13.9	81.2	28.3
3813	Structural metal products	36.8	12.4	31.2	0.5	81.0	4.9
3819	Other metal products, n.e.c.	37.9	28.8	28.1	16.1	49.0	22.5
3821	Motors and turbines	18.4	14.9	13.0	8.9	n.a.	n.a.
3822	Agricultural machinery and equipment	8.6	6.2	6.2	5.6	3.0	7.0
3823	Wood and metal-working machinery	7.0	3.0	7.0	1.3	6.3	1.0
3824	Industrial machinery and equipment	10.8	6.9	7.6	2.6	6.9	1.6
3825	Office, computation, and accounting equipment	51.8	42.3	37.3	26.1	46.6	30.0
3829	Other, non-electrical machinery n.e.c.	44.1	32.2	21.1	9.9	40.0	13.5
3831	Industrial machinery and equipment, electrical	23.1	15.8	17.9	3.2	14.9	1.7
3832	Radio, television, and communication equipment	69.4	48.2	37.4	8.2	85.9	13.0
3833	Domestic machinery and equipment, electrical	66.8	59.8	41.4	29.6	124.7	110.0
3839	Electrical apparati, n.e.c.	39.2	31.6	33.6	19.6	49.3	31.0
3841	Ship construction and repair	72.5	64.0	27.7	12.7	n.a.	n.a.
3842	Railway equipment	8.3	4.6	6.7	0.2	n.a.	n.a.
3843	Automobiles	32.3	16.0	37.1	12.4	60.2	14.6
3844	Motorcycles, bicycles	43.6	29.6	52.7	31.9	225.2	24.6
3845	Airships	10.0	10.0	10.0	-	19.3	0.02
3849	Other transport equipment	30.6	18.3	17.3	11.8	n.a.	n.a.
3851	Professional and scientific equipment, n.e.c.	15.6	8.4	14.1	5.0	n.a.	n.a.
3852	Photographic and optical equipment	47.7	35.7	35.4	20.4	n.a.	n.a.
3853	Watches	42.6	36.6	43.3	41.2	n.a.	n.a.
3901	Jewelry and related products	46.6	43.8	55.6	52.2	n.a.	n.a.
3902	Musical instruments	28.0	22.5	23.1	14.3	n.a.	n.a.
3909	Other manufactures, n.e.c.	73.3	59.6	55.2	42.5	-2.7	12.1

1/ Average tariff rates are unweighted means, being the average over all tariff items.
2/ The ad valorem equivalent includes all tariffs, the San José Protocol surcharge, the discriminatory effect, if any, in the consumption tax, and all other surcharges on imports.
3/ Realized tariffs were calculated as tariff receipts divided by imports.
4/ Cases where value added at world prices is negative.

Sources: The first two columns are Bank staff computations from MEIC data.

The second two columns are from Ministerio de Hacienda/CEPAL, "Los Impuestos al Comercio Exterior de Costa Rica", unpublished report, February 1978, pp. 37-40. The last two columns are from Alan I. Rapoport, "Effective Protection Rates in Central America", in William R. Cline and Enrique Delgado, editors, Economic Integration in Central America (Washington: The Brookings Institution, 1978), pp. 691-712.

Appendix Table 4.2: AGGREGATE NOMINAL AND REALIZED AD-VALOREM TARIFF RATES ON IMPORTS FOR SELECTED YEARS, 1967-1977

Year	Total Nominal Tariff Rate 1/ %	Extra Regional Nominal Tariff Rate 2/ %	Extra Regional Realized Tariff Rate 3/ %
1967	44.4	n.a.	16.7
1973	60.2	33.5	10.3
1974	37.4	29.3	7.0
1975	35.2	25.9	6.2
1977	30.2	21.8	6.1

Notes:

1/ includes the San José Protocol surcharge but not the discriminatory effect of selective consumption taxes nor the additional surcharge.

2/ nominal tariffs were calculated as the total nominal import taxes payable divided by imports. As such, the estimated nominal tariff rates are weighted by realized imports. For the extra regional case both imports from CACM countries and the tariffs nominally due on those imports in the absence of CACM arrangements, have been excluded from the analysis.

3/ realized tariffs were calculated by dividing tariff collections by extra regional imports. Since no tariffs are paid on CACM imports, they have been excluded.

Source: Computations based on data published in Comercio Exterior de Costa Rica, various years.

Appendix Table 4.3: NOMINAL AND REALIZED TARIFF RATES ON COSTA RICAN IMPORTS FROM OUTSIDE THE CACM,[1] BY ONE-DIGIT NAUCA CATEGORIES

NAUCA	COMMODITY GROUP	1967 NOMINAL[2][4] %	1967 REALIZED[3] %	1973 NOMINAL[2] %	1973 REALIZED[3] %	1974 NOMINAL[2] %	1974 REALIZED[3] %	1975 NOMINAL[2] %	1975 REALIZED[3] %	1977 NOMINAL[2] %	1977 REALIZED[3] %
0	Food Products	46.8	14.6	30.2	5.0	22.8	2.3	14.1	3.8	18.3	5.2
1	Beverages and Tobacco	251.2	195.5	205.3	183.4	131.5	73.2	203.3	17.7	151.9	8.7
2	Inedible Raw Materials	110.5	3.1	17.3	3.5	10.9	1.4	12.0	1.4	13.0	0.8
3	Fuels and Lubricants	95.2	50.3	170.5	2.9	55.3	3.7	35.0	0.8	7.0	0.6
4	Oil and Lard, Animal and Vegetable	71.9	25.5	37.9	3.4	21.6	2.0	22.1	2.8	20.7	1.8
5	Chemical Products	24.4	8.4	18.1	5.2	12.6	3.1	11.3	3.0	13.3	3.1
6	Manufactures Classified by Material	41.0	18.8	28.0	8.0	18.0	4.9	19.4	5.6	18.3	5.3
7	Machinery and Transport Equipment	23.5	8.3	21.0	8.1	18.2	7.2	15.3	5.9	16.3	5.6
8	Other Manufactures	79.4	34.4	42.5	24.3	31.3	15.9	16.0	14.5	26.4	12.7
9	Livestock and Special Transactions	na	na	54.8	7.4	308.7	11.3	163.8	0.15	48.3	0.03
	Total	44.4	16.7	25.8	7.9	22.5	5.4	19.9	4.8	16.8	4.7

(1) The CACM includes Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua
(2) The Nominal Tariff is Tariffs charged, special and ad valorem, plus all tariff exonerations (specific and ad valorem) by laws and contracts. It does not include the San José Protocol surcharge, the discriminatory impact of selection consumption taxes, nor other import surcharges. The Nominal Tariff Rate is the Nominal Tariff divided by imports from outside the CACM.
(3) The Realized Tariff Rate is Tariffs charges, specific and ad valorem, divided by imports from outside the CACM.
(4) The Nominal Tariff Rate for 1967 on all imports and thus includes all exonerations.

Sources: SIECA materials and Comercio Exterior de Costa Rica.

Appendix Table 4.4: NOMINAL AND REALIZED TARIFFS FOR INDUSTRY GROUPS, 1974

CIIU Classification No.	Industry	Nominal Tariff 1/ (%)	Realized Tariff (%)	Industry Share in Total Imports (%)
11	Agriculture and livestock	22.3	1.0	2.1
12	Forestry	19.3	1.9	0.4
13	Fishing	61.6	61.3	-
21	Coal	2.6	-	-
22	Petroleum and natural gas	10.3	-	6.6
29	Other mining	24.0	13.6	0.1
31	Food products, beverages and tobacco	59.0	13.2	2.5
32	Textiles, apparel and leather	30.9	11.0	5.1
33	Wood products and furniture	95.6	11.6	0.1
34	Paper products and printing	30.2	3.4	7.9
35	Chemicals	19.4	4.8	24.1
36	Non-metallic mineral products	26.8	17.1	1.6
37	Basic metals	12.6	2.1	9.2
38	Metal products and machinery	23.9	9.4	34.5
39	Miscellaneous manufacturing	51.9	39.8	0.8
	TOTAL (AVERAGE)	22.8	6.4	100.0

Note: 1/ Nominal tariffs are the ad valorem equivalents but do not include the the discriminatory effects of the consumption tax. The tariffs are import weighted.

Source: Ministerio de Hacienda/CEPAL, "Los Impuestos al Comercio Exterior de Costa Rica," unpublished report, February 1978, pp. 37-40.

Appendix Table 4.5: RELATIVE IMPORTANCE OF SPECIFIC TARIFFS, SELECTED YEARS, 1967-77

(Millions of Colones)

Year	Specific Tariffs Collected	Ad Valorem Tariffs Collected	Total Tariffs Collected	Specific Tariffs Collected as % of Total	Specific Tariffs Payable	Ad Valorem Tariffs Payable	Total Tariffs Payable	Specific Tariffs Payable as % of Total Payable
1967	110.4	62.8	173.2	63.7	399.1	163.8	562.9	70.9
1973	77.6	117.1	194.7	39.9	981.2	420.1	1,401.3	70.0
1974	102.7	178.8	281.5	36.5	1,071.2	695.6	1,706.8	62.8
1975	69.0	166.2	235.2	29.3	957.7	649.2	1,606.9	59.6
1976	84.5	182.6	267.1	31.6	998.5	738.6	1,737.1	57.5
1977	99.2	244.5	343.7	28.9	1,041.8	984.6	2,026.4	51.4

Source: Bank staff calculations from Comercio Exterior de Costa Rica, various years.

Appendix Table 4.6: SPEARMAN RANK CORRELATIONS BETWEEN DIFFERENT MEASURES OF DOMESTIC MARKET PROTECTION AND INDUSTRY CHARACTERISTICS

	Legal Tariff Rate, 1974	Realized Tariff Rate, 1974	Effective Rate of Protection based upon Legal Tariffs	Effective Rate of Protection based upon Realized Tariffs
Legal Tariff Rate, 1974	1.0			
Realized Tariff Rate, 1974	.69*	1.0		
Effective Rate of Protection based upon Legal Tariffs	.73*	.49*	1.0	
Effective Rate of Protection based upon Realized Tariffs	.80*	.80*	.69*	1.0
Capital Labor Ratio ($^{K}/L$)		-.25	-.25	
Value Added per Employee($^{V}/L$)		-.25		-.39*
Average Wage Rate (w)	-.24	-.25		

Note: *indicates statistical significance at the 1 percent level. All other r_s reported are significant to at least the 10 percent level.

Source: IBRD staff estimates.

Appendix Table 4.7: IMPORT TAX EXONERATIONS UNDER THE INDUSTRIAL INCENTIVES PROVIDED TO DIFFERENT INDUSTRY CATEGORIES, 1976-78

Industry Group		Value of Imports Taxes Exempted (US$ 000)	Value of Imports on which exonerations were granted (US$ 000)	Import Tax Exoneration Rate (%)	Industry Share of Total Annual Imp. Tax Exemptions (%)
Food products, beverages, and tobacco products					
	1976	3,700	27,580	13.4	4.3
	1977	4,157	31,829	13.1	4.7
	1978	6,170	35,514	17.3	6.2
Textile, Apparel, and leather					
	1976	5,359	26,008	20.6	6.3
	1977	6,005	29,134	20.6	6.9
	1978	4,499	25,586	17.5	4.5
Wood and wood products					
	1976	757	4,054	18.7	0.9
	1977	890	4,370	20.4	1.0
	1978	1,218	9,158	13.3	1.2
Paper, paper products, and printing					
	1976	3,692	12,682	29.1	4.3
	1977	3,796	16,889	22.5	4.3
	1978	4,507	21,093	21.4	4.6
Chemicals and Petrochemicals					
	1976	35,672	150,884	23.6	41.6
	1977	39,976	181,786	22.0	45.6
	1978	46,692	193,228	24.2	47.2
Nonmetallic Mineral products					
	1976	14,715	3,999	368.0	17.2
	1977	815	5,827	14.0	0.9
	1978	3,410	26,663	12.8	3.4
Basic Metals, metal products, and machinery					
	1976	17,261	78,491	22.0	20.2
	1977	24,175	106,161	22.8	27.6
	1978	27,879	130,255	21.4	28.2
Other manufacturing					
	1976	567	2,520	22.5	0.7
	1977	539	2,202	24.5	0.6
	1978	277	1,092	14.6	0.3
Cooperatives, special projects, and other laws					
	1976	3,864	16,024	24.1	4.5
	1977	7,346	43,375	16.9	8.4
	1978	4,337	19,487	22.3	4.4
TOTAL:	1976	85,586	322,243	26.6	100.00
	1977	87,699	421,574	26.6	100.00
	1978	98,988	462,885	21.4	100.00

Source: Departamento de Control de Exempciones, Ministerio de Economía, Industria y Comercio.

Appendix Table 4.8: CIEX EXPORT INCENTIVES AWARDED MAY 7, 1977-NOVEMBER 15, 1978

Product	Amount (¢000)
At 4 Percent Rate	
Cocoa processed in cases	344.5
Processed tobacco	503.2
Fish filets and lobster tails	59.2
Cebu breed cattle	32.2
Ornamental plants	188.4
Plantains and chayotes	238.4
Sub-Total	1.365.9
At 6 Percent Rate	
Cinchona bark	1.2
Cardomomo	1.2
Bees' honey	100.8
Seeds	146.9
Sub-Total	250.1
At 8 Percent Rate	
Wood handicrafts	177.5
Roasted cocoa	127.5
Wooden parts for furniture	37.1
Cocoa butter	810.3
Grated and frozen yuca	718.3
Fruit pulp and paste	96.0
Cured leather	99.9
Sub-Total	2.066.6
At 10 Percent Rate	
Forzen cultivated shrimp	31.8
Sub-Total	31.8
TOTAL	3,714.4

Source: Banco Central de Costa Rica.