PN-AAY-408

THE RELATIVE SIGNIFICANCE OF THE COMMON EXTERNAL TARIFF OF THE CENTRAL AMERICAN COMMON MARKET AS A CONSTRAINT TO EXTRAREGIONAL EXPORTING

By

Julio Berlinski
Juan J. Fernandez Ansola
Daniel M. Schydlowsky

CENTER FOR LATIN AMERICAN DEVELOPMENT STUDIES
Boston University
Boston, Massachusetts

INSTITUTO TORCUATO DI TELLA
Buenos Aires, Argentina

Submitted by:

Checchi and Company
Washington, D.C.

under Indefinite Quantity Contract # PDC-0000-I-23-3082-00

To:

The Agency for International Development
Regional Office for Central American Programs

February 14, 1986

TABLE OF CONTENTS

Chapter 1 Overview, Conclusions, and Recommendations

By Daniel M. Schydlowsky

Chapter 2 Central American Common Market, Trade Regime and Export Promotion: Evidence and Issues

By Julio Berlinski

Chapter 3 Exporter's Perception of Obstacles and Incentives in Central America

By Juan J. Fernandez Ansola

Chapter 4 The Efficiency of Central American Industry

By Daniel M. Schydlowsky

Chapter 5 Import Protection and Export Supply

By Juan J. Fernandez Ansola
and
Daniel M. Schydlowsky

CHAPTER 1

OVERVIEW, CONCLUSIONS, AND RECOMMENDATIONS

by

Daniel M. Schydlowsky

CENTER FOR LATIN AMERICAN DEVELOPMENT STUDIES
Boston University, Boston, Massachusetts

1. The common external tariff is one of many instruments that form an incentive system to economic activity in Central America.

While the common external tariff is one of the oldest and best known instruments of promotion of economic activity in Central America, it is far from being the only one. Almost of equal vintage is the system of fiscal incentives, which provides a wide range of duty exemptions, particularly for inputs into manufacturing activities which are not produced in Central America. Then there are multiple exchange rates, quantitative restrictions, export promotion devices, etc..

To assess the impact of the common external tariff on Central American economic activity without reference to the remainder of the system of incentives would induce substantial error. However, an integrated analysis is not usually carried out perhaps because until recently, the non-tariff elements were not as important. Nonetheless, the importance of taking the varied elements into account can be easily demonstrated (see Chapter 2, Table 2-8). Putting the pieces together provides a very different sense of net incentives than when the tariff is examined in isolation.

Recommendation:

Identify the different elements forming part of the incentive system, examine their interactions, and establish the net incentive effect provided by the system as a whole. In this process, pay special attention to the equivalence of different packages of incentives, particularly to the manner in which the exchange rate trades off with tariffs, and the way in which quantitative restrictions become binding and/or make other instruments redundant.

2. The absolute level of incentive provided by particular instruments and the relative importance of different instruments has changed over time.

When Central America operated exclusively at fixed exchange rates, the tariff and the fiscal incentives were the major element at issue. Even at that time, their intensity fluctuated. For instance, the specific tariff component of the common external tariff was gradually eroded over time as a result of international inflation (see Chapter 2, Tables 2-2 and 2-3). When Central America became subject to its balance of payments crisis, quantitative restrictions began to be adopted, and these rapidly became the determining restrictive and

incentive measures in a wide range of sectors. However, their perceived impermanence reduced their impact on allocation of resources, except insofar as very rapid pay-back situations could be identified. More recently yet, the use of multiple exchange rates, and of repeated devaluations has introduced a further element of change and instability to the system. At this point, an entrepreneur that concerns himself only with the external tariff and the system of fiscal incentives would be missing in many cases the most important part of the incentive system. The changes in the CET currently under negotiation do not signify a major departure from the historical situation, especially when products produced in the region are considered. (See Chaper 2.)

Recommendation:

Examine the stability of the incentive system over time, as well as the impact of the changing composition of the incentive system and the relationship of these to the length of the planning horizon of businessmen.

3. The system of incentives has an anti-export bias.

Two types of anti-export bias can be distinguished. The first refers to the increase in costs of production due to protection on inputs. This is called absolute anti-export bias. The second kind of bias, relative anti-export bias, relates to the higher levels of effective protection provided on domestic sales as compared to sales abroad. Both kinds of anti-export bias exist in the Central American external tariff (see Chapter 2, Tables 2-8 and 2-9). When substantial excess capacity exists, as is currently the case in Central America, absolute anti-export bias is more important than relative anti-export bias for it is the former which makes export sales absolutely unprofitable. Relative export bias is not as important in this circumstance since the major problem of the country is not how to allocate new investment between plants oriented to the domestic and plants oriented for export, but rather concerns the problem of utilizing the plant that is already there for export production. Relative anti-export bias becomes more important when investment is an issue, yet some question exists on precisely how to interpret measurements of relative anti-export bias (see conclusion 4 below).

Recommendation:

Study the absolute anti-export bias in the incentive system and analyze the effectiveness of fiscal incentive systems as well as more recent export promotion policies as factors neutralizing anti-export bias.

4. The impact of domestic market protection on exports is ambiguous.

While the general presumption is that higher tariffs on imports, i.e. greater protection on domestic sales, operates against the sale of a large volume of exports abroad, such a conclusion cannot be substantiated under a number of different market structures. For example, competitive markets with perfect substitute ability between domestic output and imports require water in the tariff for exports to exist. Likewise, monopolists producing perfect substitutes of imports as well as imperfect substitutes will export more, when domestic protection is higher. On the other hand, competitive markets for domestic production with imperfect substitute import goods will find exports increasing when protection is lower. (See chapter 5.)

The range of results which different market structures imply for the relation between protection of the domestic market and

export volume make it very difficult to interpret the meaning of different levels of effective protection on the domestic market in terms of their impact on export sales. It appears that exports may increase when effective protection goes up but the same may occur when effective protection goes down. Such ambiguity in the results also means that it becomes quite difficult to interpret the meaning of relative anti-export bias for export growth. By contrast, absolute anti-export bias clearly seems to imply lower export levels.

Recommendation:

Investigate more extensively the impact of market structure on the relationship between import protection and exports;

Establish the relationship between effective protection and exports under different market structures and isolate the implications therefrom for relative anti-export bias;

Assertain the type of market structure actually found in the different branches of economic activity in Central America, and relate these to the findings on market structure and protection.

5. Export supports are indispensible to promote export sales.

As distinct from the ambiguous impact of import protection, the effect of export supports in promoting the growth of exports is easy to establish. Export supports counter any existing anti-export bias and they further serve to cover the gap between the FOB and CIF price. Finally, export supports make it possible for the minimum necessary condition for exporting to be satisfied, i.e. for the realized export revenue to exceed domestic cost. In the current situation of extensive excess capacity, the provision of export supports designed to overcome preexisting cost disadvantages is absolutely central.

Recommendation:

Investigate the size of export supports required to overcome cost disadvantages. Analyze how these would vary under different mixes of incentive packages (exchange rate, domestic labor taxation, interest rate, electricity prices, etc.).

Determine the fiscal cost of export supports. Distinguish in this calculation fiscal cost under conditions of substantial excess capacity, where the foreign trade multiplier may yield a substantial fiscal dividend, and a situation of full capacity

utilization, when a fiscal dividend from activation cannot be expected. Assess the length of time it would take for existing excess capacity to be absorbed, and derive the consequent time path for export supports.

6. Businessmen see a large number of factors inhibiting exports other than the common external tariff.

Businessmen in different branches of economic activity find a number of specific obstacles standing in the way of their export sales. Many of these have to do with finding markets, penetrating them, and establishing sales channels. Others have to do with the provision of specific infrastructure, the availability of particular production processes, etc.. The remarkable characteristic of the entrepreneurial view relates to the importance of the specific particular obstacles in comparison to the more general policy environment (see Chapter 3 for specific details). The implication of these findings is of importance for the shape of the export demand curve, which appears to the entrepreneurs to be quite different from the standard infinitely elastic curve assumed for the small country case in most economic analyses. Moreover, it also provides greater support for the notion that non-price constraints are of substantial importance in the export process. Finally, the

entrepreneurial view gives credence to the argument that specific, differentiated policy interventions are needed to facilitate exports and that these are not easily substituted for by broad, macro measures. (See Chapter 3, Section IV.)

Recommendations:

Undertake detailed micro-studies to isolate specific obstacles and difficulties standing in the way of exports from particular branches of activity. Conduct such studies in other Latin American countries with successful export track records (e.g. Brazil and Colombia) and compare the managerial solutions found by the successful firms in other countries with those obtaining in Central America.

Explore or identify the policy measures which could be adopted to counteract the specific obstacles cited by the business community. Consider the extent to which price incentives can motivate businessmen to find solutions for non-price difficulties, and cost out the resultant levels of support.

7. National economic efficiency of production in the manufacturing sectors of Central America has been fairly good.

Existing empirical results show a remarkable level of efficiency of manufacturing production. (See Chapter 4.) However, these studies do include some rather strange results for selective sectors. They show an enormous dispersion of efficiency within sectors ranging in many cases from very inefficient to very efficient. They also indicate substantial differences in the level of efficiency depending on whether a short run, cycle dependent perspective with excess capacity is taken, or, alternatively, a medium term view with a replication of existing capital stock is adopted.

The causal role of the CET in these findings is unclear. The link between tariffs and output itself is ambiguous. (See conclusion of Chapter 4.) In addition, the standard of comparison is not unique: if the shadow price of foreign exchange is used as a benchmark, many firms look efficient; if the most efficient firms are used as a benchmark, most of them naturally fall short of the mark. Some firms are inefficient on either criteria.

Recommendation:

Investigate selected sectors from the point of view of the national economic efficiency. Identify to this effect those sectors where existing measurement contradicts generally held entrepreneurial views.

Assess and monitor the levels of capacity utilization, and give preference to production on installed capacity compared to expansion, unless clear indication of the desirability of the latter exists.

8. The substantial difference between market and shadow prices, particularly during this crisis period, have substantial implications for policy.

The severe scarcity of foreign exchange has raised the already high shadow price of foreign exchange; the extensive unemployment implies a shadow wage rate well below the market rate and the extensive underutilization of capacity implies a zero marginal cost of capital for a significant range of output. Purposeful government intervention under such circumstances can improve the performance of the economy substantially, by bringing the market signals more into agreement with the

underlying scarcities as evidenced by the shadow price measurements.

Recommendation:

Sistematically calculate and monitor shadow prices in Central America as a basis for compensatory government intervention. Design a compensatory trade policy intended to make the market reflect the national economic profitability of economic activity in response to the real scarcity of resources as indicated by the shadow prices.

9. Clear expectations and predictable rules of the game are an important element of export development.

The orderly and well established manner in which incentive policy is made, and above all, the clarity of the rules by which incentives are changed, are central elements to the commitment of business to make an investment in export marketing (see Chapter 3). Since complete stability, bordering on immobility, is not consistent with a changing world in which market prices and shadow prices as well as market conditions are in continuous flux, the system of incentives needs to be evolving continuously in order to keep abreast of the new requirements. However, this

evolution needs to proceed according to well established rules so that it is change within stability, and in accordance with the expectations of the economic agents who are subject to this incentive system. (See Chapter 2, Section V.)

Recommendation:

Explore and design procedures which are consistent with Central American legal and policy-making traditions and that are suitable to up-date the system of incentives with a minimum of disruption and with a view to providing business a long-term stable expectational environment, particularly with regard to investment in export marketing.

CHAPTER 2

CENTRAL AMERICAN COMMON MARKET, TRADE REGIME AND EXPORT PROMOTION
(Evidence and issues)

Julio Berlinski(1)

January 1986

---

(1)Instituto Torcuato Di Tella, Buenos Aires, Argentina. This paper is part of a larger work done in association with the Center of Latin American Development Studies(Boston University) funded by the Agency for International Development (A.I.D.) through Checchi & Co.(Washington, D.C.). This paper draws on my experience as former advisor to the General Secretariat of the Central American Common Market (SIECA) as well as on two papers written for the World Bank, (1983)"The proposed new tariff for the Central American Common Market", and (1985)"Guatemala, trade regime and export promotion in manufacturing". A first draft was presented to a seminar held at CLADS in December 1985. Comments by D.M.Schydlowsky and J.J.Fernandez are gratefully acknowledged. The points of view are my own.

CONTENTS

	page
I. INTRODUCTION	1
II. THE INSTRUMENTS OF TRADE INTERVENTION	4
A. Import protection	4
i. The common external tariff	4
ii. Nontariff restrictions	6
B. Export taxation (protection)	14
C. Exchange rate regulations	17
III. THE PROPOSED CHANGES IN IMPORT PROTECTION	19
A. Initial conditions	19
B. Reform proposals and recent negociations	20
IV. THE BIAS AGAINST EXPORTS	28
A. Sources of bias	28
B. Changes in anti-export bias	30
V. CONCLUSIONS	35
NOTES	39
APPENDIX TABLE A1	43

16

I. INTRODUCTION

This paper is intended to provide a general discussion of several issues arising from the trade regimes existing in Central America and its relationship to export promotion.

The trade regimes of the countries involved (Guatemala, El Salvador, Nicaragua, Costa Rica) are not uniform. The basic multilateral instrument of the members of the Central American Common Market (C.A.C.M.) is the Common external tariff (C.E.T.) negotiated in the early 60's, which at that time also included Honduras. By the end of the decade the war between El Salvador and Honduras disrupted the market. Since then Honduras has its own tariff schedule and trade between Honduras and the rest of the countries was regulated by bilateral agreements. The original C.E.T. regulates trade between the member countries and the rest of the world, providing free trade among them.

The incentive signals of the C.E.T. were modified by the use of several instruments like the Convenio Centroamericano de Incentivos Fiscales and some imposed on a national basis. Among them, at an early stage, non tariff restrictions, tariff exemptions, non neutral consumption taxes, taxes on traditonal exports; later on, the use of multiple exchange rates and promotional schemes to non traditional exports were the most outstanding cases.

The reason for having such a comprehensive approach is being reinforced by the recent experience regarding exchange rate regulations. The strong changes taken place in exchange rates brought the imposition of quantitative restrictions (QR's) on regional trade, as well as it meant an important driving force for export promotion outside the region.

On the other hand, this may be related to the need for some basic coordination of instruments which seems to be essential when the discussion of the system of incentives in a Common Market is being made, especially regarding tariff reform proposals. This is so because, in the past, tariffs have shown to be a major part of total incentives provided to import substitution activities; today, new exchange regulations in some countries may compete in the short run for such leadership.

Last but not least, incentives to exports have to be consistent with protection provided to import substitution. This instrumental approach to protection, by requiring some symmetry of incentives to export promotion, may help in attaining some of the objectives associated with increasing efficiency in resource allocation.

Section II is devoted to a discussion of the different instruments used in Central America to control imports, promote exports and to the new foreign exchange regulations. Section

17

III, in its turn, deals with the proposed changes in import protection discussing the different reform proposals and recent negotiations vis a vis the initial conditions described by conventional measures of protection. Section IV is concerned with the sources and changes of anti-export bias due to the existing trade regime or to recent changes taken place in the instruments of trade intervention. Finally, in the conclusions the principal issues are taken up providing some recommendations.

II.THE INSTRUMENTS OF TRADE INTERVENTION

The different instruments used today in the trade regimes of Central America are the result of decisions taken by the countries involved, some on a multilateral basis, others are bilateral o national initiatives.

The historical sequence of the different instruments is: first the introduction of regional measures,the common external tariff, followed by fiscal incentives providing among other things tariff exonerations; second, the implementation of national measures like fiscal incentives, export promotion (taxation) laws, non neutral consumption taxes, quantitative restrictions, etc.

A.Import protection

Since the early 60's import protection in Central America resulted from the interdependence of the common external tariff with some national legislations. In many cases the latter would affect the ranking of incentives underlying the structure of the C.E.T.. This was done by trade intervention devises which affected prices and/or quantities.

i.The common external tariff

The common external tariff (C.E.T.) has been the principal instrument used to control imports from the rest of the world in Central America. It is a two column schedule, one is a specific rate and the other is ad valorem. The usual short cuts for calculating the ad valorem equivalent of specific rates for each country, using the unit value of imports from the rest of the world leads to different total ad valorem equivalent rates. So it is not a surprise that one of the points of the different reform proposals stressed the need to have an ad valorem tariff. A long series of those estimates will show the impact of international inflation, especially after the oil shock, eroding the ad valorem equivalent of specific rates.

A comparison of estimates made by me at different points of time can be summarized as follows (see table 2-1): a) rates are higher for consumer goods than for intermediate or capital goods, b) total ad valorem rates are different for Guatemala and Costa Rica, either for aggregate or detailed figures, c) the ad valorem rates for Guatemala show in 1981 a figure (19%,including the effect of the San Jose Protocol) substantially lower than the same rate for 1972 (27%).

The erosion due to international inflation was not the same across industries, since the relative importance of specific rates in total ad valorem was different. For example in 1972 those shares were around 67% for Nondurable consumer

TABLE 2-1
AD VALOREM EQUIVALENT OF TARIFFS

	GUATEMALA (1972)	COSTA RICA (1972)	GUATEMALA (1981)
1.Nondurable cons. goods	57	54	24
2.Durable cons. goods	43	63	24
3.Fuels, lubricants	28	68	15
4.Intermediate prod.agric.	14	13	) 15
5.Intermediate prod.ind.	25	57	)
6.Construction materials	24	23	16
7.Capital goods agriculture	8	7	) 14
8.Capital goods industry	14	15	)
9.Transport equipment	17	20	)
AVERAGE	27	37	15

SOURCE:BERLINSKI,J.(1974),"Analisis comparativo de algunas caracteristicas del sistema arancelario aplicado a las importaciones extraregionales en Centroamerica" and BERLINSKI,J.,(1985),"Guatemala, trade regime and export promotion in manufacturing", table 2.1.1. 1981 estimates do not include the surcharge of the San Jose Protocol. Imports from outside the region were used as weights. No adjustments for overvaluation of the exchange rates were made.

goods, 57% for Intermediate products to industry and 9% for Capital goods to industry with a total average of 44% ; so tariff equivalents in the first two cases decreased more rapidly than the rates concerning capital goods.(1)

Table 2-2 presents another aspect of the structure of incentives related to the size of tariff exonerations provided by fiscal incentives. Regarding the rates, some of the pattern of table 2-1 remained, especially the escalation of tariffs and the erosion of rates which in the case of Guatemala meant coming down from (13 %) in 1972 to (7 %) in 1981. The difference in rate levels between tables 2-1 and 2-2 is the result of the high proportion of imports from the rest of the world exempted from tariff payment, share which in 1981 amounted to around 54%.

Also the "tax expenditure" aspects of those tariff exonerations should be stressed. The relative importance of them compared to total tax revenue was in 1980 the highest for Costa Rica (14%), followed by Nicaragua and El Salvador (11%) and Guatemala and Honduras (7/8%).(2)

A warning has to be made here about the estimates provided in the above mentioned tables:a) the weights used for aggregation purposes were cif values of imports and b)unit values of imports from outside the region were used to estimate the total ad valorem equivalent of tariffs. The first underestimates the effect on incentives of protective rates,

TABLE 2-2
TARIFF PAID

	GUATEMALA (1972)	COSTA RICA (1972)	GUATEMALA (1981)
1.Nondurable cons. goods	28	32	11
2.Durable cons. goods	36	21	15
3.Fuels,lubricants	12	8	3
4.Intermediate prod.agric.	9	4	) 6
5.Intermediate prod.ind.	8	7	)
6.Construction materials	11	10	5
7.Capital goods agriculture	4	5	) 11
8.Capital goods industry	7	6	)
9.Transport equipment	13	8	)
AVERAGE	13	10	7
Tariff revenue forgone/ total tax revenue(%)	11	35	8

SOURCE:BERLINSKI,J.(1974),"Analisis comparativo de algunas caracteristicas del sistema arancelario aplicado a las importaciones extraregionales en Centroamerica", BERLINSKI,J.(1985) op.cit.,table 2.1.1 and (SIECA 1983)"Consideraciones sobre el convenio centroamericano de incentivos fiscales al desarrollo industrial y sus protocolos". Imports from outside the region were used as weights. No adjustments for overvaluation of the exchange rates were made.

since low weights are provided to items with high tariff rates; the second may also introduce a downward bias if the unit value of goods with prohibitive tariffs might be higher than the one of the domestic quality produced under protection.(3)

A word should be added about the beneficiaries of those tariff exemptions, especially regarding their effect on domestic prices of close foreign substitutes or on reducing import costs. The former corresponds to a case in which the size of imports is high, so they may overflow to the open market and in so doing affect domestic prices downward; the latter corresponds to the more general case of dual markets, which in the case of cost savings on intermediate and capital goods increases the rate of return for the beneficiaries of tariff exemptions.

In conclusion, the C.E.T. was designed using as criteria the type of good involved and the extent of domestic supply. Lower rates were provided for intermediate and capital goods which are basically not produced in Central America, while the highest total ad valorem equivalent corresponds to consumer goods produced in the area.

Regarding Honduras, after leaving the C.A.C.M., they legislated their own tariff schedule which was similar to the C.E.T.. At the same time, preference margins were negotiated with former partners to provide an equivalent to the prior existence of regional free trade for which bilateral agreements

were signed.

ii.Nontariff restrictions

National legislations introduced several instruments which affected the incentive content of the C.E.T. structure. This was done mainly by quantitative restrictions and import surcharges of different kinds, including the more common case of imposing consumption taxes with lower rates to domestic supply than to competing imports (4). If for the products concerned, free trade within the region existed, those additional restrictions may have increased the level of protection. In this way preference margins provided to regional partners were enlarged by national policies.

The existence of quantitative restrictions implies that the C.E.T. may not be the relevant instrument of protection. It is known that a tariff allows the domestic price of an importable to increase above the international level, as follows:

(a) $Pd=PeR(1+t)$

where, Pd: domestic price

Pe: international price(CIF)

R : exchange rate

t : ad valorem tariff

In the absence of other instruments, and if tariffs are not redundant (a) describes the so called "law of one price". If

both terms of (a) are divided by PeR we get:

$$(b) \quad \frac{Pd}{PeR} = (1+t)$$

The term in the left hand side would become the "implicit tariff" and the other one the "explicit tariff". The former, implicit in the behavior of entrepreneurs; the latter, reflecting the nominal legal rates corrected (when required) for the existence of other price instruments (for example official prices of imports) or the ad valorem equivalent of other devises like pre-import deposits. Now if QR's exist and they decome relevant what will be found is that the sign of (b) would be an inequality, showing that the implicit tariff is greater than the explicit one.

Regarding QR's in Central America we may find today extreme cases. Let me refer to two of them: one would be the case of Guatemala of transition from QR's to trade liberalization and the other case would be the present administration of QR's in El Salvador and Honduras.

In a study made for the SIECA I could provide some early measurements (1972) of the incidence of those restrictions in trade and production of Guatemala(5). Among the most important were imports of agriculture,mining,vegetable and animal oils, grain mill products, cacao, animal feeds and manufacture of electrical appliances; i.e. before the international payment

crisis some selected QR's existed in several countries which might have affected domestic relative prices.

After the payments crisis, Guatemala introduced in 1982 import and foreign exchange controls which by the end of 1984 were replaced by new exchange rate regulations cum import liberalization. Some remaining QR's still exist, some related to security reasons like guns, others to health like blood or foods, finally others for more specific sectoral interests like the cases of coffee, animal feeds, tobacco, pesticides, tyres, etc.

In El Salvador QR's on imports take the form of generalized licencing plus some licences administered by the Ministry of Foreign Trade, especially regarding animals, milk, grains, textiles,etc.

Another example of an extreme case of QR's on imports is provided by Guatemala in the period 1982/84 or better to use a living example we shall refer to the case of Honduras. Here imports are classified according to different degrees of essentiality. To illustrate the relative importance of each category , I have computed them based on 1983 import data. From the four most important categories, the first corresponds to basic consumption, health and education with 14% of total import value, next priority was petroleum products (23%), the third was intermediate inputs with 39% and the forth essentiality is

capital goods with (15%). This pattern is similar to other rankings made by different import control authorities, i.e. due to employment reasons providing inputs to existing industries has greater priority than investments in new activities.

Since the disruption of the market Honduras imposed on top of their tariff sechedule several surcharges mainly to increase fiscal revenues. In so doing they have strongly reinforced the tariff rates: an item with a 20% tariff would pay 81%, while if the same item is imported by a tariff exempted person or firm it would pay 33%. On the other hand, bilateral agreements do not include all trade with Central America. In 1981, out of 13% of total imports originated in Central America only 61% corresponded to products included in those agreed lists.(6)

Costa Rica has used several devices to reinforce the import barrier provided by the C.E.T.. Among them, the surcharge agreed in the San Jose Protocol (30% of the C.E.T) is multilateral, the others involve the "sobretasas temporales" which were low 2%/10% except in the case of automobiles (200%). To that we have to add the sales tax, but especially the selective consumption taxes. The latter rates varied according to the type of good : 50% for automobiles,cigarettes,beverages; products included in other lists paid between 10% and 25%(7). Regarding the protective effect of those intruments I have written a paper providing an analytical framework as well as some estimates. In 1974 the average nominal tariff rate for

selected activities (except coffee and bananas) was 65% compared to 75% when differential rates of selective consumption taxes and "sobretasas temporales" were added. Despite this low aggregate incidence, those additional instruments were important in "Tyre production" raising the tariff rate (cum San Jose Protocol) from 22% to 92% and in "Paper and printing" which from 25% for the former increased to 50%.(8)

Finally, we have seen that the C.E.T. was one among the instruments used for import protection. In many cases the effect of those non tariff restrictions set at the national level was of great importance. So they have to be seen together in order to have a correct understanding of the price signals concerning the profitability of investments. In addition, replacing QR's by tariffs is needed to provide a clear ceiling to which domestic prices may rise. Otherwise implicit protection may fluctuate depending on shocks imposed by exogeneous macro variables.

B.Export taxation (protection)

Export taxation has been a traditional way of providing revenue to nacional governments, acting at the same time as a substitute of the income tax for groups generally hard to tax. Those taxes were also used to prevent windfall gains when export proceeds in domestic currency show important fluctuations due to increases in international prices or changes in the exchange

rates. Besides, setting nominal exchange rates in countries with large dispersion in international competitiveness may require to complement it with export taxes. This is especially true when those products have some weight in the cost of living, i.e. export taxes would act as a hidden subsidy on domestic consumption.

Regarding Guatemala, tax rates in 1984 represented on average 4% of FOB values for traditional exports. The principal products involved were sugar, cotton, bananas,etc.

In El Salvador exports of coffee, sugar and shrimp are taxed, becoming their revenues an important source for the treasury. In the period 1980-85 export tax revenues compared to total tax revenues represented 21%.

In some countries in addition to taxation of traditional exports we also found quantitative restrictions affecting them. This is mainly related to the need to keep under control their foreign exchange flows. In Guatemala this involves products like sugar, meat or wood; in El Salvador exports of coffee and sugar are regulated by state agencies who are the only allowed to engage in foreign trade.

Export promotion laws are generally introduced in order to provide additional foreign exchange when trade regimes give high incentives to sales to the domestic markets, but in several

countries they appear too late to have resulted in substantial effects.

For specific legislation regarding export promotion outside the region we have compared some national experiencesia) Draw-back: here Guatemala,El Salvador,Honduras and Costa Rica have such kind of legislation. The general idea is to provide exporting firms neutrality regarding the system of protection plus exemptions from income tax. The former is done generally by tariff suspension mainly on inputs and capital goods;the latter is applied for certain period of time and in some case only concerning firms who export its total production. b)Rebates on FOB value (C.A.T.): here the legislations of Guatemala,Honduras and Costa Rica have been analized. Definitions of non traditional exports is being done by providing a negative list of traditional exports. The size of the incentives varies, but in all cases mentioned, the base for calculation is the FOB value of exports, being for example 10% in Guatemala (15% for new goods). In Honduras, the base promoted is the increment of exports with respect to a base year, while Costa Rica is a mixed case of the alternatives mentioned where we find rebates on exports as well as on their increments. Those certificates are endorsable and have some maturity period before they can be used to pay taxes. Costa Rica is from the cases analized the only one with a long tradition in the use of that instrument. There, in 1983, 40% of non traditional exports were enjoying C.A.T. compared with 5% in 1973.(9)

As can be seen by the illustrative examples above mentioned, export promotion schemes are very similar. They provide rebates on FOB value of non traditional exports and/or on export increments, also exemptions on tariffs applied to inputs and capital goods plus deductions and exemptions on income and related taxes.

But in some countries like Guatemala and Honduras this only reflects the intentions of policy makers since in both cases no certificates were issued. On the other hand, the new foreign exchange regulations of Guatemala puts in the short run a question mark on the usefulness of an instrument like the C.A.T., since the instrumental place of the latter was occupied by the share of export proceeds sold in the free foreign exchange market. This means overlooking the volatility of nominal exchange rates compared to the need of having schemes which are able to remove the tax content of traded inputs. We shall come back to this subject when the sources of anti-export bias will be discussed.

C.Exchange rate regulations

Two attitudes have been recently found in the area regarding foreign exchange regulations. One favoring the introduction of important changes like in the case of Guatemala, the other a conservative approach as the one followed by

Honduras.

New regulations in Guatemala atempted to have some essential imports and service of the debt payments at the old exchange rate funded by the proceeds of traditional exports. On the other hand remaining imports and some share of non traditional exports were sent to the new free market. But, the discrimination against those exports outside the region vis a vis sales to regional markets was clear from the starting rules (November 1984). There, 20% of export proceeds (made 50% by mid 1985) of the former where sent to the free market compared to 100% for the latter.(10)

The basic idea in this section in not to provide an evaluation of what has happened in Guatemala but to contrast it with the conservative Honduran experience. There, the old parity was maintained by the exchange control authority through the increase in capital inflows as well as unilateral transfers.

What is badly needed today is a comprehensive discussion of the interdependence of instruments including the exchange rate. This should be done in order to arrive at some basic agreement regarding rules of adjustment for exchange rates that may allow the elimination of QR's on regional trade.

III.THE PROPOSED CHANGES IN IMPORT PROTECTION

The purpose of this section is to provide an evaluation of the proposed changes in import protection. Indicators of effective rates will be used when available to take into account the effect on value added of tariff and nontariff's restrictions. The rationale for providing those measurements is to show the direction in which resources are being pulled by the incentive system.

A.Initial conditions

The initial conditions describe the point of reference for the evaluation of the reform proposals. This is important for the adjustment required when proposals imply a strong discontinuity from present conditions. Also because recent studies made of the Southern Cone liberalization programs show credibility to be crucial for success.(11)

It is known that a tariff increases the price of imports, in so doing it may provide incentives to import competing activities which increases their factor rewards. But, if inputs are provided at prices higher than the international level, value added under protection increases less than the margin allowed by output protection. The measure which incorporates both effect is precisely the effective protection rate. In table 2-3 an estimation of effective rates for Guatemala and

Costa Rica is provided as an approximation to the initial conditions.

Table 2-3 shows that for Guatemala the average realized rate for 1973 was 87%, compared to a substantially lower figure for Costa Rica (56%). Processed foods show in both countries the highest rates (191% and 155%) with a large dispersion. For Intermediate products and Machinery, effective rates are lower. The outstanding pattern is similar to the one discussed earlier using tariff data weighted by imports. Regarding the 1981 tariff figures, the pattern of dispersion of rates is not different but levels are not the same. Here again the dispersion of effective rates is associated with the dispersion of nominal rates.(12)

8.Reform proposals and recent negotiations

In this section two reform proposals will be presented, one elaborated earlier by SIECA and published around 1982, the other negotiated around September 1985 by 4 countries (Guatemala, El Salvador,Nicaragua,Costa Rica), acting Honduras as an observer.

Given the close association between nominal and effective rates of protection, in table 2-4 a comparison is made between the different tariff proposals and the rates describing the early 70's and 80's situations. We could see that the averages

TABLE 2-3
EFFECTIVE PROTECTION ESTIMATES FOR DOMESTIC AND REGIONAL SALES

	GUATEMALA (Realized 1973)	COSTA RICA (Realized 1973)	GUATEMALA (Tariffs 1981)
1.Processed foods	191	155	101
2.Nondurable cons.goods	93	31	89
3.Intermediate products	49	24	50
4.Construction materials	20	18	9
5.Machinery	11	9	19
AVERAGE	87	56	67

SOURCE:BERLINSKI,J.(1983)," The proposed new tariff for the Central American Common Market",tables 2.5 and 2.6; and BERLINSKI,J.(1985),op.cit. table 3.1.5. Those are conventional partial equilibrium rates. Non traded inputs were considered 100% value added (early Corden measure). It was also assumed that primary inputs were provided at international prices. 1981 estimates do not include the surcharge of the San Jose Protocol. Value added at international prices were used as weights. No adjustments for overvaluation of the exchange rates were made.

TABLE 2-4
C.A.C.M. PROPOSED (1982) AND NEGOTIATED (1985) TARIFFS, ESTIMATED AD VALOREM RATES FOR SELECTED GOODS PRODUCED IN GUATEMALA FOR DOMESTIC AND REGIONAL SALES

	PROPOSED (1982)	AD VALOREM (ETA 1974)	NEGOTIATED 1985 (Average of Part I and Part II)	AD VALOREM (Guatemala, ETA 1981)
1.Processed foods	34	53	33	34
2.Nondur.consum.	47	84	87	48
3.Intermed.prod.	25	31	31	24
4.Construction mat.	20	18	30	15
5.Machinery	20	33	24	13
AVERAGE	31	46	36	30

SOURCES:BERLINSKI,J.(1983 and 1985)op.cit.table 3.3 and table 3.1.5. Negotiated rates for 1985 were estimated based on Consejo Arancelario y Aduanero Centroamericano (SIECA 1985),"Anexo A del Convenio sobre el regimen arancelario y aduanero centroamericano: arancel centroamericano de importacion". Part I corresponds to negotiated rates while Part II are rates in process of negotiation, they correspond to rates proposed by Guatemala, El Salvador and Costa Rica. For detailed I.S.I.C.(4 digits) rates see Appendix table A1. Weights of production used correspond to 1972. No adjustments for overvaluation of the exchange rates were made.

by type of good follow similar criteria regarding rate levels for the activities involved, showing lower rates for intermediate and capital goods than for consumption products. For the 20 selected sectors of Guatemala the rates of the 1982 proposal were concentrated (see table 2-5) in the bracket of up to 50%, while the 1974 rates presented a higher dispersion. That comparison shows the reduction in tariff dispersion of the 1982 proposal, but no important change seems to take place regarding effective rates (see BERLINSKI,J.(1983) op.cit.). This is related to the tariff escalation pattern adopted in the proposal, but also present in the 1974 figures.

The early 60's agreement regarding the C.E.T. rates enlarged the domestic market for the existing activities which provided the basis for faster growth. So proposed rates for 1982 were intended to maintain this pattern being higher for consumer products than for intermediate and capital goods. On the other hand, for the activities selected, the general pattern of rates coming out from the 1985 negotiations is similar to the characteristics above mentioned regarding escalation of rates, but the level and dispersion of the 1985 tariffs is higher than those of the 1982 proposal (see again table 2-5). But those comparisons should be looked at carefully since no adjustments for overvaluation of the exchange rates were made.(13)

After having a broad picture of the 1985 negotiated rates, it is useful to look at the detailed rates presented in Appendix

TABLE 2-5
C.A.C.M.,FREQUENCY DISTRIBUTION OF PROPOSED(1982) AND NEGOTIATED (1985) TARIFFS FOR DOMESTIC AND REGIONAL SALES
(20 selected sectors of Guatemala)

RATES	PROPOSED (1982)	ETA (1974)	NEGOTIATED 1985 (Average of Part I and Part II)
1 TO 25	45	35	35
26 TO 50	55	35	50
51 TO 75	0	20	0
76 TO 100	0	10	15
SECTORS	20	20	20
MEAN	30	42	36
S.D.	13	24	24
DISPERSION	43	58	65

SOURCE: own elaboration based on a sample of sectors selected in BERLINSKI,J.(1983) op.cit. table 3.3..1985 negociated rates come from Consejo Arancelario y Aduanero Centroamericano (SIECA 1985),"Anexo A del Convenio sobre el regimen arancelario y aduanero centroamericano: arancel centroamericano de importacion".Part I corresponds to negotiated rates.Part II are rates in process of negotiation, they correspond to rates proposed by Guatemala,El Salvador and Costa Rica. For detailed I.S.I.C.(4 digits) rates see Appendix table A1. Weights of production used correspond to 1972. No adjustments for overvaluation of the exchange rates were made.

table A1. Table 2-6 provides several frequency distributions of them for the sample of 67 I.S.I.C. selected goods where a distintion was made regarding products negotiated (Part I) and in process of negotiation (Part II). Total products for the former were 53 of which 87% were in the bracket of up to 50% rate, our sample contained only 14 products in Part II where around 2/3 of them were in the 50/100% bracket range. The mean of Part I rates was 30% compared to 66% for Part II, together with an increase in the dispersion of rates. The breakdown of rates by type of good show similar characteristics: in Part I rates for final goods are higher than for intermediate products, while in Part II this is also the case but in addition rates are higher vis a vis similar goods of Part I.

The data presented in Appendix table A1 also gives us the opportunity to look at the escalation of rates and stage of negotiation for some input-output chains. For example, I.S.I.C. 3211"Spinning,weaving and finishing textiles" with an average tariff of 47% (Part I and II) is a very important input to 3213"knitting mills" having in Part II an 80% tariff on output and 3220"Manufacture of wearing apparel" where a 100% rate will be found (also in Part II). The resulting effective rates are high enough, especially because imported inputs from outside the region (which represent around 30% of traded inputs in both cases) are assigned the low rate (5%) of the "fiscal floor" (exceptionally 1% or 10%). But we also could see that within I.S.I.C. 3211 the dispersion of rates is also high (the

TABLE 2-6
C.A.C.M.,FREQUENCY DISTRIBUTION OF NOMINAL TARIFF RATES NEGOTIATED IN 1985 FOR 67 SELECTED PRODUCTS OF GUATEMALA

RATES	TOTALS		PART I			PART II		
	PART I	PART II	(1)	(2)	(3)	(1)	(2)	(3)
1 TO 25	49	14	17	0	73	0	0	14
26 TO 50	38	21	72	0	18	0	0	43
51 TO 75	9	21	11	33	9	0	0	43
76 TO 100	4	43	0	67	0	0	100	0
PRODUCTS	53	14	18	3	22	0	6	7
MEAN	30	66	34	77	25	0	97	47
S.D.	20	33	13	5	17	0	8	20
DISPERSION	67	50	38	6	68	0	8	42

OURCE:own elaboration based on a sample of products selected in ERLINSKI,J.(1983) op.cit. table 3.3.. 1985 negociated rates ome from Consejo Arancelario y Aduanero Centroamericano (SIECA 985),"Anexo A del Convenio sobre el regimen arancelario y duanero centroamericano:arancel centroamericano de mportacion".Part I corresponds to negotiated rates.Part II are ates in process of negotiation, they correspond to rates roposed by Guatemala,El Salvador and Costa Rica.(1)Processed oods, (2) Nondurable consumer goods, (3)Intermediate products. f more than one NAUCA II item was found within each of the 67 .S.I.C.(8 digits) products, an unweighted average was alculated. For detailed I.S.I.C. rates see Appendix table A1.

extremes being 5% and 70%), calling for a more product oriented approach to know the true effective protection changes. In any case, this information should be very helpful since the items presented are among several products which have to follow a process of negotiation under the procedures set by the "Consejo Arancelario"(14). But given the similar points of view about Part II rates of Guatemala, El Salvador and Costa Rica it is difficult to forsee major changes.

In conclusion, lack of data on the extent of overvaluation of the exchange rate and on price distortions introduced either by past or remaining QR's, makes it difficult to pass judgement about the tariff negotiated in 1985. But, the evidence provided would suggest that tariff levels and dispersion are higher in the 1985 negotiation than they were in the 1982 proposal. Also the rank correlation between both sets of rates for the 20 selected sectors is low.

IV.BIAS AGAINST EXPORTS

In this section the sources of bias as well as the changes introduced by the negotiated rates of the C.E.T. and the new foreign exchange regulations will be discussed.

A.Sources of bias

One of the sources of anti-export bias comes from the fact that local producers have to buy their inputs (from local or imported sources) under protection at prices higher than the international level. In the absence of export subsidies the result would be negative effective rates of protection for exports outside the region. At the same time, given to import restrictions sales in the domestic (regional) market are made at prices higher than the international level,following generally the made to measure principle starting from input protection. Taking into account those effects one can consider two definitions of bias against exports (leaving aside adjustments of overvalued exchange rates): the absolute bias related to export taxation on the input side, the relative bias due to higher rates of protection to domestic sales as compared to exports outside the region.

A simple example may clarify the measurements involved as well as their concrete meanining. The example (table 2-7) will be made under the following assumptions: ouputs and inputs are

TABLE 2-7
... ILUSTRATIVE EXAMPLE ON THE MEANING OF ABSOLUTE AND RELATIVE BIAS AGAINST EXPORTS

	Pe	(1+t)	(1+s)	DOMESTIC Pe(1+t)	EXPORTS Pe(1+s)
A)AGRICULTURE					
Production	1.00	1.00	1.00	1.00	1.00
Inputs	.20	1.30	1.30	.26	.26
Value added	.80	.925	.925	.74	.74
B)INDUSTRY I					
Production	1.00	1.30	1.00	1.30	1.00
Inputs	.60	1.00	1.00	.60	.60
Value added	.40	1.75	1.00	.70	.40
C)INDUSTRY II					
Production	1.00	1.30	1.00	1.30	1.00
Inputs	.70	1.30	1.30	.91	.91
Value added	.30	1.30	.30	.39	.09

where Pe:international price; t: tariff; s: subsidy(tax);
so the anti-export bias will be under the assumptions made:

	ABSOLUTE Effective rates to exports (%)	RELATIVE [(1+t)/(1+s)] Nominal	Effective
A)AGRICULTURE	- 7.5	1.00	1.00
B)INDUSTRY I	0	1.30	1.75
C)INDUSTRY II	- 70.0	1.30	4.33

tradables, the nominal rate of exchange is made equal to one, no water in the tariff remains, no quantitative restrictions and no taxes (subsidies) to exports exists, finally uniform tariff protection of 30% on manufacturing is assumed.

Three activities were included in the example, one resource based (agriculture) which is an input into agroindustries (industry I), while industry II provides inputs to agriculture. This interindustry framework allows, under the assumptions made, to draw some conclusions: a) industry I internalizes international competitiveness of agriculture receiving the highest effective protection; i.e. in such a situation a unform tariff on manufacturing will not produce uniformity in effective rates. b) absolute bias against exports is higher in industry II than in agriculture due to the higher input coefficient of the former; c) while relative nominal bias against exports is the same for all industries, the effective bias is higher for industry II.

B. Changes in anti-export bias

Taken Guatemala as an example, the new foreign exchange regulations have put much emphasis on absolute bias, disregarding that in the medium run the relative bias measure is important in changing the profit equation of the firm. Otherwise exports will be mainly driven by domestic recessions, and the moment those are overcomed the trade balance will be

worse off due to augmented imports associated with the increase in domestic activity and the decrease in exports for the same reason. This would not be the case if more symmetry is brought in between prices sold in the domestic market and exports proceeds outside the region. In which case capacity may even be stretched to satisfy the demands of both markets.

Let us illustrate this point by having a closer look at the interaction of protection instruments in Guatemala's recent experience, trying to see the effect of several export promotion measures plus the new foreign exchange regulations(15). An estimation of the change in effective rates to exports outside the region (see table 2-8) due to the instrumental changes above mentioned would show: that the introduction of a 10% C.A.T.(16) would have reduced several negative effective rates, while providing primary inputs at international prices would have affected especially food and beverages, where there would have been a strong change in sign. A less important change seemes to have come from the draw-back due to present tariff exemptions related to fiscal incentives. Finally, the introduction of the free market exchange rates have had effects, at least, in foods and textiles profitability.

The relative bias measure (table 2-9) would have shown reductions, on the one hand in the cases of Draw-backs and C.A.T.'s. On the other hand, the effect of selling a share (50%) of export proceeds to the rest of the world at the free market

TABLE 2-8
GUATEMALA, ABSOLUTE BIAS, THE EFFECT ON EFFECTIVE RATES TO EXPORTS OUSIDE THE REGION DUE TO THE INTRODUCTION OF PROMOTION INSTRUMENTS

	BASIC 1981	DRAW-BACK	C.A.T.	C.A.T. and prim. inputs at int.prices	FREE MARKET RATE
1.Nondurable cons.	-21	-20	-6	5	3
2.Consumer durables	-11	- 6	5	5	21
3.Petroleum products	-38	- 8	-7	-7	-202
4.Intermediate prod.	-14	-10	8	9	- 30
5.Construction mat.	- 9	- 9	5	6	46
6.Machinery	-13	- 7	6	6	- 4
AVERAGE	-19	-16	-2	5	- 14

SOURCE: BERLINSKI,J.(1985),op.cit.table 3.2.2 and 3.2.3. The free market rate computed was 3 to 1, the latter being the so called oficial rate related one to one to the US dollar. Estimates presented correspond to the situation of mid 1985 where exports outside the region received 50% of their proceeds at the free market rate, while for this calculation it was assumed that at the margin the relevant rate for traded inputs was the free market rate. Draw-backs and C.A.T.'s represent potential rates. Exchange rates computed in the exercise were nominal rates. No adjustments for overvaluation of the exchange rates were made.

TABLE 2-9
GUATEMALA, RELATIVE BIAS AGAINST EXPORTS, FREQUENCY DISTRIBUITION OF COEFFICIENTS UNDER ALTERNATIVE EXPORT PROMOTION INSTRUMENTS

BIAS	BASIC 1981	DRAW-BACK	C.A.T.	C.A.T. (primary inputs at int.price)	FREE MARKET RATE
< 1	0	0	3	3	8
1 TO 1.5	42	46	60	57	0
1.6 TO 2.0	23	26	18	14	11
2.1 TO 2.5	15	10	10	14	12
2.6 TO 3.0	10	11	7	5	19
>= 3.1	11	8	4	8	50

SOURCE: BERLINSKI, J.(1985)op.cit.tables 3.3.3 and 3.3.4. Bias coefficients result from comparing effective protection coefficients (1+rate) for domestic (regional) sales and exports outside the region. Regarding the exchange rates computed see table 2-8. No adjustments for overvaluation of the exchange rates were made.

rate, while buying at the margin importables at that rate would shift activities to high bias brackets associated to increased protection provided to import competing activities. So, in general absolute and relative bias would be reduced at the same time except in the case of Guatemala's new foreign exchange regulations.

A final word about the effect of the 1985 tariff negotiations on bias against exports. Regarding inputs, Part I (negotiated tariffs) would provide a lower floor intending to substitute the effect of discontinued tariff exemptions. Rates were basically set at 5% for not produced inputs and up to 30% for those where domestic supply existed. So the absolute measure of bias would not show much change. On the other hand, Part II (in process of negotiation) tariffs would act as the ceiling rates since the high proposed levels (in the range of 70/100%) would reinforce relative bias.

In conclusion, absolute bias would have been reduced by export rebates (C.A.T.) or provision of inputs at international prices but it certainly was made smaller by changes taken place in the real exchange rate. Regarding relative bias, it would have been reduced by the first two measures, but increased by any devaluation such as the case of Guatemala and by the 1985 tariff negotiations given their higher protective effect on import competing activities.

V.CONCLUSIONS

Since the early 60's import substitution industrialization (ISI) was promoted in Central America in two ways: a)for existing industries it meant the enlargment of domestic markets bringing an increase in output and employment;b)for new industries the protected market provided the domestic demand which was an attractive point of departure for any project.

If one would be able to split growth rates regarding the components above mentioned (existing industries, new products) we would certainly find a higher weight of the former type of activities.

As described by several measures in the text, the structure of the common external tariff was designed to provide higher private profitability for sales to the domestic market of final consumer goods. At the same time this was eased by the availability of inputs at near international prices due to a generous system of tariff exemptions on intermediate and capital goods. Then tariff escalation was built into the protective system. Also national initiatives involved a reinforcement of trade intervention through QR's, non neutral consumption taxation and other surcharges. But due to free trade within the region increasing the protective barriers meant not only providing more incentives to domestic import competing activities but also rising the preference margin to sales from

the area.

For those reasons export promotion outside the region required some compensation schemes to overcome the bias against them of the present protective system. On the one hand, absolute bias should be removed in the short run by export promotion devices; on the other hand, the profit equation of the firms should be changed in the medium term, i.e. export expansion should be considered a precondition of an import liberalization process.

Those compensating schemes have shown similarities among countries. Some have tended to do it through legislations regarding draw-backs or export rebates like C.A.T.'s or in others given the scarcity of foreign exchange by the introduction of a free market where increasing shares of export proceeds would be sold.

Here a distinction must be made between the domestic resource based industries and the rest of manufacturing activities. The former is generally supplied with primary inputs at international prices, while in the latter a hidden tax is imposed by sourcing their inputs (domestic,imported) at higher than international prices.

Concerning relative bias, progress must be made knowing before hand some of the possible implications of tariff reform.

In general terms, relative bias should be eliminated designing a system that provides near symmetrical incentives to sales to the domestic (regional) market and to exports outside the region. But here the fiscal cost to the treasury would be higher the higher protection to import competing products is, so export promotion schemes would have to be funded by increasing taxes (or deficits); i.e. while the promotion basis for ISI (except some tax expenditures associated with fiscal incentives legislations) has taken place outside the treasury, export promotion requires an increase in expenditure or to forgo fiscal revenues which may induce retaliation. This is leading us to the need to produce in the medium term a tariff reform.

The aim of tariff reform proposals is to change relative prices between importables and exportables in the economy. This can be done by simple rules, but given the size of the existing industries what is needed are stable dismantling procedures and/or preanounced schedules. Here the main problem concerns the cost of adjustment of existing activities, which may not survive if profit rates are going down. So, suggesting the need for distintion between protection for terminal reasons or to support certain activities to overcome the cost of transformation.

Going back to export promotion I wanted to stress again the need to look at it as one among interdependent instruments of trade intervention, some of them set on a multilateral basis

others national initiatives. How much weight has today any of them is a question which has to be answered on a country by country basis, especially after the introduction of new foreign exchange regulations in some of them.

All of these requires the treatment of export promotion in the C.A.C.M. as a process in which, given the size of existing industries, policy measures have to be phased as to provide at an early stage strong export promotion to allow for the rationalization of import protection (tariff and nontariff measures) in the medium term. Also some general rules for exchange rate adjustments have to be agreed on, otherwise QR's on regional trade might inhibit economies of scale related to the enlargement of domestic markets which should have been one of the driving forces for the negotiation of a common external tariff.

NOTES

(1)See BERLINSKI,J.(1974),"Analisis comparativo de algunas caracteristicas del sistema arancelario aplicado a las importaciones extraregionales en centroamerica". Imports from outside the region were used as weights.

(2)See SIECA(1983),"Consideraciones sobre el convenio centroamericando de incentivos fiscales al desarrollo industrial y sus protocolos".

(3)A simple formula may clarify the bias introduced by using the unit value of imports from the rest of the world to calculate the ad valorem equivalent of specific rates. Assuming an exchange rate one to one to the US dollar, the tariff revenue of a potential import would be:

(a) TAR = ESPxKg +ADVxCIF , where:

TAR: tariff revenue(US dollars); ESP: specific rates (per weight); Kg.: measure of weight; ADV: ad valorem rate; CIF: CIF value of imports.

Now we divide both terms of (a) by CIF in order to express TAR as an ad valorem rate:

$$\text{(b)} \quad \frac{TAR}{CIF} = \frac{ESP}{CIF/Kg} + ADV$$

So if the unit price in not a good proxy of the foreign price of a potential import competing with domestic production, a bias in

the estimation will be introduced. Its size will depend on the share of the ad valorem equivalent of the specific rate in total ad valorem tariff. An example may provide an illustration of the bias expected, in such protection calculations: if french shoes are imported their unit price may be higher than the CIF price of competing imports. In such case protection enjoyed by domestic producers will be underestimated.

(4)Neutral consumption taxes requires the application of the destination principle (no taxation of exports), also being imposed on CIF plus tariffs with equal rates to both sources of supply.See LEITH,J.C.,"Tariffs,indirect domestic taxes and protection" and MCKINNON,R.I.,"Protection and the value added tax" in GRUBEL,H.G. and JOHNSON,H.G.(1971) Editors "Effective tariff protection",G.A.T.T. Graduate Institute of International Studies,Geneva.

(5)See BERLINSKI,J.(1977),"Las tasas de proteccion efectiva potencial de la industria manufacturera de Guatemala(1972)", table 3.5.1.

(6)See BERLINSKI, J.(July 1985),"Honduras, notas sobre el proyecto de revision del arancel".memorandum.

(7)See NOGUES,J.J.(1983),"Trade and factor market distortions in Costa Rica:overview and proposals for policy reform",World Bank,mimeo.

(8)See BERLINSKI,J.(1977),"Los impuestos al comercio exterior de Costa Rica",Ministerio de Hacienda de Costa Rica/CEPAL.mimeo.

(9)Figures taken from MICHAELY,M.(1984),"Trade policies in Costa Rica: evaluation and proposals",World Bank, mimeo.

(10)In section IV devoted to anti-export bias this is taken up because the full free market rate was also assigned to imports where domestic supply existed;i.e. regarding the effect on protection, the same treatement was provided to regional exports than to import competing activities.

(11)CORBO,V. and DE MELO,J.(1985)"Scrambling for survival,how firms adjusted to the recent reforms in Argentina, Chile and Uruguay",World Bank staff working papers number 764.

(12)About those 1981 tariff figures, international inflation eroded the ad valorem equivalent of specific tariffs but the importance of them in total ad valorem rates differs, so rank correlation (Spearman) between 1981 and 1977 nominal rates is stronger than the association of the former to earlier tariff estimates.

(13)The adjustment for overvaluation is needed in order to compare protective rates through time. That involves the comparison of the exchange rates existing in the years where

estimates were made, to the exchange rate which would have prevailed if the instruments for trade intervention were removed. This depends on import protection , export taxes(protection) and the relevant elasticities of supply and demand.See BALASSA,B. AND ASSOCIATES (1982),"Development strategies in semi-industrial economies",The Johns Hopkins University Press.

(14)see CONSEJO ARANCELARIO Y ADUANERO CENTROAMERICANO, (SIECA-I/D.T.4,Septiembre 1985),"Resultados de la negociacion tarifaria y sugerencias sobre otros temas atinentes a la aplicacion del regimen arancelario y aduanero centroamericano".

(15)This is a measure of impact given the volatility of nominal exchange rates computed.

(16)This corresponds to the potential effect of a generalized C.A.T. on FOB value. As mentioned in the text no certificate was issued in Guatemala.

APPENDIX TABLE A1
C.A.C.M.,NEGOTIATED (1985) TARIFF RATES FOR DOMESTIC AND REGIONAL SALES(20 selected sectors,67 products of Guatemala)

TYPE OF GOOD AND I.S.I.C.	AVER-AGE	PARTS I	PARTS II
1.PROCESSED FOODS	33		
3111.Slaughtering and preparing meat	30		
1101.Carne de ganado vacuno		30	
1105.Despojos comestibles de ganado		30	
1108.Sebo		5	
1109.Carne en canal		40	
1201.Pollos beneficiados		30	
3112.Manuf.of dairy products	39		
1100.Fab.de mantequillas y quesos		50	
1301.Leche pasteurizada y homogeneizada		30	
3113.Canning of fruts and vegetables	41		
1101.Salsa y pure de tomate y similares		50	
1106.Sopas de legumbres hidratadas(des)		53	
1301.Jugos y nectares de frutas		35	
3115.Manuf.of vegetable and animal oils	19		
1101.Aceites comestibles,origen vegetal		13(1)	
1102.Shortening		40	
3116.Grain mill products	30		
1100.Productos de molineria		30	
1101.Harina de trigo		30	
1199.Otros productos de molienda n.e.p.		30	
1203.Alimentos prep. a base de cereales		34	
3118.Sugar factories and refineries	39		
1101.Azucar blanca refinada		45	
1103.Otros tipos de azucar		25(2)	
2.NONDURABLE CONSUMER GOODS	87		
3213.Knitting mills	80		
1100.Fab. de tejidos de punto			80
3220.Manuf.of wearing apparel	100		
1100.Fab.prendas de vestir para hombres			100
1108.Camisas para hombres			100
1207.Calzoncillos de punto para hombres			100
1299.Otros articulos de punto n.e.p.			100
1402.Medias de punto para dama			100
3240.Manuf.of footwear	77		
1100.Fab.partes de cuero para calzado		70	
1201.Calzado de cuero para hombres		80	
1208.Calzado de lona o tela		80	
3.INTERMEDIATE PRODUCTS	31		
3211.Spinning,weaving,finishing textiles	47		
1100.Fab.de filamentos y fibras textiles		23	
1201.Hilados de algodon puro		20	35
1205.Hilados de fibras artificiales y sint.		5	27
1301.Telas de algodon puro o mezcla (<15%)		70	70

1302.Telas de algodon mezcladas con fibras artificiales y sinteticas			70
1303.Telas de fibras artificiales y sinteticas puras o mezcladas entre si		23	70
1305.Telas de lona con otras fibras(>30%)		70	
3311.Sawmills,planing and other wood mills	10		
1100.Aserraderos,talleres de acepilladura		10	
1101.Madera blanda aserrada		10	
3412.Manuf.of boxes of paper	35		
1101.Bolsas de papel		35	
1104.Cajas de carton corrugado		35	
1105.Cajas de carton liso		35	
3512.Manuf.of fertilizers,pesticides	12		
1110.Otros abonos y fertilizantes n.e.p.		10	
1115.Insecticidas agricolas		13	
3551.Tyre and tube industries	30		
1103.Neumaticos para vehiculos de rodadura		25	35
3620.Manuf.of glass	24		
1204.Envases de vidrio para alimentos		24	
3710.Iron and steel industries	18		
1114.Barras y varillas de acero		18	25
1118.Laminas de acero galvanizadas		18	
1126.Tubos de acero con costura galvaniz.		22	
1199.Otros productos de la industria n.e.p.		9	
3811.Manuf.of cutlery and hardware	22		
1106.Machetes		30	
1308.Clavos y similares		18	
1399.Otros productos de ferreteria n.e.p.		15	
4.CONSTRUCTION MATERIALS	30		
3692.Manuf.of cement and plaster	30		
1101.Cemento portland tipo 1		30	
5.MACHINERY	24		
3829.Manuf.of mach.and equipment n.e.c.	36		
1202.Refrigeradores y equipos de refrigeracion industriales y comerciales		50	
1203.Enfriadores de agua		50	
1902.Aparatos de torrefaccion		5	
1904.Hornos industriales y comerciales		13	
1909.Elevadores,montacargas y sus partes		20	
1912.Bombas para liquidos		5	
1999.Otros productos de la industria n.e.p.		11	5
3831.Manuf.of electrical industrial mach.	5		
1105.Bujias		5	
1199.Otras maquinas y accesorios n.e.p.		5	
AVERAGE	36		

SOURCE:own elaboration based on a sample of sectors and products selected in BERLINSKI,J.(1983) op.cit. table 3.3. 1985 negotiated rates come from Consejo Arancelario y Aduanero Centroamericano (SIECA 1985),"Anexo A del Convenio sobre el regimen arancelario y aduanero centroamericano: arancel centroamericano de importacion".Part I corresponds to negotiated rates.Part II are rates in process of negotiation, they correspond to rates proposed by Guatemala,El Salvador and Costa Rica. See (SIECA-I/D.T.4,Septiembre 1985),"Resultados de la negociacion tarifaria y sugerencias sobre otros temas atinentes a la aplicacion del regimen arancelario y aduanero centroamericano". For some NAUCA II items the rate negotiated would be increased if production in Central America exists as judged by the Consejo Arancelario y Aduanero Centroamericano:(1) for NAUCA II 15.07 80 01 "Aceites fluidos en bruto (crudos),para uso alimenticio, incluidos de soja desgomado y de algodon neutro",the rate will rise from 5% to 15%;(2) for NAUCA II 17.02 01 01"Jarabe de maiz(glucosa liquida)", the rate will rise from 5% to 40%. Regarding weights, if more than one NAUCA II item was found within each of the 67 I.S.I.C.(8 digits) products, an unweighted average was calculated; then weights of production were used which corresponded to 1972.No adjustment for overvaluation of the exchange rate was made.

CHAPTER 3

EXPORTER'S PERCEPTION OF OBSTACLES AND INCENTIVES IN CENTRAL AMERICA

By Juan J. Fernandez Ansola*

January, 1986

* CENTER FOR LATIN AMERICAN DEVELOPMENT STUDIES, Boston University, Boston, Massachusetts. Comments by D.M. Schydlowsky and J. Berlinski were very helpful.

TABLE OF CONTENTS

	Page
I. Introduction	1
II. Interviews With The Private Sector	3
IIa. Objectives of the Interviews	3
IIb. Selection and Representativeness of Interviewees	4
IIc. Major Themes in the Interviews	9
IId. Obstacles, Incentives and Other Issues	15
III. Opinions of Selected Officials of the Government and Export Promotion Agencies	23
IV. Evolution of Non-Traditional Exports to Third Countries	27
V. Export Incentives and Policy Regimes	34
VI. Summary and Recommendations	43
Appendix: The Interviews - Organization and Results	50

I. INTRODUCTION

In order to understand the problem of exporting non-traditional products to third markets[1/] from Central America as seen by the economic agents involved, a series of interviews were carried out in Costa Rica, El Salvador, Guatemala, and Honduras with private and public sector representatives. The purpose of this report is to describe the results of these interviews, and to relate them to the existing structure of incentives and policy regimes in each of the countries. Furthermore, we will be interested in looking at the effects of these incentives on the evolution of non-traditional exports to countries outside the region.

The structure of incentives to non-traditional exporters encompasses several policy instruments such as exchange rates, fiscal incentives, institutional support, etc. These will be described in detail for each country together with the results of the interviews.

The report will be organized as follows: section II will discuss the objective of the interviews and also summarize the results; section III focuses on the public sector perception of the

1/ By third markets we mean those outside the region.

problems; section IV covers the evolution of non-traditional exports to third countries; section V describes the incentive schemes and policy regimes; and finally, the report concludes with a summary and recommendations in section VI. An appendix includes a detailed description of the interviews by country.

II. INTERVIEWS WITH THE PRIVATE SECTOR

IIa. Objectives of the Interviews

The objective of the interviews was to have a sample of opinions that can be referred to when examining issues related to the problems facing exporters of non-traditional goods to third countries. In particular, it was desired to elicit the exporters' perception of the effectiveness of steps taken by the government to generate this net flow of exports outside the region. This will help put into context the different obstacles to exporting non-traditional products to third countries.

Interviews were held with some exporters to third countries, with exporters to the CACM, and with entrepreneurs who had exported but currently were not doing so.

IIb. Selection and Representativeness of Interviewees

The selection of interviewees was carried out with the help of Centro de Investigaciones para el Desarrollo Economico (CINDE) in Costa Rica, Fundacion para la Investigacion del Desarrollo Economico (FIDE) in Honduras, the Gremial de Exportadores in Guatemala, and the AID office in El Salvador.

The criteria followed for this selection were:

a) The individual firm or interviewee had had an 'interesting experience' with exports, such as: many problems in penetrating a market, technological and production problems, tried many times unsuccessfully, etc.

b) If possible, interviewees should belong to different industrial sectors (branches).

c) Given that time was scarce, availability and willingness was crucial.

The experience with exporters of the promotion agencies mentioned above was the fundamental element in this process because all the contacts were made through them. A rather varied set of interviews resulted.

Regarding the specific individuals interviewed, in El Salvador, for instance, we interviewed the general manager of the most important holding company which is the principal producer and exporter of

shoes in the country. Similarly, we interviewed the most important exporter of artisanry which has exports of over a million dollars and is in the process of expanding.

In Honduras, we interviewed the most important textile producer in the country, with a labor force of 1,200 and whose exports are currently small because of the overvaluation of the lempira, among other things.

In Guatemala, we interviewed a producer of hardware materials, such as tools and brushes, who is exporting more than two million dollars worth per year to third countries, up from nearly zero four years ago. This producer also exports around four million dollars worth to the CACM. In addition, we interviewed smaller exporters of food products who stopped exporting to third markets, including an exporter of marmelades and candy.

In Costa Rica, we found an interesting case - an exporter of outdoor products who had integrated forward and backward to solve marketing and production problems, and who exports around five million dollars worth per year to third markets.

These are some examples which do not exhaust the list of interviews. We refer the reader to the appendix for a detailed description of the interviews.

We should warn readers at the outset that even though we believe the opinions of those interviewed are fairly representative, it is almost certain that counter-examples may be found. Therefore, one should not jump to policy conclusions without careful thought.

We also held interviews with government officials, especially in the Foreign Trade Ministries and the Finance Ministries. Furthermore, meetings were held with officials at the "gremiales de exportadores" and in organizations for promoting exports like Fundacion Salvadorena para el Desarrollo Economico (FUSADES) in El Salvador, FIDE in Honduras, and CINDE, Centro para la Promocion de Exportaciones (CENPRO) and the Economic Planning Ministry in Costa Rica. In Guatemala, the bulk of the promotion effort is channeled through the 'gremial de exportadores'.

As can be seen from Tables 1-4, the sectors of production covered in the interviews correspond to 32-43% of non-traditional ROW (rest of the world) exports in Guatemala, 62-64% of non-traditional ROW exports in Costa Rica, 28-31% of non-traditional exports in El Salvador, and 24-27% of non-traditional exports in Honduras.

Table 1: Guatemala - Exports in thousands of Quetzales
CA = Central America, ROW = Rest of the World

	1983 CA	1983 ROW	1984 CA	1984 ROW
1) Agribusiness	24013	34272	17185	22249
2) Food Process	31030	6238	35593	8945
3) Textiles, Wood, etc.	50087	6364	35593	11606
4) Artisanry		801		844
5) Non-traditional ROW total		110800		134700
Exports of sectors to ROW as percent of total non-traditional exports to ROW (1+2+3+4/5)	.43 (43%)		.32 (32%)	
CA Exports	320924		291432	
Traditional ROW		668384		667370

Source: Central Bank of Guatemala, 1985.

Table 2: Costa Rica: Agribusiness, Textiles and Food Processing Exports to ROW (thousands of dollars)

	1983	1984
1) Agribusiness (includes different kinds of fishes, vegetables, and fruits)	20659	34153
2) Textiled, shoes, furniture	73272	88638
3) Food processing	3924	4716
4) Artisanry		
5) Non-traditional ROW total	151500	204700
Exports of sectors to ROW as percent of total non-traditional exports to ROW (1+2+3+4/5)	.64 (64%)	.62 (62%)

Source: Central Bank of Costa Rica, 1985.

Table 3: El Salvador: Exports in thousands of colones

	1983	1984
1) Agribusiness (includes fresh shrimp)	78876	73108
2) Textiles, shoes, etc.	60157	54081
3) Food processing	48214	46811
4) Artisanry *		
5) Non-traditional total	610915	618176
Exports of sectors as percent of total non-traditional exports (1+2+3+4/5) **	.31 (31%)	.28 (28%)

* Artisanry exists in El Salvador and is exported, but figures were not disaggregated enough to be included in this table.
** A break down between CA and ROW was not available for the sectors.

Source: Banco Central de Reserva de El Salvador, June 1985.

Table 4: Honduras: Exports in thousands of Lempiras

	1983	1984
1) Agribusiness (basically fresh shrimp)	46573	58346
2) Textiles, furniture, etc.	14558	13099
3) Food processing	8324	9018
4) Artisanry		
5) Non-traditional total	289019	293616
Exports of sectors as percent of total non-traditional exports (1+2+3+4/5) *	.24 (24%)	.27 (27%)

* A break down between CA and ROW was not available for the sectors.

Source: Boletin Estadistico, Banco Central de Honduras, February 1985.

IIc. Major Themes in the Interviews

In the appendix to this report a complete account of the interviews will be found, but we still believe it useful to summarize the major aspects:

A) Type of activity.

1) Exporting activities can be classified in four main branches:

a) What is usually called agribusiness and involves the production of some non-traditional products in the agricultural sector (flowers, broccoli, etc.). These activities relate to an abundant resource in most Central American countries (land) and also to special climatic features that are not found elsewhere. The proportion of imported inputs in this activity is low and at the same time they are treated favorably as far as the exchange rate is concerned. The market for these products is fundamentally the U.S. Changes in the common external tariff do not have important effects on them. They are affected by other things like the lack of an adequate transportation infrastructure.

b) Food processing activities. Raw materials for this industry are produced by the agricultural sector and in that sense they enjoy the same advantages that were mentioned for agribusiness. However, there are some differences. They do use some manufactured inputs like glass and some ingredients that either are not produced locally or have high protection. When inputs are not

produced locally, the common external tariff is irrelevant to these activities because duty exemptions or refunds are usually given. There are circumstances, however, when some of the inputs are produced either domestically or in the region and then enjoy high protection and sometimes market power; the common external tariff then becomes an issue for these exporting activities. (What is known as absolute anti-export bias occurs.) In addition, it may also be that protection for sales in the domestic market is higher. Relative anti-export is then important and should be considered when assessing commercial policies.2/ In addition to absolute anti-export bias, there are several other issues relevant to the possibility of domestic producers being competitive; these will be described later.

c) Textile manufacturing, shoe production, and furniture (wood furniture or other types like outdoor products) were generally considered full-fledged industrial activity. In most of our interviews, firms were capital intensive when compared to food processing, for instance. However, this may not be the case on an industry-wide basis.

Most of these activities evolved in association with large market opportunities provided by the Central American common market (CACM); and presumably, the reason they could exist profitably had a lot to do with the tariff structure of the CACM. This is, of course, a very general statement and is certainly not

2/ See chapter 2, section IV for definitions, discussion and an illustrative example of both kinds of biases.

true for all of the activities. But it is a distinctive characteristic when one compares these activities with agribusiness, for instance, which was geared right from the start to third markets.

In general, these activities do have an important proportion of their inputs brought from abroad, although this is not entirely true for the wood furniture sector.

The types of problems they face are characteristic of an infant industry; they are not yet completely prepared to compete in a demanding market like that of the U.S. or Europe. Furthermore, they are not used to carring out exhaustive market analyses aimed at guiding their production. These factors jeopardize the efforts of some of them in selling products abroad.

Technology is another relevant aspect in this group. Processes are more sophisticated than those for the two groups mentioned before. Obsolescence may have ocurred because of lack of competition in the domestic market and substantial investments may be required for exporting to third countries. However, we were surprised to learn that most of the entrepreneurs thought that the investment requirement to 'update' the plant was not important.

d) Artisanry production: here the activity is exporting a very typical and unique product from the region. In general, these were activities carried out in a very small scale and in some cases evolved into real 'industries' helped with special lines of credits from AID and other sources. Their

organization as firms is still quite primitive and relies on supply from subcontractors who are generally family units.

The nature of the problems of these sectors is, of course, very different from those mentioned for the other three groups. They do share some similar characteristics such as those related to exchange-rate problems. Regarding the promotion of these activities into a bigger share of non-traditional exports, there are, we think, two issues: 1) How to massively market these products - a task which has not yet been tackled in a general way. (Some isolated tests are being made but they are not widespread.) 2) How to transform what are essentially family unit firms into a more complicated organization with serial production.

B) Stage of the firm in the export process.

When thinking about export promotion, it is also useful to do so in terms of four groups:

1) those who are already exporting outside the CACM;
2) those exporting to the CACM but not to third countries;
3) those who are willing to export but have not been able to do so even with considerable effort;
4) the rest, including potential exporters, without explicit interest in exporting at present.

It seems to us that considerable effort may be wasted if no discrimination is made when attempting the implementation of an export promotion plan. For example, taking members of group 1 to a very general session on export markets of the type, 'How to take advantage of...', may not be very useful. We heard repeatedly throughout the interviews how exporters felt about these activities and also how much they needed other types of assistance, for instance:

i) the study of very particular markets for particular products (not general market analyses);

ii) the possibility of technological cooperation from firms that were in the same activity in the U.S. or elsewhere;

iii) connected with the last point, the contribution of national or international expertise to modify certain very specific processes to make them acceptable in world markets.

For group 3, these general efforts may be useful at the beginning. But eventually, they will also need more specific types of cooperation, like bringing in a technician from abroad to collaborate with them for a few months, or possibly sending specialized personnel for training in plants abroad for a period of time.

Members from group two are quite crucial to the strategy. For instance, will they be able to export the same products they export

to the CACM to third countries? Casual observation tells us that tastes may be very different in third markets and in the CACM indicating further need for assistance in carrying out analyses of these third markets.

The required adaptation may be costly in some cases and marginal in others. Governments should probably have some measure of this when deciding on the incentive scheme. Answers to this question are not clear-cut in our interviews, and it is likely that if the sample of firms were extended, the dispersion of responses would be higher meriting further research.

Generally, activities that grew under the import substituting industrialization (ISI) process may require a big effort in order to be transformed into exporters to outside markets.

As results are increasingly successful with members of the other groups, a demonstration effect will attract members of group four into these activities.

IId. Obstacles, Incentives and Other Issues

The appendix provides a detailed description of answers in the different countries. The purpose of this section is to give a general overview. This is accomplished by means of tables five, six and seven.

Issues are characterized as falling into three categories: first, those incentives or obstacles related to prices or to implicit subsidization of exports, (Table 5); second, problems internal to the firm, (Table 6); and third, problems exogenous to the firm, (Table 7). The extent to which problems internal to the firm are internal to the sector is not clear and further research is indicated at a micro level.

When reading the tables it is natural to do so horizontally and to compare. This may be incorrect because we are comparing across opinions of different individuals. The vertical reading is, of course, the one that ranks the problems for a particular activity and is thus more appropriate. Having said this we should also point out that once the whole picture is clear, we can address some of the 'horizontal' issues.

Replies are classified indicating an item is:

1) extremely important;
2) important;

3) irrelevant.

There are added comments where appropriate. Unfortunately, there is some abritrariness in the difference between extremely important and important. Ex-post it was necessary to create this classification to highlight the difference between points just made and made emphatically by the interviewees.

The thrust of the arguments made by the private sector as well as our interpretation can be summarized as follows:

1) A pattern of answers was found in the same branches across countries which explains why, when discussing the results, we do so for each branch without reference to the country. However, for reference, separate tables for each country will be found. [See the appendix.]

2) For some activities, like 'textile, furniture and shoe manufacturing', every aspect seems to be extremely important. This may reflect a branch which is affected by the closure of the CACM to its exports and a depressed domestic market. Presumably, the point on the business cycle is relevant for the type of answer obtained. (See Tables 5, 6, and 7.)

3) Typically, in other branches where the CACM or domestic market conditions are less relevant (agribusiness), the answers are remarkably different. This may also tell us something about what is likely to happen in the event of a resurgence of the domestic market or CACM, (i.e., exporting activities may be affected

differentially). The design of a long-run incentive scheme should probably take this into account.

4) Agribusiness seems to basically face two problems, one related to infrastructure (transportation, etc.), and the other to price incentives (especially financing given their inherent competitiveness as a resource-based industry). Technical cooperation in the production of some products was also seen as important. For instance, in El Salvador we found a firm that was establishing a joint venture with a U.S. firm to receive assistance in technology to produce candles. (See Tables 5 and 6, and in the appendix, Table 13.)

5) In food processing, the situation was perceived as more complex. Presumably, marketing and provisions of some inputs at world prices together with sales prices (exchange rates, etc.) were the most relevant issues. When referring to marketing, we are including development of products appropriate to new tastes, etc.. In Table 13 we describe the break-through of an entrepreneur in El Salvador who received technical assistance from an executive of Beatrice Foods. (See appendix.)

6) Artisanry has peculiar problems that relate to diversification of products and financing. These are small firms, and their capital structure is not prepared to maintain an export activity that requires credit to buyers. In the appendix, we describe the case of a company in El Salvador where this problem is becoming acute. (See also Tables 5 and 7.)

Table 5: Price Related Problems

OBSTACLE OR INCENTIVE	ACTIVITY: Agribusiness	Textile, Furniture, and Shoe Manufacture	Food Processing Activities	Artisanry and Related
Exchange-Rate Incentives	Important: even though the inherent competitiveness of primary products makes them less vulnerable.	Extremely important: most of the time, favorable treatment is the difference between competitive and non-competitive.	Extremely important.	Irrelevant: and by this we mean relative to the other three activities.
Tariffs on Inputs	Irrelevant.	Important: in some special cases, like outdoor products, firms had to reach an agreement with the domestic supplier to obtain competitive prices on some inputs.	Important: in some of the firms it was even crucial because the price of glass domestically supplied was completely out of line with world price and it is an important input.	Irrelevant.
Financing	Important: even though it is not a fundamental obstacle. Sometimes scheme involves the financing of farmers by the exporters, but s/he does have access to credit.	Extremely important: high 'real collaterals' to firms that have high investment in working capital; lack of insurance policies that could alleviate previous problem.	Extremely important: impossiblity of post-export financing implies loss of competitiveness against more aggressive sellers with credit lines at their disposal.	Important: problems of liquidity from sending product until receipt of payment 60-90 days; too long given structure of firms in need of financing; currently some special lines are being made available.
Fiscal Incentives	Important.	Extremely important: in this sector we got comments of the crucial importance to them of tax waivers, etc., especially in Costa Rica where profit taxes are quite high.	Important.	Important.

7) The textile, furniture and shoe manufacturers appear to regard all incentives and obstacles as relevant. An exception is made for an outdoor product firm that is integrated backward and forward - backward into the production of its inputs, and forward into the marketing of the product in the U.S.. A good example of a successful joint venture was found in Costa Rica as described in Table 14. (See appendix.)

8) Transportation is an aspect that appeared consistently in the interviews. This is a subject which may require more research and certainly some action.

9) The specificity of incentives, as opposed to across the board and general types of measures, was emphasized throughout most interviews.

10) Technological obsolescence appears to be an issue in the textile and shoe industries. This may be relevant when attempting a transition from the CACM to the world market. When designing incentives, it would be interesting to have a measure of this obsolescence across industries. We found a firm in Honduras with liquidity problems that precludes access to new money for financing new equipment. (See Tables 5 and 13, and appendix.)

11) The common external tariff seems to be diluted, in the perception of entrepreneurs, with all other policy instruments. In the short run, the impact does not seem to be important due to the fact that most inputs used in export products are duty-exempted (absolute anti-export bias). However, in the long run, the

relative anti-export bias generated by the tariff structure is likely to have allocational effects.

Table 6: Problems Internal to the Firm

OBSTACLE OR INCENTIVE	ACTIVITY: Agribusiness	Textile, Furniture, and Shoe Manufacturing	Food Processing Activities	Artisanry and Related
Technological Obsolescence	Irrelevant.	Important: this was the only activity where we found comments about technological obsolescence and the need for extra investments to become competitive.	Irrelevant.	Irrelevant.
Problems of Scale in Production or Market	Irrelevant.	Important: all serial production relies heavily on large scale production for reducing costs, and even the technology is designed for that.	Irrelevant on the production side. May be important on demand side; looking for special small markets is one way to avoid this.	Irrelevant.
Marketing	Important: because of its special nature there is a lot of family business among those who buy the products in U.S.; personal dealings are important.	Extremely important: changing from protected market where most things would sell to one that is very demanding and particular in its tastes.	Extremely important: you cannot compete with big world food producing firms, but then special segments and places of the market have to be found.	Important: the change from small family business to large scale involves, among other things, new product development and analysis of demands in world market.

Table 7: Problems and Incentives Exogenous to Firm

OBSTACLES AND INCENTIVES	ACTIVITY: Agribusiness	Textile, Furniture, and Shoe Manufacturing	Food Processing Activities	Artisanry and Related
Transportation	Important: especially the infrastructure is not adequate for shipping refrigerated products, etc.; costs are not a crucial obstacle.	Extremely important: two reasons: 1) very high costs, 2) tight delivery schedule that cannot be complied with.	Extremely important: necessity of bringing these costs down or impossible to compete.	Irrelevant.
Domestic Infrastructure	Important: especially transportation inside the countries, and specialized transportation (like refrigerated) to the outside.	Important: port facilities and internal transportation are blamed as inadequate.	Important.	Irrelevant.
Assistance in Developing New Products, Improving Old	Irrelevant.	Important: this has to do with learning from the market, tastes, etc., which vary compared to domestic ones.	Extremely important: it is almost impossible to compete with traditional food producers in traditional products; this aspect of the business is crucial.	Extremely important: again, this has to do with expanding a family business to a large scale firm with product diversification
Stability in Profits and Political Stability	Important: even though instability comes mostly from world markets (commodity prices).	Extremely important: most firms need to expand their foreign markets and are operating at low levels of capacity; stability is crucial for being able to expand with confidence.	Important: these are more flexible than textiles given their labor intensive nature; expansion or contraction can be done without high costs.	Irrelevant: these are highly flexible firms that can rapidly adjust to the ups and downs of market and prices.
Supply of Domestic Inputs (Inferior Quality, etc.)	Irrelevant.	Extremely important: this is why there is a strong incentive to integrate vertically and this is observed very often; or special arrangements are found between suppliers of inputs and producers.	Extremely important: raw materials have to be of certain quality, most of the problems, though, come from inputs used for packaging in some cases, this is found to be a very real handicap.	Irrelevant.
Cooperation from the Government and Other Institutions	Important.	Important: especially the need for technical assistance and market analyses for the design of new products plus special lines of credit.	Extremely important: most of the interviewees found that technical assistance in developing products, etc., was crucial; special programs helped with this, (AID with governments)	Extremely important: in providing assistance for the transition into large scale production.

III. OPINIONS OF SELECTED OFFICIALS OF THE GOVERNMENT AND EXPORT PROMOTION AGENCIES

We already mentioned the fact that conversations were held with government officials and other relevant export promotion agencies. In some cases, because many departments or agencies were involved, we had to make some choices. In Costa Rica, we met with members of CENPRO and the Economic Planning Ministry. Conversations were also held with the Director of CINDE, a private export promotion agency. In El Salvador, the same was done at FUSADES and the Foreign Trade Ministry; and in Honduras, at FIDE and the Finance Ministry. In Guatemala, the Gremial de Exportadores was very helpful in giving us their opinions and providing a channel for obtaining interviews with exporters.3/

The following points arise from all these conversations:

i) The incentive policies implemented were not part of an organized industrial policy. There is no sense of priorities as to which sectors or products should be encouraged the most.

ii) Connected with the point above, it was not explicit whether or not authorities felt that new products or existing ones should be prioritized. The feeling was that there was unused capacity in

3/ Guatexpo, the former official export promotion agency has been absorbed by the Direction of Foreign Trade.

the economy and also opportunities for investment. Interestingly enough, the new investment may have temporary negative impacts on the balance of payments initially because there is no domestic capital goods producing sector. There was a vague notion of foreign direct investment as a partial solution for this problem.

iii) Taking into consideration the original expectations in the public sectors, the results have been poor. Most officials feel that incentives are enough but that they misjudged the time required for the process to take place. Others think that even in the long run results will not be spectacular and they mention the fact that the major trade flows will take place between developed countries.

iv) It also appeared that policies were not coordinated enough and in some cases some agencies behaved in an opportunistic fashion. For instance, AID devoted money to a project that involved abolishing surcharges at Costa Rica's ports. These surcharges were effectively abolished, but subsequently, the base rates were increased.

With regard to the lack of coordination of policies, Costa Rica has the following agencies following independent promotion efforts:

Minex,

Cenpro,

Ministry of Economics - Foreign Trade Divisio
Central Bank - Foreign Trade Department
Private entities (with official support)
    Liga Agricola - sugar cane
    Oficina del Cafe
Economic Planning Ministry
CINDE
Different Chambers.

v) Connected with the previous point, some projects have not been implemented because several agencies attempted to carry out the same project. AID devoted one million dollars to establish an insurance fund for exports in Costa Rica. The national insurance agency and the Central Bank could not decide how to implement it and the money sits idle at the Central Bank.

vi) Government officials believed that credit lines for investment in new plants were more necessary than those for working capital. This belief contradicts perceptions in the private sector and probably stems from indecisiveness regarding the fundamental priorities, i.e. taking advantage of existing unused capacity versus developing new products with new investment, etc..

vii) The fact that credit lines were not more favorable for export activities was perceived as an important handicap, especially the

requirement that real assets be pledged as security which seemed to run counter to the idea of a development bank.

viii) Government officials believe it is important to establish joint ventures with foreign firms to take care of marketing and production. However, the firms are in a better position to establish such ventures than the government.4/

ix) Officials were in general very conscious of most problems cited by private firms (bureaucratic structure not flexible enough, internal transport costs, port costs, etc.), but did not see a very quick, easy way out of this.

In some success stories in Southeast Asia, a high ranking official would get together frequently with the most important representatives of the private sector to find out what problems could be solved in a quick fashion. This type of contact is non-existent in these countries and would be recommended.

The bureaucratic nature of all these official organizations make them very suspicious of the private sector. This is enhanced by the overlapping of activities and the general inefficiency of management.

4/ Profits would be the incentive for the foreign firms. Maybe some other incentives can be instituted by the government and/or AID.

Table 8: Value of Total Central American Exports, 1975-1985, excluding Nicaragua
Thousands of Central American Pesos

YEAR	TOTAL nom.	TOTAL '76 doll.	GUATEMALA nom.	GUATEMALA '76 doll.	EL SALVADOR nom.	EL SALVADOR '76 doll.	HONDURAS nom.	HONDURAS '76 doll.	COSTA RICA nom.	COSTA RICA '76 doll.
1975	1923566	2003713	823621	849805	513377	534767	293263	30586.5	493305	513859
1976	2465832	2465832	760333	760333	720727	720727	391831	391831	592941	592941
1977	3471921	3275396	1160216	1094545	972762	917700	510777	481865	826164	781286
1978	3209349	2815217	1111602	975089.5	630963	553476	601877	527962	864907	758690
1979	3904219	3026523	1217076	943469.8	1031723	799782	721117	559005	934306	724268
1980	4008412	2726810	1472796	1001902	720044	489825	813830	553625	1001742	681457
1981	3320976	2075608	1109241	693275	490833	306770	712799	445499	1008103	630064
1982	3017553	1639969	1083800	660853	407552	248507	655785	399868	870416	530741
1983	3128926	1884894	1118354	673707	487409	293619	680763	398050	862400	519518
1984	3515800	207[illegible]535	1122300	667154	705100	415483	735800	433573	952600	561324
1985*	3588000	2054130	1125000	644062	723000	413917	820000	469450	920000	526700

Source: Sieca - Marzo, 1985.
Dollars of 1976 value was obtained applying the wholesale price index of the U.S. from the International Financial Statistics - 1985.
* Projection by CEFSA in September 1985.

IV. EVOLUTION OF NON-TRADITIONAL EXPORTS TO THIRD COUNTRIES

For reference, we will give a brief description of the evolution of non-traditional exports. In particular, we want to look at what happened to non-traditional exports, to the rest of the world, and to the level of intraregional trade. This is shown in Tables 8 through 11.

Several points arise from looking at Table 8.

a) It is a fact that Central American exports took a sharp fall between 1979 and 1983. This is true for their nominal value, and especially when we look at their value in real terms. El Salvador is the country where this is most evident and Costa Rica follows. In the case of El Salvador, political factors may have been the crucial obstacle.

Other factors that account for this fall in exports are:

i) a fall in prices of commodities and volume of traditional exports, especially in El Salvador, Guatemala, and Honduras;

ii) a decrease of intra-regional trade.

The fall in prices, can be seen in Table 9. Coffee, sugar, and cocoa are the commodities most affected by the fall in prices. The changes in volume of traditional exports is shown in Table 9a.

The fall is unequivocal for the most important traditional exports of all countries except Costa Rica.

To illustrate the importance of the value changes, note that for Honduras, bananas and coffee account for 56% of total exports; for El Salvador, coffee and cotton account for 66% of total exports; for Costa Rica, bananas and coffee account for 45% of total exports; and in Guatemala, coffee and cotton account for 40% of total exports.

The decrease in intra-regional trade can be seen in Table 10.

b) It is remarkable that even though exports to Central America keep falling through 1984 and 1985 (Table 10); this is not the case for total exports (Table 8). This implies of course that the participation of trade with the rest of the world is increasing. The question that follows is, what is the role of non-traditional exports in all this? For the answer, let us look at Table 11.

In Costa Rica, non-traditional exports to third markets increased by 36% between 1980 and 1984. In Honduras, there was a 19% decrease in which the appreciation of the Lempira surely played a role. In Guatemala, there was a 40% increase between 1983 and the projection for 1985 made in September of 1985 by CEFSA.

Table 9: Prices of Traditional Products
(FOB Costa Rica and Guatemala)

	1980	1981	1982	1983	1984
Coffee					
Guatemala (quetzales per quintal)	361	268	254	254	280
Costa Rica (dollars per quintal = 220 pounds)	158.9	114.6	116.14	97.6	110.1
Bananas					
Guatemala (quetzales per quintal)	7	11	15	14	16
Costa Rica (dollars per metric ton)	213.0	224.0	225.24	237	229
Raw Meat					
Guatemala (quetzales per kilogram)	2.61	2.25	2.10	1.77	1.42
Costa Rica (dollars per kilogram)	2.72	2.23	2.19	2.29	2.32
Sugar					
Guatemala (quetzales per quintal)	33	43	21	29	22
Costa Rica (dollars per quintal)	25.86	26.8	13.9	20.3	15.1
Cocoa					
Guatemala (quetzales per quintal)	298	204	144	152	151
Costa Rica (dollars per quintal)	89.2	61.8	55.35	56.64	63.83

For Guatemala, average prices.
For Costa Rica quotations cited by CEFSA.
Sources: CEFSA, July 1985 for Costa Rica; Banco Central de Guatemala, Boletin Estadistico, December 1984.

Table 9a: Percentage Change of Volume of Traditional Exports between 1979-84

	Honduras	El Salvador	Costa Rica	Guatemala
Bananas	-37%		+4%	+17%
Coffee	-23%	-22%	+52%	-11%
Meat	-72%	-86%	+21%	-46%
Cotton	-42%			-69%
Sugar	+13%	+118%	+23%	+80%
Cocoa			-68%	

Source: Elaboration on the basis of statistical reports of Central Banks of the countries cited.

c) The role of non-traditional exports to third countries has been very important in maintaining the level of overall exports at a time when exports to CACM countries fell sharply. Figures for El Salvador reflect other factors playing a negative role, i.e., political.

d) The results yet to be seen are whether or not this increase in extra-regional exports continues to offset the decline of intra-regional trade plus the fall in the value of traditional exports. Furthermore, the question remains: what will be the effect on extra-regional exports when and if the CACM recovers?

In some cases, the evolution of non-traditional exports may be seen as disappointing given the incentives that were put into place recently. Several things should be kept in mind:

a) Most of these incentives came to offset a traditional relative anti-export bias. They do appear to be quantitatively very important, but so is the effective rate of protection for most of the products which are now to be exported to third markets. This consideration is relevant for the longer-run. In the short-run, the absolute anti-export bias is not very important given that most of the imported inputs that go into the production of exports are duty-exempt.

b) The process of becoming an export industry to third markets is a slow one. Learning may take a long period of time, and most of the results are yet to be seen.

Table 10: Central America: Value of Intra-region Trade and as % of Total Exports, 1975-1985, (excluding Nicaragua). Millions of Pesos Centroamericanos = U.S. Dollars. ROW = Rest of World

	ROW		REGIONAL TOTAL		GUATEMALA		EL SALVADOR		HONDURAS		COSTA RICA	
YEAR	value	% total	value	% total	value	% total	value	% total	value	% total	value	% total
1975	1479.7	76.93	443.8	23.07	168.2	26.98	141.7	27.61	26.5	9.07	107.2	21.74
1976	1934.4	78.45	531.4	21.55	189.0	24.86	176.0	24.43	35.6	9.11	130.6	22.03
1977	2820.5	81.24	651.4	18.76	222.4	19.17	211.6	21.76	43.4	8.51	173.8	20.99
1978	2492.5	77.68	716.4	22.32	254.9	22.94	233.5	37.02	49.1	8.17	178.6	20.66
1979	3102.6	79.47	801.5	20.53	299.6	24.62	266.6	25.84	60.0	6.32	175.3	18.77
1980	2954.6	73.72	1053.7	26.28	403.7	27.41	295.7	41.08	83.8	0.31	270.3	26.99
1981	2455.0	73.93	865.9	26.07	355.5	32.05	206.4	42.07	65.9	9.25	238.0	23.61
1982	2304.1	76.36	713.3	23.64	320.0	29.53	174.2	42.75	51.8	7.91	167.1	19.21
1983	2406.9	76.93	722.0	23.07	320.9	27.61	164.8	33.83	61.3	9.28	187.0	21.70
1984	2900.4	80.70	681.1	19.3	291.4	25.73	170.0	24.11	47.7	6.48	172.0	18.05
1985*	3028.0	84.40	560.0	15.6	250.0	22.22	140.0	19.23	35.0	4.26	135.0	14.67

Source: Estadisticas Analiticas del Comercio Intracentroamericano, Sieca - Marzo 1985.
CEFSA Consultores Economicos y Financieros, Costa Rica, September 1985.
* Projection by CEFSA in September 1985.

Table 11: The Role of Non-traditional Exports to Third Countries (millions of dollars)

	GUATEMALA			EL SALVADOR			HONDURAS			COSTA RICA		
Year	Total	Non-Trad. to Third Markets	Total CACM	Total	Non-Trad. to Third Markets	Total CACM	Total	Non-Trad. to Third Markets	Total CACM	Total	Non-Trad. to Third Markets	Total CACM
1980	1472.6	n.a.	403.7	720.0	71.9	295.8	813.8	130.4	83.9	1001.6	150.4	270.3
1981	1109.2	n.a.	355.5	490.8	66.2	206.5	712.8	108.5	65.9	1008.1	171.0	238.0
1982	1083.8	n.a.	320.0	407.5	54.8	174.2	655.7	87.0	51.9	870.3	160.6	167.2
1983	1091.7	110.8	320.9	487.4	55.7	164.7	660.7	78.1	61.3	862.4	151.5	187.1
1984	1132.2	134.7	291.4	760.9	62.4	170.0	735.8	105.1	47.3	952.6	204.7	172.0
1985*	1125.0	155.0	250.0	723.0	80.0	140.0	820.0	100.0	35.0	920.0	210.0	135.0

Source: SIECA various reports.
CEFSA raport on Central American situation, September 1985.
n.a. = Not available
* Projection by CEFSA in September 1985.

95

c) The world market is in the middle of or coming out of a recession which accounts for a very competitive world market where dumping and restrictive practices are quite common.

d) Results from the CBI initiative should not be expected to be spectacular. True, these countries can now avoid quotas imposed on others, but most of the exemptions either already existed or amount to a small percentage. Having access to a market is, of course, very important (absence of quotas), but then competitiveness is crucial for selling at a profit.

V. EXPORT INCENTIVES AND POLICY REGIMES[5/]

Table 12 contains a description of the incentive scheme under the following headings: fiscal incentives, exchange rate incentives, financial and related incentives, and institutional incentives. Where one of these headings does not appear, it means there are no incentives of that sort.

This description is not intended to be a thorough analysis of the incentive system. In particular, it is not clear whether some measures are superimposed on others. For instance, the draw-back policy may be applied together with the CAT or they may be exclusive of each other. Similarly, the profit tax exemption may or may not apply depending upon the circumstances.

Furthermore, there are some implicit subsidizations that we do not capture. In some cases, national commercial agencies subsidize domestic producers by selling at a loss. There are also some general incentives to produce a particular item that have not been taken into account; they are important for the absolute anti-export bias but irrelevant for the relative anti-export bias.

These considerations are outside the scope of this study but are very important and indicate an area for further research.

5/ This section is an update of U.N./ECLA: "Centroamerica: La Exportacion de Productos Industriales..." (E/CEPAL/MEX/1983/L.10)

The description does show that the schemes adopted by the different countries are very similar. The practical application may result in different monetary incentives resulting from, for instance, superimposition of incentives in some countries and exclusionary incentives in others.

One aspect of Guatemala's system is of interest. Non-traditional exports outside the region are discriminated against because they receive only 50% of the proceeds at the parallel exchange rate, while the same exports to the CACM receive 100% of the proceeds at the parallel exchange rate. Furthermore, an entrepreneur complained about the disincentive of a new tax on the 'extra-benefits' from devaluation. (See Table 15 in the appendix: Food Products.)

It is necessary to point out that some of the incentives mentioned in the table have not been implemented. In particular, what we call 'Tax Cancellation Certificates' (See Table 12.) Costa Rica is the only country with some history in its application. The existence of an active stock market in this country facilitates the transferability of this instrument.

The question remains as to how useful the incentive will be in countries where no stock market exists and transfers may take place at very high premiums. It is fair to point out that the experience in Colombia and Peru shows that this problem is not

relevant. Banks trade these certificates, which makes them highly liquid and the premium is the normal one for discounting operations.

Table 12

	El Salvador	Costa Rica	Guatemala	Honduras
FISCAL INCENTIVES	a) Exemption of import duties: qualified industries may bring inputs used in the production of exports into the country on a temporary basis without import duties; duty free import of goods into free trade zone. b) Exemption of direct taxes: qualified activities will be exempted from the payment of profit taxes; total exemption of payment of taxes on firm's assets and wealth. c) Exemption of indirect taxes: no export taxes for most products (non-traditional). d) Tax cancellation certificates: certificado de compensacion tributaria: up to 10% of the fob value of export can be deducted from taxes.	a) Exemption of import duties: refund of taxes paid on inputs; duty free import into the country of inputs ; refund or exemption from tax for economic stabilization; to introduce and process all class of materials destined to be exported to third markets. b) Exemption of direct taxes: exemption of 100% of profit taxes on net profits of qualified activities obtained from non-traditional exports; exemption from taxes on firm's assets for qualified activities. c) Exemption of indirect taxes: refund of sales taxes and other taxes on inputs, raw materials, machinery, equipment and spare parts for products that will be exported; no taxes on exports for most products. d) Tax cancellation certification: Certificado de Abono Tributario (CAT) equivalent to 15% of the fob price of exports; Certificado de Incremento de las Exportaciones (CIEX) up to an equivalent of 10% of the increment in the fob value of export with respect to a base year.	a) Exemption of import duties: suspension for a year, renewable, of customs duties and other taxes on inputs and other articles, including samples, furthermore, capital goods needed for said industries could be sold after five years; exemption of national and municipal duties for introducing and processing goods in the free trade zone. b) Exemption of indirect taxes: total exemption of profit taxes for income from sale of exports. c) Exemption of indirect taxes: exemption of consumption taxes on some inputs; no export taxes for most products.	a) Exemption of taxes: temporary import regime for export products; this includes importing machines for these purposes; beneficiaries of this decree will not be eligible for other laws of export promotion; profits from exports under this regime will not pay taxes for a ten year period, if the firm is industrial and all its production is exported to third countries generating direct employment. b) Tax cancellation certificates: CEFEX - Certificado de Fomento de Exportaciones - can be used to pay indirect taxes and it has a 3 year validity; to non-traditional products exported with a minimum national value added of 20% and to firms whose export volume exceeds 75% of the base year (calender year previous to the enactment of this law - 1982); the CEFEX will be of 10% or 15% according to national value added. (CEFEX will apply for non-traditional exports to CACM if no bilateral agreement applies).
INCENTIVES IN EXCHANGE RATES APPLIED	a) Free remittance in foreign currency of funds from exports to countries outside the region allowed to foreign firms. b) Non-traditional exports to Central America receive the parallel rate. c) Non-traditional exports to third countries receive certain composition of official and parallel according to composition of imported inputs.	a) Free remittance in foreign exchange of funds originated in exports allowed to foreign firms. b) Costa Rica has a unified exchange rate system.	a) Non-traditional exports to third countries receive 50% of the proceeds at the parallel rate. b) When exported to CACM countries, they receive 100% at the parallel rate.	a) There are no official exchange rate incentives; one hears of different arrangements, like letting the exporter keep certain amount of dollars and exchange them in the black market, etc..

Table 12 (continued)

	El Salvador	Costa Rica	Guatemala	Honduras
FINANCIAL, COLLATERALS AND INSURANCE	a) Special line of export credit - Banco Central. b) Special line of pre-export credit - Banco Central. c) Guaranty fund for export credits. d) Credit insurance for exports. It was not possible to establish to what extent these are operational incentives and if their amounts are significant.	a) Credito post-embarque: program for financing industrial sales - Banco Central. b) Credito pre-exportacion: program for financing industrial sales - Banco Central. c) Fondo de Fomento de las Exportaciones - Banco Central. Credit insurance: Acuerdo Instituto Nacional de Segundos (not yet put into practice).	a) Fondo de Garantia para otorgar avales. Not yet operational.	
INSTITUTIONAL INCENTIVES	a) Instituto Salvadoreno de Comercio Exterior (created by the Ley de Fomento de Exportaciones). b) Fundacion Salvadoreno para el desarrollo (FUSADES): AID funded, provides technical assistance of different kinds to non-traditional exporters.	a) Technical Assistance and promotion: Centro de Promocion de exportaciones y de las inversiones.	a) Guatexpo existed until recently and has been absorbed by the Direccion de Comercio Exterior. b) The 'Gremial de Exportadores' provides assistance to exporters and channels some AID money for these purposes.	
SERVICES	a) Tax-free zone of San Bartolo. b) Fiscal incentives for commercial enterprises in the exporting business.	a) Free trade zones of industry and commerce: zona processadora de exportaciÀn de MOIN. b) International marketing: creation of the consorico de exportacion de productos Costarricences S.A. 1980. c) Air and sea transportation: participation in NAMACAR and LACSA.	a) Tax-free zone Santo Tomas de Castilla. b) Incentivos fiscales para empresas comerciales de exportacion.	
NEW ASPECTS	a) Formation of a center of Export Documents (Centro Unico de Documentacion de Exportaciones), that will centralize legal aspects concerning exports. b) Total exemption of profit taxes for proceeds that can be attributed to exports for a period of ten years. This will also be true for tax on firm's assets. c) All exemptions applied to producers will also apply to trading companies that export non-traditional products. d) Firms that provide services required and oriented to promote non-traditional products abroad will be exempted from profit taxes. Certificado de Abono Tributario (CAT) can be up to 30% of FOB value depending on: national value added, volume of labor used, contribution to diversification of products and markets, foreign exchange generation.	a) Tax cancellation certificate for 50% of the amount paid for equity of non-traditional exporters. These exporters should be selling abroad 100% of their production. Up to 25% of the net profits will be exempted on this account. b) Export contract: this is an instrument for coordinating benefits and acts as a guarantee for 12 years as for the above concessions. c) Temporal admission regime (1984). Suspend all kinds of taxes on materials that will be imported to be transformed and re-exported.	a) Firms will be classified as: 1) total export industrial firms: those that devote all their production to exports outside the region; 2) partial export-industrial firms: those that devote only part of their production for markets outside the region. b) Profits related to export activities will be tax-exempted for a period of ten years. c) Certificado de Abono Tributario: not emplemented yet.	Most of the fiscal incentives are part of a new law of 1984.

The instability of policy instruments is a major concern when considering export promotion. Commercial policy is one aspect of export promotion closely connected with others (fiscal incentives, exchange rates, etc.). At some point it may even become irrelevant given the instability of complementary instruments, such as the exchange rate policies. To describe these policies in detail would take another study. However, as an example, we will review the situation in El Salvador since 1982.

El Salvador has had a tradition of fixed exchange rates as have all other Central American countries. By the end of the 1970's it appeared that this rate was not sustainable for several reasons:

a) oil shocks;

b) reduction of the value of exports due to diminished production and a fall in their foreign prices;

c) an important fiscal deficit financed through money printing, affecting inflation and therefore the value of the colon vis a vis other currencies where inflation was more benign.

In August of 1982, a parallel market was created. This was remarkable given that for fifty years the colon had been fixed at 2.50 to the U.S. dollar.

Between August of 1982 and June of 1985, three exchange rates coexisted:6/

a) to import 'essential' goods (medicines, fertilizers, pesticides, wheat, raw materials for oils and butter, oil and capital goods), dollars could be obtained at the official exchange rate of 2.50 colones per dollar;

b) for non-essential goods (which are contained in "lista G"), even though the parallel market could be used, in practice the black market rate applied at the margin. This rate oscillates and has reached the level of 11 colones per dollar;

c) for the rest of imports, dollars could be obtained at the parallel rate which was set at 4.50 colones per dollar.

On the export side, the situation was as follows:

a) traditional exports (coffee and sugar) within the international quota, received the official exchange rate;

b) Central American exports received:

   1) the official exchange rate before December 1984;

   2) from December to March 1984, 50% at official exchange rate and 50% at the parallel rate;

6/ This information was taken from a report by FUSADES. "Reflexiones de la politica cambiaria: sintesis de una charla." Octubre 1985, El Salvador.

3) from March 1984 to June 1985, 30% at the official exchange rate and 70% at the parallel rate;

4) from June 1985 100% at the parallel rate;

c) non-traditional exports to third countries received a mix of the official and parallel rates according to their composition of imported inputs.

In June of 1985, changes were introduced involving the parallel and black markets. The latter was indirectly recognized because now fluctuations in the parallel rate would follow those of the black market rate.

With regard to exports, a certain portion of traditional exports would receive the parallel rate (up to $90 U.S. million for coffee and $17.5 U.S. million for sugar). Non-traditional exports would receive the parallel rate irregardless of their final destination. Furthermore, most of the financial transactions (royalties, transfers, etc.) would be valued at the parallel rate.

An interesting phenomenon appeared in the coffee market. Coffee exports outside the quota received a higher rate than exports within the quota (a mix of official and parallel rate). This resulted in El Salvador not fulfilling its export quota.

The description of the situation in El Salvador indicates the changing signals faced by the domestic producer when making

decisions. These changing signals may create a situation where the whole incentive system becomes ineffective in its attempt to reallocate resources. El Salvador is a good example of a process that is going on in other Central American countries.

VI. SUMMARY AND RECOMMENDATIONS

Total Central American exports fell between 1980 and 1985. This is true for their nominal value and especially when we look at their value in real terms. Two things account for this:

1) decrease of intraregional trade;

2) fall in prices of commodities, and volume of traditional exports in some cases like El Salvador, Guatemala, and Honduras.

Exports to the rest of the world in 84-85 show an upward trend. (See Table 10.) Non-traditional exports seem to play a role in this phenomenon. (See Table 11.) The fall in intra-regional trade was so sharp between 1980 and 1984 (30%) that offsetting it with an equal increase in exports to the rest of the world was a very high target indeed, especially given the circumstances of low commodity prices, and a very competitive market for non-traditional products.

Total exports in 1985 remain, in nominal terms, 10% lower than they were in 1980, even though non-traditional exports to third markets have increased by 12%.

It was expected that a sharp increase of non-traditional exports outside the region would offset these negative factors. This did not occur. Given the small base of non-traditional exports to the

rest of the world, the expected sharp increase may have been an unrealistic hope.

There are many policy instruments which interact and can be used to promote exports. Most Central American countries have instituted a variety of export incentives consisting basically of:

1) Exemption of import duties to inputs of export activities

2) Exemption of direct taxes on profit for export activities. Profits considered are those related to the export activity itself.

3) Exemption of indirect taxes like sales taxes and other taxes on inputs.

4) Tax Cancellation Certificates in domestic currency (like the Certificado de Abono Tributario, etc.).

5) Incentive exchange-rates applied. Most countries have several exchange rates and apply a favorable one to non-traditional exports to third countries. Notice also that exports to the CACM countries receive <u>at least</u> the same exchange incentive as those to third countries. (See case of Guatemala, Table 12.) Also notice that in some cases, disincentives are introduced with the incentive system. For instance, in the case of Guatemala, a tax was introduced on the 'extra-benefits' from devaluation. (See Table 15 in the appendix - Food Products.)

6) Financial incentives (loans, insurance, collateral).

7) Institutional assistance of different kinds: technical

assistance, marketing assistance, technology transfer assistance and simplification of export procedures.

8) Services like tax free zones, more efficient and less costly air and sea transportation.

An overvalued currency counteracts other export incentives in some countries, (for instance, Honduras). Moreover, the instability of exchange rates results in the whole system of incentives sending confusing signals to producers. This is so because most policy instruments are complements.

Most of the expected results are yet to be seen, however, some countries have been very successful in their programs (Costa Rica). The reason for the slowness of response is that the learning process is in most cases a costly and difficult one.

With regard to the Common External Tariff and non-traditional exports, we mentioned this as one of many instruments in the effort to promote exports. Its effect is then diluted in the whole incentive scheme, particularly in the perception of entrepreneurs. It was clear in the interviews that other instruments predominate in their perception, such as exchange rates, transportation costs, infrastructure, etc..

It is also fair to point out that the absolute anti-export bias is not so important because most inputs used in export products are

duty-exempted. However, in the long-run the relative anti-export bias generated by the tariff structure is likely to have an allocational impact.

Effective rates of protection for the domestic market for most of the products that are supposed to be exported remain, in general, fairly high. In the long-run, this may encourage production for the domestic market instead of production for third markets because profitability to the local entrepreneur will be higher in production for the domestic market and investment will be allocated accordingly. To summarize, the tariff system has different effects according to the activity. However, in the short-run, it does not seem a crucial element in export promotion. This is not to deny its relevance for the long-run. It is precisely there, and in its role as resource allocator, that its importance lies.

Most of the other obstacles found are already well known such as transport costs, financing, etc.. Here there exist institutional problems that have to be solved. For instance, a very conservative banking system is supposed to be acting as a development bank; in general, this will be a contradiction in terms. Most of the infrastructure, ports, etc., are quite ineffective in carrying out an efficient and smooth export process. Furthermore, transport costs appear to be an important constraint in many cases.

There are several other issues that can only be overcome with

entrepreneurship and initiative. Most of the successes found involved these elements and we are afraid that there is no good substitute for them, not even an excellent incentive system. Helping those individuals with initiative to succeed will probably have demonstration effects on others and bring out similar elements in them.

As far as policy implementation is concerned, we thought it useful to distinguish four types of activities:
1) agribusiness; 2) textile, furniture, and shoe manufacturing; 3) food processing activities; 4) artisanry and related activities. This will help in pointing out distinct problems pertaining to each activity.

It seems also that those actually or potentially involved in export activities could be usefully divided into four groups:

1) those already exporting non-traditional products to third countries;
2) those exporting to the CACM but not to third countries;
3) those that are willing to export but have not been able to do so, even with considerable effort;
4) the rest includes potential exporters without explicit interest in exporting at present.

When implementing any policy geared to promoting exports we think that these four categories should be kept in mind. Why?

1) their problems may be quite different as it appears from the interviews;
2) general types of policies directed at all of them may be useless because of the lack of specificity;
3) most of the exporters interviewed needed assistance in very specific areas: assistance to develop a specific line of production or to solve a particular technological problem, analysis of very specialized segments of the U.S. market or world market, etc.
4) to direct general policies like conferences, etc., at these individuals may be a waste of time;
5) success stories, in general, involved joint ventures that permitted shared technology, marketing, etc.;
6) efforts to generate more of these type of ventures may generate very good results in a short time;
7) lack of specific knowledge of a process, technology, etc., has to be solved by some knowledge transfer or technology transfer. This can be done by allowing the training of specialized personnel in U.S. plants, or the direct assistance of a U.S. technician or expert with experience in the field. The U.S. firm participating in these exchanges should have a very real incentive to cooperate.

The problem of designing a more specialized or specific incentive system seems complicated. At the same time solving these

institutional problems is crucial if exporters or would-be exporters are to evolve to a new level of entrepreneurship and competitiveness.

It appears that official policies are not coordinated enough. Some agencies may also be behaving opportunistically and attempting to go against the export promotion process. (See the case of Costa Rica, page 25.) A more centralized control may be needed adding to the credibility of the public sector's approach. Furthermore, the complementarity of instruments in the incentive scheme should be recognized in order to avoid confusing signals from uncoordinated policy implementation.

Another method would be for the responsible parties of the centralized organization to have biweekly or monthly meetings with the most important representatives of the export sector in order to identify problems and directly intervene in their solution. This method constitutes part of the story behind well-known successes.

A P P E N D I X

THE INTERVIEWS: ORGANIZATION AND RESULTS:

a) Type of activity; from the economic point of view it is interesting to note what type of resource is exported. Furthermore, it is very different to deal with an exporter who has a high component of imported material as intermediate inputs versus one who takes advantage of competitive production of primary products and processes them.

b) Differences in profits from selling inside the CACM and in third countries: here the presumption is that the producer behaves like a discriminating monopolist, covering fixed costs on domestic sales and selling abroad at variable cost. The question was oriented to see if this was the relevant way of looking at the world.

c) Stability of profits from selling abroad: this question was oriented to determine:

1) real exchange rate effects on revenues from exports;
2) stability of other promotion policies

d) Percentage devoted to third countries. This gives an idea of how important the activity is for the firm. We also tried to find out the absolute dimension of the plant.

e) An open question that aimed at learning which were the fundamental obstacles found by the firm as an exporter.

f) Another partially open question was designed to get further information on the company's context. Was the export direct or through a trading company? Was the CBI or GSP used? Was the product different inside and outside? Is the plant labor or capital intensive? When did the firm start to produce and when to export? Is ownership completely national or not? This gives a general ideal of the type of activity of the firm and the initiative of its management. Presumably, a joint venture with foreign ownership could be more successful in foreign markets given their experience.

Table 13: Activities Represented - El Salvador

	Non-traditional: agricultural products with some processing (sesame, honey, etc). In general, these are very labor-intensive exports. They also generate employment in the primary sector.	Non-traditional industrial (shoes, textiles); 100% national ownership
IMPACT OF COMMON EXTERNAL TARIFF	Only Foreign market for these products.	Differentiated products. The product fo foreign market is different from that for the domestic market. Given drew-back....., common external tariff does not affect because suppliers are foreign.
STABILITY OF PROFITS IN SELLING ABROAD	Very unstable: 1) fluctuation of commodity prices in foreign markets; 2) variations in policy (foreign exchange receives parallel rate).	Currently 100% of value of exports at parallel rate and imported inputs are paid 50% official and 50% parallel rate. This is important incentive. There is uncertainty about changes in this policy.
PERCENTAGE DEVOTED TO THIRD COUNTRIES	All production is devoted to third countries.	1 to 2%, and expected to increase to replace lost CACM market.
FUNDAMENTAL OBSTACLES	1) Agricultural exports have not been so affected by the collapse of C.A.C.M.. Industrial firms have been the ones affected by unilateral decisions of protectionism in CACM. 2) Exchange rate incentives (parallel market) have been fundamental for our exports. 3) Marketing of these products is important, involves a lot of personal relationships because family businesses are involved; trips to New York to deal directly. 4) In general, banks are not involved in the transactions. 5) Major problem: attempt by the government to establish minimum export price. One has to register in C.Bank expected receipts of foreign exchange. Then commodity prices fluctuate and the C.Bank is reluctant to accept lower receipts. 6) In general, government officials do not collaborate.	1) Fundamental obstacle is transportation costs. 2) To comply with dates of delivery. U.S. market is very demandin on this issue.
OTHER ISSUES	1) The system involves financial and technical assistance to the farmer producing the primary good. This is carried out by firm itself. 2) Currently in process of joint venture with Boston firm to produce candles. They would provide technology and we would provide labor and raw materials. 3) Currently new incentives; change of Export Promotion Law: a)total exemption of taxes for ten years; b) special credit: low rates and long terms. 4) Percentage of non-traditional exports of this kind is small, even though market is really important. 5) To offset the fall of traditional exports will be difficult, in eight years the volume of production of coffee fell from 5 million quintales to 2.5 million quintales. It takes time to develop agricultural industry, (Chile, 10 to 15 years). 6) Credit incentives are becoming very important with new line for exporters with money provided by AID. In any case, real interest rates are very low. Nominal are around 10% and inflation 20-25%. 7) Now we are in program of Genetic research to increase yields.	1) Incentives to export are not profit but the acquisition of foreign exchange 2) Transport costs are very high compared to those of other exporting countries, (for instance, Brazil). 3) Shoes are not covered by CBI.

Table 13: Activities Represented - El Salvador (continued)

	Non-traditional industry: labor intensive in majority of lines; labor force of 1200; value of machines approximately $40 million.	Non-traditional industrial - food processing: this is a labor intensive activity; fried beans, jalapeno peppers, etc.; sales of $7 million.
IMPACT OF COMMON EXTERNAL TARIFF	1) Local production subsisides exports to have access to foreign exchange. 2) Local sales bring 20-25% more profits than sales abroad.	1) We do no sell same product inside and outside because with some products we sell inside, we just cannot compete outside (hot sauces and ketchup).
STABILITY OF PROFITS IN SELLING ABROAD		Profits are relatively stable, concerned about stability of incentives; currently getting basics at undervalued rate (electricity, oil, etc.); not clear how long this is going to last.
PERCENTAGE DEVOTED TO THIRD COUNTRIES		1) 85% domestic market 15% third countries. 2) fixed costs are small, so it is not possible to decrease average cost much by volume.
FUNDAMENTAL OBSTACLES	1) Through FUSADES, AID uses experience of exporters to promote other non-traditional exports. 2) If industry qualifies as net exporter, no payment of import duties is required. 3) Certificado Abono Tributario (CAT). Is not yet in effect, unknown promotional effect. 4) Political problems in country so important that economic problems are secondary to government. Rules are not clear. 5) There is no formal contact between government and private sector. 6) Products of El Salvador in world market are naturally discriminated against because of uncertainty. 7) Unavailability of foreign exchange to by imported inputs is fundamental.	1) Our capital structure is such that we cannot compete against the Del Montes, etc., with all advertisement these people can do. 2) Credit can be obtained at reasonable rates and this is not an obstacle. 3) Lessons to be learned: get marketing help right away; now there are organizations who help (FUSADES).
OTHER ISSUES	1) This is a vertically integrated firm. 2)Originally firm was organized to supply the CACM. When problems arose, CACM went from 40-50% of the market to 10-13% of the market. Currently sales to third countries are 1-2% and expected to increase. We are using 60-65% of installed capacity. 3) Sales are through broker. It is not possible to be exclusive supplier of given market. 4) Experience was acquired through licenses of Wolberg, Brown Shoe, etc.. Furthermore, firm started with assistance of General Shoe Corporation of U.S.A.. 5) Insurance and financing is not sufficiently developed. 6) Technologically there are no problems, this is standard in the world.	1) CACM was obviously an unfeasible market in the medium run. Unilateral devaluations changed competitiveness completely from one day to the next. 2) Lots of errors at the beginning to get into U.S. market. Brokers would make one sale and then no follow-up, etc.. 3) Finally with help of FUSADES brought a marketing executive from Beatrice Foods. Defined marketing policy on the basis of this assistance.

Table 13: Activities Represented - El Salvador (continued)

	Industrial food processing: 80-90 employees, fixed assets of $80 thousand.	Artesan and regional products:(birds made of cloth and similar articles). In 1 1/2 years we went from 50 units daily to 450 units daily. 500 workers: 200 in factory and 300 in household enterprises.
IMPACT OF C.E.T. PRICING INSIDE AND OUTSIDE	Bottles from U.S. without taxes but shipment cost is too high. This is really a problem of natural protection because of transport costs.	1) Prices are the same. Originally were lower inside, this provided room for arbitration which ocurred. 2) Foreign inputs are minimal. 3) Foreign exchange is received at parallel rate.
STABILITY OF PROFITS IN SELLING ABROAD		
PERCENTAGE DEVOTED TO THIRD COUNTRIES		1) 95% of the products are exported extra-regionally. 5% go to stores in hotels, airports, etc., so they end up abroad also. 2) 1,200,000 U.S. dollars are exported yearly.
FUNDAMENTAL OBSTACLES AND INCENTIVES	1) Meetings organized to "sell abroad" are too general and do not help much. 2) Need of more specialized type of arrangements. 3) Problem of very high competition in export market and suppliers of glass face little competition in their own production. 4) Incentive used in financing: 'Linea de Exportacion', interest is 2 points lower than otherwise. 5) AID effort (FUSADES) need more specific directions: what market is available, what product you have to produce, can we produce this here? 6) Transporation costs crucial. 7) Pricewise, we are devalued but still getting basics at non-devalued dollar (oil, electricity, etc.). Great incentive but not going to last long.	1) At first, artistic enterprise, no sense of marketing. 2) Now, everything is done through distributors. 3) In Sept. '85, a sole importer was designated. This avoids price war in the case of several distributors. 4) Reform of distribution channels permits us to get feed-back on what goes on in the market. 5) Fundamental problem was lack of knowledge of the market. FUSADES helped us make contact with American company (Stine Winder). 6) Transportation has not been an obstacle. Recently, airfares went from official market (in dollars) to parallel market, but there is still no problem. 7) Competitors appeared with the same products from Taiwan and we had to lower costs to compete. This involved engineering changes in the plant.
OTHER ISSUES	1) Need to find certain niches where big ones do not go. 2) Market certain products that require a lot of hand labor, certain climatic conditions available here or products that people have not been producing for other reasons. 3) We had not thought in food service market (restaurants, bars) and it turned out to be the best. 4) Current arrangement: we send products to a warehouse in U.S. and broker sells the product from there.	1) FUSADES provided technical assistance to be able to grow. 2) Currently, preparing new articles and testing the market, (30 new products). 3) Expansion was financed with own funds. 4) There are some liquidity problems, but there should not be any problem in getting some pre-export loans that are AID lines.

Table 14: Activities Represented - Costa Rica

	Non-traditional industrial, (furniture, outdoor products). Joint venture with U.S. firm, 50% national ownership. U.S. firm is responsible for marketing. Costa Ricans are responsible for production sales of approximately 5,000,000 U.S. dollars yearly. Fixed capital $350,000, 120 workers.	Trader of non-traditional goods to non-traditional markets. 8 years in the business. Trades 2,000,000 dollars a year.
IMPACT OF COMMON EXTERNAL TARIFF PRICING INSIDE AND OUTSIDE	1) All imported intermediate inputs are duty-free. 2) Provision of tubes, which is done domestically, is competitive. This is so given special arrangement with supplier. This firm is its most important customer.	
STABILITY OF PROFITS IN SELLING ABROAD	1) The government has tried to institutionalise this stability through the export contract that guarantees incentives for 12 years. 2) We are new in this business and have not experienced exchange rate instability.	
PERCENTAGE DEVOTED TO THIRD COUNTRIES	All of the production is devoted to the U.S. market.	
FUNDAMENTAL OBSTACLES AND INCENTIVES	1) People that supplied us with the inputs domestically had to learn. There were some logistical problems with suppliers in the U.S. 2) Institutions devoted to export promotion do not have a clear picture of what they have to do. 3) Our own feeling is that they should help those who are already exporting to improve. 4) Process of bringing a non-exporter to exporting is slow and very costly, so this should be the second priority. 5) Fundamental to facilitating export process (Diminish the degree of bureaucratization of the process). This has not been done yet even though the official policy is clear in its export orientation. 6) Internal transport tariffs are amongst the highest in Latin America. 7) Port cost is very high and very inefficient. 8) Financing: there are special lines, but still the system is very conservative, requiring 120% of real collateral. This firm has enormous working capital and not many assets, so requirement is real obstacle. 9) Profit tax incentive is very important because this tax is very high. 10) Basic measures required from government: Priority 1: a) real export strategy with implementation and not so much "behind the desk" discussion, (support existing exporters); b) "demonstration effect" will attract prospective exporters; c) market analyses are necessary but not global; very specific markets for some products (the Wyoming market for outdoor furniture, for instance). Priority 2: a second group with potential that is willing to invest and export. Priority 3: that are not really interested but are there. Currently, all priorities are in the same bag and this is very ineffective.	Lessons: 1) Transportation rates to U.S and the Caribbean are extremely high. I cost $15-30 per TN in a chartered ship, while traditional lines charged $100 pe TN. 2) Only way to to get to Caribbean islands which are a natural Costa Rican market is through these low rates obtained through chartering ships instead of traditional lines. 3) Products we are looking for: high value added, different from those in market, intensive in labor, competitive price, products which big producers do not wan to get into, products that are not only for minorities, do not get in products where massive production gives advantages . 4) Products may not be competitive (even if they are FOB) because of: transport costs, financing, packaging is very expensive here (FOB price of pineapple box = $6.50 while the package (box) = $2).
OTHER ISSUES	1) U.S. firm had experience in production and sent two specialists. We had several problems at the beginning with bureaucratic procedures and financing. 2) Someone came from Sweden and ordered $1,500,000; we cannot provide that amount immediately. Furthermore, smaller markets are not known, and here is where the government could help. 3) There is in this country all the framework and infrastructure for an export insurance system, but this has not been implemented. This insurance could serve as collateral when financing exports. 4) Most of the financing up to now has been for capital goods and not working capital. Capital goods will not be working if I do not have financing for the rest. 5) Four points: a) Connection with market where one wants to sell should be firm; possible representative or joint venture. b) Financing should be less conservative. c) Eliminate bureaucratic barriers. d) Institutions should help those already exporting so that they improve.	1) First, Caribbean Islands used as test: a) They are net importers of products we export. b) They have dollars available. No payments problems. c) Not so demanding in quality and quantity. d) It is a school where one can learn to export. e) It's an 'open market', anyone can export there, so in that sense it is a real test. f) We had transportation available. Chartered ships that carried cement and had some free space. 2) We are agents of big U.S. trading company. They are looking at this region because of quotas to other countries. 3) CBI not very big impact because majority of products already in Generalized System of Preferences (GSP). 4) Suggestion: measures should be more direct: take producer to US, Guatemala etc., to see how production is carried out. Bring technical assistance to the farmer - someone who will teach him (in a couple of weeks) how to produce.

Table 15: Activities Represented - Guatemala

	Non-traditional industrial: food processing (candy, marmelades, etc.).	Non-traditional industrial, (brushes, tools).
IMPACT OF COMMON EXTERNAL TARIFF ON PRICING INSIDE AND OUTSIDE	1) Foreigners cannot compete here because of transport costs, but there is a lot of domestic competition. 2) No big difference in price ouside and inside.	
STABILITY OF PROFITS SELLING ABROAD	1) The government has not been consistent in its policies. For instance, new fiscal regime was introduced in March of 1985. It lasted a week and was abolished. 2) Need to unify exchange rate to be more competitive.	
PERCENTAGE DEVOTED TO THIRD COUNTRIES	Plant is currently producing for internal market only.	25% devoted to third countries. Up from nearly zero four years ago.
FUNDAMENTAL OBSTACLES AND INCENTIVES	1) Non-traditional exports to third countries receive 50% at parallel rate and 50% at offical rate. 2) Firms that export more than 50% to third countries have the right to a fiscal credit that has not been returned in a long time. 3) Important problem, acquisition of foreign exchange for inputs. 4) It is not possible to supply the whole American market. We have to direct ourselves to small portions of it.	1) Fundamental problems had to do with penetrating the American market and learning appropriate technology. 2) Sometimes one ends up with small distributors in the U.S., and this way may be less competent and reliable than established ones. 3) Problem of transport to U.S. is big for us.
OTHER ISSUES	1) It is not possible to give financing to the buyer because dollars have to be in Guatemala 45 days after sale is made, otherwise, 1% a month is charged to exporter. 2) Quality requirements are very different in U.S.; we went to FDA in Washington to find out. 3) Problems: a) Transportation - monopolized and lack of transportation to Europe. b) Packaging - very high costs. If exchange rate were unified, this problem would be less relevant. c) Credit.	Suggestions: 1)Organize a system through which an American company can be 'sponsor' of firm here. This will help with technology, marketing, etc.. 2) This system should give incentive to U.S. firm and benefits should be mutual. 3) Problem of selling what U.S. needs, difficult to find this out for individual small firm in Guatemala. 4) Have possibility of access to appropriate technology which currently is difficult.

Table 15: Activities Represented - Guatemala (continued)

	Non-traditional industrial - food products, (tomato paste, etc.).	Non-traditional industrial, (marble).
IMPACT OF COMMON EXTERNAL TARIFF PRICING INSIDE AND OUTSIDE	Difference between unitary profit inside and outside is very important. Quantity was the incentive to sell outside.	
STABILITY OF PROFITS SELLING ABROAD	Imported inputs are paid at parallel rate. 35% of inputs are imported.	
PERCENTAGE DEVOTED TO THIRD COUNTRIES		70% is exported to third countries.
FUNDAMENTAL OBSTACLES AND INCENTIVES	1) Lack of knowledge of international market: a) We produced a concentration that is not the one sold to the rest of world. b) Learned through mistakes and this was very costly. 2) Why no export insurance company?: a) It would use existing financial system. Guarantee to bank with which exporter already operates. (No new bureaucracy needed.) b) It would not require great effort, covering contingency losses.	1) Transportation costs: a) Italy - Miami less than Guatemala - Miami. b) Argentine - Miami less than Guatemala - Miami. 2) Administrative problems are tremendous for someone who who is starting. To export to Central American is just one step.
OTHER ISSUES	1) Local producer used to small quantities and large unitary profits. Concerned about going to competitive market and modifying structure of costs and prices. 2) We became more competitive inside through our export market. 3) This is new plant with up-to-date technology. No extra investment was necessary to get into international market. Priorities: a) Given devaluation level, this is incentive enough as far as price is concerned. b) Currently, government is charging a tax on extra-benefits from devaluation. This is a great disincentive. c) Information systems on specific markets.	1) Integrated from quarry to final product. 2) Obsolescence of technology is not important. We are operating with 15 year old technology but still competitive.

Table 16: Activities Represented - Honduras

	Non-traditional industrial, (wood chemicals): been in business for 15 years. 800,000 metric tons of exports yearly. Technology in: labor intensive at forest level; capital intensive in plant.	Non-traditional industrial (textiles). Started in 1950. Vertically integrated 1200 workers, 50,000,000 SU.S. value of plant.
IMPACT OF COMMON EXTERNAL TARIFF ON PRICING INSIDE AND OUTSIDE	1) Proportion of imported inputs is 8% of costs, (not important). 2) Percentage of final product for domestic market is negligible.	1) To subsidize exports with local production because in many cases we do not even cover variable costs. 2) Prices in here similar to those in Panama. There are price controls On certain products. 3) We have problems in domestic market because Guatemala is competing with low prices given their favorable exchange rate policy.
STABILITY OF PROFITS	Two problems: 1) Commodity prices have been coming down recently. 2) The Lempira is extremely overvalued. The parallel market rate is 40-50% above official rate, and we keep receiving official rate.	Problem of overvalued lempira is very important. Profits keep going down.
PERCENTAGE DEVOTED TO THIRD COUNTRIES	95% for export.	15% to Caribbean, Haiti and U.S..
FUNDAMENTAL OBSTACLES AND INCENTIVES	1) Exports have a tax of 1% FOB. 2) Very important problem: to obtain dollars for buying imported inputs. Requested dollars in June and still waiting (end of October).	1) Nominal interest rates are at 19-20% while inflation is 4-5%. 2) Export insurance is too expensive. 3) Transportation costs probably the biggest obstacle.
OTHER ISSUES	1) Now there is AID financing for 20% of exports.	1) Law of export promotion is not operative: a) 15% subsidy on export increment (problems with this measure); b) duties not paid equivalent to 25% of value of imported inputs. 2) Suggestions: a) supply of imported inputs should have more continuity; b) transportation cost should be brought down to standards enjoyed by Europe, etc.; c) interest rates for financing working capital should go down. d) export financing should be more actives with loans of 6 months to a year. 3) Impossibility of keeping up with payments of loans from international organization. This implies no access to new money needed for new equipment to keep us competitive.

CHAPTER 4

THE EFFICIENCY OF CENTRAL AMERICAN INDUSTRY

Daniel M. Schydlowsky

CENTER FOR LATIN AMERICAN DEVELOPMENT STUDIES
Boston University, Boston, Massachusetts

TABLE OF CONTENTS

		Page
I.	The Meaning of Efficiency	1
II.	National Economic Efficiency	8
III.	Empirical Estimates of National Economic Efficiency	15
IV.	Protection and Efficiency	20

124

I. THE MEANING OF EFFICIENCY

Common sense indicates that a firm or producer will be efficient when he can compete in the market place. In a small, less developed country that means that the producer will be efficient when his costs divided by the exchange rate are no greater than the price at which a comparable good can be acquired from the rest of the world; or, if he should be producing an export good, then costs divided by the exchange rate should be no greater than the price at which the product can be sold on world markets. This common sense view is indeed correct when we are dealing with a fully competitive economy in the absence of government intervention, externalities, indivisibilities, etc.. In more realistic situations, the simple equivalence between competitiveness and efficiency breaks down.

Consider, for example, the usual case of a small economy which trades in world markets, but which levies a differentiated tariff on its inputs. In such a case, the domestic producer acquires imported inputs at a price higher than that obtained in the world market by at least the amount of the tariff. Domestic inputs would be acquired at a price higher than that of equivalent goods on the world market as well, because domestic producers of these goods are protected from import competition by the existence of a

tariff. Thus, as matter of natural course, the cost of production of the domestic industrial producer will be higher as a result of the existence of import tariffs on the inputs used in the production process. Naturally, when the domestic industrialist wishes to sell his product, the higher cost of inputs will be compensated for or perhaps more than compensated for by the tariff on the output. The net effect on the value added in the process of the tariff on the output and the tariff on the input is what has come to be known as the effective rate of protection. In such a situation, however, the domestic firm is fully able to compete in the market, however, it is generally accepted as inappropriate to regard competitiveness under such conditions, i.e. behind tariff walls, as an adequate indicator of efficiency. Yet to convert the cost of such a producer to foreign exchange, say dollars, by the simple process of division through the exchange rate, and to then compare the result with the import price is also not appropriate. For, when such a division by the exchange rate is undertaken, the cost raising effect of the tariffs on the inputs is left out of the calculation. Thus, the cost in dollars to the producer are overstated. What would be more appropriate, is to net out the tariffs on the inputs as part of the conversion of costs to dollars. In the absence of such an adjustment, domestic producers will look inefficient simply because of the wrong

deflation, regardless of their real efficiency. The resulting misperception has been called the "inefficiency illusion".1/

The analysis of the effect of input tariffs on efficiency assessments including the inefficiency illusion is complicated by the fact that one producer's inputs tariffs are another producer's output tariffs and thus it is necessary to look at the whole tariff system together. While the need to take interdependence into account has been well recognized in the effect of protection literature, its analogue in the assessment of productive efficiency has not yet received equally widespread recognition. Yet it is well known that levying a tariff is equivalent to a partial devaluation, for the importer does not really distinguish between a situation in which a dollar's worth of imported merchandise costs 15 pesos because the exchange rate is 10 and there is a 50% tariff levied at the customs house, and the situation where the exchange rate is 12 and the tariff is 25%, or the situation where the exchange rate is 15 and no tariff at all is levied. In all cases, the "commodity exchange rate" is 15, which is a total cost the user will need to pay per dollar's worth of import. When a differentiated tariff is integrated in this way with the existing exchange rate if this be a single one, or with the various exchange rates if there be several, a full "exchange rate system" can be visualized. This exchange rate

system will consist of as many different items as there are positions in the tariff nomenclature with different rates. By the same token, when a particular producer operates in the system, the weighted sum of exchange rates applying to his input purchases would constitute his cost exchange rate, whereas the weighted rate on his outputs will represent his sales exchange rate. With a system of protection providing positive effective rates, the sales rate will be above the cost rate. Note, however, that while the positive effect of protection is usual for the domestic market, the same does not hold true for export sales, where it is quite common to have a negative effect of protection. In that case, the sales rate will be below the cost rate. This results because the cost rate has been raised by the tariffs on the inputs, while the export sales rate is only higher than the financial rate by whatever the export promotion incentive might be, which is often lower than the tariffs.[2/]

In the Central American case, the exchange rate system includes a three-way differentiation. On the one hand, there is moderate to high protection of outputs; on the other hand, tariffs are low on inputs if not produced in the area; finally, tariffs for inputs produced in the area are somewhat lower than tariffs on ouputs. It follows that cost exchange rates are likely to be substantially above the financial exchange rate, unless an enterprise uses only imported inputs in his production process, a

rather rare situation. In consequence, when cost of production in local currency are divided by the (financial) exchange rates, to derive a cost in dollars for comparison with the CIF price of comparable imports, an inefficiency illusion will result, because an inappropriately low exchange rate has been used for the conversion. Knowledge of the respective cost exchange rate would be needed in order to make a proper comparison.

Unfortunately, the inefficiency illusion is not the only reason why competitiveness in world markets as usually calculated is not a good measure of efficiency in the real world of Central America. A second, and rather powerful reason arises from the pricing of labor. In the competitive labor market and at full employment, the wage payed in the market is a good indicator of the scarcity value of labor. In conditions where there is substantial unemployment or under employment, as occurs in Latin America, it is well recognized that the real scarcity value of labor is lower than the market wage. The latter is held up by a variety of social arrangements which include minimum wage legislation, union management contracts, work sharing, etc.. In taking the firm's costs as a starting point for efficiency calculations, it is inevitable that labor should be costed at what it actually gets paid, i.e. at the market rate. If that market rate overstates its real scarcity costs, however, it will also be true that the costs on the which the efficiency

calculation is based will be inflated by the corresponding amount, thus adding a further element to the inefficiency illusion.

Something similar may occur with capital. Whereas it is generally thought that in less developed countries capital is subsidized for business use, in comparison to its real scarcity, at the same time there is also abundant evidence to indicate that there is widespread underutilization of capacity.[3/] With such underutilization, marginal costs, i.e. costs of production on already installed capital, are obviously much lower than costs that involve increasing installed capacity. Thus, it is appropriate in such circumstances to exclude fixed costs from the efficiency calculation. Accounting data usually present average costs and thus would again signify a starting point for an efficiency calculation which involves an upward bias and therefore another contribution to the inefficiency illusion.[4/]

In the event that capacity is not underutilized and capital is indeed subsidized for the use of the firm, then it would be an offset to the inefficiency illusion equivalent to the incidence of that subsidy. However, once again, there is a further element operating in the opposite direction, arising from the cost of working capital. Working capital in the production process essentially consists of embodied labor and raw materials. In so

far as these have an accumulated? cost as a result of tariffs, labor market imperfections, etc., working capital requirements will be correspondingly enlarged and the private cost will be correspondingly larger than the social cost, thereby again raising the inefficiency illusion.

In some, the manner in which factor remunerations are determined in the usual LDC combines with the effect of input tariffs to make market competitiveness a very poor indicator of economic efficiency. Fortunately, a more appropriate indicator is available and to this we now turn.

II. NATIONAL ECONOMIC EFFICIENCY

A measure of national economic efficiency needs to be based on evaluations of output and input which are independent of distortions in the domestic market and which allow comparability across different products.

The logical starting point for evaluating output in a small trading economy is world price. To that extent, national economic efficiency departs from the same initial point as the more simple competitiveness calculation. Once having valued output at world price, the material inputs used in the production process are also valued at their world prices and the resulting amount is subtracted from the value of ouput at world prices. The difference can be interpreted as value added by the domestic production process but measured at world prices. Alternatively, it can be regarded as the foreign exchange saved or earned by assembling the product domestically. Now, it will be immediately obvious that the calculation of such a world priced value added or such foreign exchange production can be calculated for a wide range of products, and since a dollar is a dollar, it makes the unit of product comparable across a wide range of outputs.

In order to transform a set of inputs into an output, primary factors of production will be required, i.e., labor and capital

of various kinds need to be used. Thus, there will be a cost attached to producing the value added (foreign exchange). These costs are properly measured at the true scarcity values of labor and capital in the economy, more commonly called shadow prices.

When the cost of domestic factors at these shadow prices is expressed as a ratio of the foreign exchange generated, we obtain a number called the domestic resource cost of foreign exchange.[5/] This ratio tells us how many 'pesos' worth of domestic resources at shadow prices it costs to produce a dollar's worth of value added, priced at international prices. Since the shadow prices of factors measure the true scarcities, they are free of the distortions which affect the market prices and they are also applicable across the economy to a wide spectrum of activities. Hence, the domestic resource costs of foreign exchange measure satisfies the independence requirement for a measure of national economic efficiency.

With the domestic resource cost of foreign exchange (DRC) measured, it is possible to order activities from the least costly to the most costly. Naturally, the least costly will be the most efficient activity, and the most costly will be the least efficient activity. Somewhere along the line, an activity will become too costly to be worth doing. That cut-off point is given by the marginal social utility of foreign exchange, also

known as the shadow price of foreign exchange. We can therefore conclude that activities which have a DRC less than the shadow price of foreign exchange are efficient and activities which have a DRC above the shadow price of foreign exchange are not efficient.[6/]

The domestic resource cost of foreign exchange can be calculated at various levels of economic aggregation. Thus, it can be calculated at the firm level for a single of the firm's products or for all the firm's products together. Likewise, it can be calculated at the level of an economic sector at whatever number of digits of classification seems appropriate to the exercise at hand. Moreover, it is possible to examine jointly a cluster of activities with suppliers and users all considered as one total complex. For convention's sake, the analysis of a single sector, typically at the two to four digit level of aggregation yields an index called the <u>direct</u> domestic resource cost of foreign exchange. Correspondingly, when a whole chain of production is aggregated together so that one looks at direct and indirect value added entering into a product, the resulting measure is called the <u>total</u> domestic resource cost of foreign exchange. Because sectors differ in productivity, the DDRC and the TDRC for the same sector will typically also diverge and the orderings of sectors are unlikely to be the same. Which one is appropriate to examine depends on the question being asked. If the question

relates to single sectors, taken separately from their suppliers, the DDRC is the appropriate index. If on the other hand, the question is one of expansion of a sector and its supplying activities together, then the TDRC is the appropriate indicator.[7/]

DRC calculations can also differ by the nature of the world prices used. If a country has a range of trading partners from whom similar merchandise can be bought at different prices, the DRC will depend in good part on which of these "world prices" is used as the bench-mark for comparison. In the case of an economic integration area such as the Central American Common Market, this question arises quite clearly with regard to intra-area trade which is transacted at prices which are above world market prices by some margin of preference. The options in this case are to regard purchases and sales to partner countries within Central America as transactions undertaken at "world prices." Or, alternatively, it is possible to deflate those prices to make them equivalent to those corresponding to third countries. Again, which of these assumptions are appropriate depends on the question being asked.

The shadow prices used can also differ according to the circumstances. One typically wishes to measure marginal social cost of factors for the initial conditions to which a decision

corresponds. But such situations can vary quite substantially across the economic cycle or across a policy cycle, or even across time. Taking cyclical and policy elements into account yield so-called "second best" shadow prices. Taking time into account would involve a time series of DRC's or alternatively, a present value calculation. Whether it is desirable and necessary to go to that level of sophistication depends once again on the nature of the question being asked. Present practice has so far concentrated on obtaining representative point estimates which have not incorporated variations across time.

When the national economic economic efficiency calculation as reflected in a DRC computation is compared to a simple competitiveness analysis in which the total costs are divided by the financial exchange rate, some common elements as well as a number of differences stand out. The main common elements are three:

(i) both calculations take the observed cost structure of production as given;

(ii) neither usually deals with non-existing industries, for no cost data is usually available for them;

(iii) both use world prices as reference points.

The differences, on the other hand, are quite substantial. The

principal ones are:

(i) national economic efficiency is usually computed on a value added basis, while competitiveness operates on a total cost basis;

(ii) national economic competitiveness operates with the shadow prices of factors, where competitiveness uses market rates;

(iii) national economic efficiency uses the shadow price of foreign exchange as a benchmark, while competitiveness uses the financial exchange rate.

Given these differences, it is not surprising for national economic efficiency calculations to produce substantially different results from simple competitiveness analysis. This difference involves not only a difference in level of assessed efficiency but also a difference in ordering of sectors: there is every reason to suppose that sectors ordered from most to least efficient according to DRC will bear little similarity to an ordering of sectors from most to least competitive. It follows, therefore, that a sector might be quite uncompetitive in the marketplace and yet be quite efficient and also vice-versa, a sector may be nationally inefficient but at the same time be competitive in the marketplace.

These differences are usually accounted for by the effects of

protection and market distortions on competitiveness. The lack of correlation of market competitiveness and national economic efficiency means that there is no effective substitute for a direct measurement of national economic efficiency. To the results of recent measurements of this kind for Central America we now turn.

III. EMPIRICAL MEASUREMENTS OF NATIONAL ECONOMIC EFFICIENCY FOR CENTRAL AMERICA

Calculations for total DRC's are available on a comparable basis for Guatemala and Honduras.[8/] Both sets of calculations have been undertaken at the firm level and then aggregated to the four-digit ISIC classification level. Shadow prices used are of the second-best variety, and observed prices for international transactions have been regarded as world prices, i.e., no adjustment has been made to prices of trade within Central America.[9/] Since the original data are at the firm level, a dispersion is observed in each sector. Classifying sectors into efficient or inefficient ones on the basis of their average DRC therefore did not seem appropriate. Rather, a sector was considered efficient if 80% of its gross value of production in domestic prices had DRC's which were lower than the shadow price of foreign exchange. Correspondingly, a sector was regarded as inefficient if 80% or more of its output had a DRC above the shadow price of foreign exchange, or a negative DRC. In between these two categories a gray area was defined, of sectors in doubt.

Data for Guatemala are shown in Tables III.1 and III.2. They correspond to early 1983, and are measured in quetzales per dollar. Note that there is a distinction in that Table III.1

TABLE III - 1

GUATEMALA

DOMESTIC RESOURCE COST OF FOREIGN EXCHANGE IN THE SHORT RUN
(Quetzales per Dollar)

ISIC	Efficient Sectors	Min	Aver	Max
3111	Slaughter of Cattle & Preparation of Meat	0.12	0.24	1.21
3113	Canning of Fruits and Vegetables	0.24	0.39	0.53
3114	Fish & Seafood	0.27	0.27	0.27
3116	Preparation of Milling products	0.04	0.16	-1.46
3117	Preparation of Bakery Products	0.21	0.63	1.24
3118	Production and Refining of Sugar	0.06	0.22	0.57
3119	Production of Chocolate and Sweets	0.13	0.55	1.10
3121	Various Foods	0.15	0.27	1.26
3122	Concentrates	0.18	0.42	-2.92
3131	Alcoholic Beverages	0.14	0.38	0.88
3133	Beer	0.08	0.14	0.24
3134	Sodas and Non Alcoholic Beverages	0.17	0.20	0.39
3211	Spinning, Weaving, Finishing of Textiles	0.07	0.38	0.89
3212	Textiles exc. Clothing	0.31	0.35	-0.60
3213	Knit Products exc. Clothing	0.24	0.62	0.97
3215	Rope	0.40	0.46	-2.91
3219	Other Textiles n.e.s.	0.37	0.37	0.37
3220	Clothing exc. Shoes	0.14	0.31	-6.17
3231	Tanning and Leather Finishing	0.14	0.22	0.60
3232	Preparation and Dying of Hides	0.16	0.34	0.85
3233	Leather Products	0.03	-1.55	-1.11
3240	Shoes exc. of Rubber and Plastic	0.36	0.47	0.78
3320	Wooden Furniture	0.21	0.83	1.05
3411	Pulp, Paper, Cardboard	0.32	0.32	0.33
3503	Textile Subproducts	0.13	0.13	0.13
3511	Basic Chemicals exc. Fertilizer	0.12	0.19	0.43
3512	Fertilizers & Pesticides	0.06	0.12	0.19
3513	Resines, Plastics, Fibres, exc. Glass	0.41	0.41	0.41
3521	Paint, Varnish and Lacquer	0.20	0.35	-0.93
3522	Pharmaceutical Products and Medicines	0.12	0.17	0.43
3523	Cosmetics	0.03	0.16	0.81
3529	Chemical, n.e.s.	0.18	0.66	-6.23
3530	Petroleum Subproducts	0.84	0.84	0.84
3540	Coal and Asphalt Subproducts	0.15	0.15	0.15
3551	Tires and Innertubes	0.16	0.16	0.24
3559	Rubber Products exc. Tires and Innertubes	0.13	0.19	0.25
3560	Plastic Products	0.09	0.24	0.94
3610	Products of Clay, Ceramic and Porcelain	0.52	0.56	0.57
3620	Glass and Glassware	0.39	0.39	0.39
3691	Clay Products for Construction	0.39	0.39	0.39
3699	Concrete, Stone and Other Non-Metallic Prods.	0.11	0.26	7.14

TABLE III - 1
(Continuation)

GUATEMALA

ISIC	Efficient Sectors	Min	Aver	Max
3710	Basic Iron and Steel Products	0.12	0.28	0.58
3720	Basic Non-ferrous Metal Products	0.21	0.33	0.40
3811	Knives, Hand Tools and Ferrous Products	0.28	0.30	0.32
3812	Metal Furniture and Acces.	0.22	-0.29	-0.24
3813	Structural Metal Products	0.10	0.13	0.86
3819	Metal Products n.e.s. exc. Machinery	0.09	0.17	-3.20
3823	Wood and Metal Working Machinery	0.15	0.15	0.15
3829	Machines and Mechanical Equipment n.e.s.	0.49	0.88	1.16
3831	Electrical Machinery and Equipment	0.47	0.47	0.47
3832	Radio, TV and Communication Equipment	0.15	0.16	0.18
3834	Lighting Fixtures	0.41	0.41	0.41
3839	Electric Equipment n.e.s.	0.13	0.13	0.39
3843	Busses and Motorized Vehicles	0.10	0.35	0.76
3851	Professional and Scientific Equipment	0.25	0.28	1.09
3852	Photographic and Optical Equipment	0.13	0.18	0.20
3901	Jewelery and Acces.	0.22	0.23	2.26
3909	Toys, Office Equipment and Other n.e.s.	0.17	0.47	-23.50
	Doubtful			
3112	Milk Products	0.18	2.99	-0.73
3311	Wood Milling and Working	0.21	0.66	-1.61
3319	Wood and Cork Products n.e.s.	0.38	-0.50	-0.14
3412	Packaging Materials of Paper and Cardboard	0.17	1.06	-0.22
3420	Printing and Publishing	0.19	7.84	-2.04
	Inefficient			
3140	Tobacco Products	0.17	2.95	2.97
3214	Carpets and Rugs	-1.39	-1.39	-1.39
3419	Pulp, Paper and Cardboard Products	0.41	-0.25	-0.22
3573	Powder and Hairsetters	-0.81	-0.81	-0.81

141

TABLE III - 2

GUATEMALA

DOMESTIC RESOURCE COST OF FOREIGN EXCHANGE IN THE MEDIUM RUN
(Quetzales per Dollar)

ISIC	Efficient Sectors	Min	Aver	Max
3111	Slaughter of Cattle & Preparation of Meat	0.28	0.56	2.41
3113	Canning of Fruits and Vegetables	0.45	0.76	0.91
3114	Fish & Seafood	0.64	0.64	0.64
3116	Preparation of Milling products	0.08	0.38	-3.22
3118	Production and Refining of Sugar	0.27	0.82	1.78
3121	Various Foods	0.21	0.46	3.60
3122	Concentrates	0.39	0.78	-5.07
3131	Alcoholic Beverages	0.32	0.76	1.75
3133	Beer	0.23	0.41	0.80
3134	Sodas and Non Alcoholic Beverages	0.33	0.37	0.59
3211	Spinning, Weaving, Finishing of Textiles	0.25	0.77	3.07
3212	Textiles exc. Clothing	0.46	0.88	-0.95
3213	Knit Products exc. Clothing	0.77	1.15	1.82
3215	Rope	0.71	0.80	-5.07
3219	Other Textiles n.e.s.	0.59	0.59	0.59
3220	Clothing exc. Shoes	0.25	0.48	-8.69
3231	Tanning and Leather finishing	0.31	0.45	1.18
3233	Leather Products	0.03	-2.52	-1.69
3240	Shoes exc. of Rubber and Plastic	0.64	0.84	1.44
3411	Pulp, Paper, Cardboard	0.57	0.73	0.78
3503	Textile Subproducts	0.32	0.32	0.32
3512	Fertilizers & Pesticides	0.11	0.20	0.28
3513	Resines, Plastics, Fibres, exc. Glass	0.66	0.66	0.66
3521	Paint, Varnish and Lacquer	0.37	0.62	-1.43
3522	Pharmaceutical Products and Medicines	0.17	0.28	0.85
3523	Cosmetics	0.04	0.24	1.40
3530	Petroleum Subproducts	1.12	1.12	1.12
3540	Coal and Asphalt Subproducts	0.25	0.25	0.25
3551	Tires and Innertubes	0.26	0.27	0.53
3559	Rubber Products exc. Tires and Innertubes	0.22	0.39	0.53
3560	Plastic Products	0.17	0.56	1.63
3610	Products of Clay, Ceramic and Porcelain	0.65	0.72	0.88
3620	Glass and Glassware	1.13	1.13	1.13
3691	Clay Products for Construction	0.87	0.87	0.87
3710	Basic Iron and Steel Products	0.21	0.50	1.12
3720	Basic Non-Ferrous Metal Products	0.33	0.54	0.68
3811	Knives, Hand Tools and Ferrous Products	0.43	0.52	0.80
3812	Metal Furniture and Acces.	0.57	-0.55	-0.44
3813	Structural Metal Products	0.12	0.19	1.59
3819	Metal Products n.e.s. exc. Machinery	0.18	0.33	-7.46
3823	Wood and Metal Working Machinery	0.26	0.26	0.26

142

TABLE III - 2
(Continuation)

GUATEMALA

ISIC	Efficient Sectors	Min	Aver	Ma
3829	Machines and Mechanical equipment n.e.s.	0.59	1.07	1.41
3831	Electrical Machinery and Equipment	0.61	0.61	0.61
3832	Radio, TV and Communication Equipment	0.21	0.26	0.30
3834	Lighting & Fixtures	0.58	0.58	0.58
3839	Electric Equipment n.e.s.	0.17	0.18	0.50
3843	Busses and Motorized Vehicles	0.12	0.55	0.93
3851	Professional and Scientific Equipment	0.56	0.80	1.60
3852	Photographic and Optical Equipment	0.29	0.34	0.35
3901	Jewelery and Acces.	0.48	0.49	3.18
	Doubtful			
3112	Milk Products	0.27	6.40	-1.67
3117	Preparation of Bakery Products	0.47	1.27	2.49
3119	Production of Chocolate and Sweets	0.27	0.96	2.65
3232	Preparation and Dying of Hides	0.25	0.79	1.96
3311	Wood Milling and Working	0.38	1.10	-2.49
3319	Wood and Cork Products n.e.s.	0.68	-0.92	-0.28
3320	Wooden Furniture	0.84	1.15	2.08
3412	Packaging Materials of Paper and Cardboard	0.35	1.90	-0.39
3420	Printing and Publishing	0.33	8.26	-4.39
3511	Basic Chemicals exc. Fertilizer	0.13	0.81	2.54
3529	Chemical, n.e.s.	0.26	0.84	-10.63
3699	Concrete, Stone and Other Non-Metallic Prods.	0.19	0.68	11.33
3909	Toys, Office Equipment and Other n.e.s.	0.31	0.87	-49.72
	Inefficient			
3140	Tobacco Products	0.36	5.54	5.58
3214	Carpets and Rugs	-1.89	-1.89	-1.89
3419	Pulp, Paper and Cardboard Products	1.33	-0.49	-0.40
3573	Powder and Hairsetters	-1.11	-1.11	-1.11

tabulates TDRC for the short run, i.e., using existing installed capacity, which is priced at zero, while Table III.2 shows TDRC for the medium term, which assumes a replication of existing capital equipment, at existing levels of technical productivity. The shadow price for foreign exchange for 1983 was estimated at Q2.103 for the short run and Q1.424 for the medium term.[10/]

When the total value of production in efficient sectors is summed, one finds that 88.7% of Guatemalan industrial production was efficient in national economic terms in 1983 for the short run, while 82.5% was also efficient in the medium term. On the other hand, 1% was inefficient in the short run, and 1.1% inefficient in the medium term. Sectors in doubt grouped 4.7% of production in the short term and 10.8% in the medium term. 5.6% of production was not covered by the sample.

Tables III.3 and III.4 show the comparable data for Honduras in 1983. In this case, we have total domestic resource cost per dollar measured in Lempiras, with a cut-off point at a shadow price of L2.97 for the short run and L2.44 for the medium run. 88% of production was efficient for the short term, and 56.1% efficient for the medium term. 2.9% was inefficient in the short term, and 12.6% ineffient in the medium term. The sectors in doubt comprise 8.6% for the short term and 27.2% for the medium term. 4.1% of production was excluded from the sample.

Table III - 3

HONDURAS

DOMESTIC RESOURCE COST OF FOREIGN EXCHANGE IN THE SHORT RUN
(Lempiras per Dollar)

ISIC	Sector	Min	Aver	Max
3111	Slaughter of Cattle & Preparation of Meat	0.42	0.57	0.77
3112	Preparation of Meat Products n.e.s.	0.36	0.78	1.86
3113	Canning of Fruit and Vegetables	0.93	3.41	-0.22
3114	Fish, and Seafood	0.50	0.58	0.84
3115	Vegetable and Animal Oils and Fats	0.48	0.99	1.41
3116	Preparation of Milling Products	0.58	1.67	-3.64
3117	Production of Bakery Products	0.42	0.48	0.85
3118	Production and Refining of Sugar	0.29	0.33	0.35
3119	Production & Refining Chocolate & Sweets	1.23	1.25	1.26
3133	Beer	0.66	0.66	0.66
3140	Tobacco Products	0.60	0.69	-1.69
3211	Spinning, Weaving and Finishing of Textiles	0.42	0.60	-13.50
3213	Knittwear exc. Clothing	1.23	1.63	5.60
3311	Sawmills and Woodworking	0.38	0.69	1.12
3320	Wooden Furniture and Acces.	0.80	0.94	1.42
3419	Pulp, Paper and Cardboard Products, n.e.s.	0.75	0.66	1.26
3420	Printing and Publishing	1.19	1.40	1.50
3511	Basic Industrial Chemicals exc. Fertilizers	0.29	0.29	0.29
3522	Pharmaceuticals & Medicines	0.31	0.93	1.09
3523	Cosmetics	2.17	2.28	2.96
3529	Chemical Products n.e.s.	0.80	5.23	-0.91
3551	Tires and Innertubes	1.17	1.22	1.41
3560	Plastics	0.57	1.01	-6.14
3692	Production of Cement, Calcium & Plaster	0.40	0.55	0.55
3699	Concrete, Stone and Other Non-Metallic Prods.	0.43	0.78	0.93
3812	Metal Furniture and Acces.	1.11	1.28	24.65
3819	Metal Products, n.e.s. exc. Machinery	0.71	1.16	1.56
3822	Machinery and Equipment	0.26	0.39	1.33
3832	Radio, TV and Communication Equipment	0.39	0.63	1.49
3839	Electrical Equipment n.e.s.	0.57	2.67	-0.27
3843	Busses and Motorized Vehicles	0.67	0.79	1.01
3909	Other Manufacturers n.e.s.	0.40	1.02	-0.45
	Doubtful			
3121	Various Foods	1.45	2.18	-1.98
3220	Clothing exc. Shoes	0.95	4.31	-1.98
3319	Wood and Cork Products n.e.s.	0.95	1.35	4.70
3559	Rubber Products exc. Tires and Innertubes	1.54	-4.68	-0.76
3811	Knives, Hand Tools and Ferrous Products	0.75	1.28	-3.61
3813	Structural Metal Products	1.02	-14.43	-27.44
3844	Motorcycles and Bicycles	0.49	1.34	-1.07
	Inefficient			
3131	Alcoholic Beverages	-0.98	-1.24	-1.48

Table III - 4

HONDURAS

DOMESTIC RESOURCE COST OF FOREIGN EXCHANGE IN THE MEDIUM RUN
(Lempiras per Dollar)

ISIC	Sector	Min	Aver	Max
3111	Slaughter of Cattle & Preparation of Meat	1.17	1.34	1.59
3114	Fish, and Seafood	1.49	1.66	1.88
3117	Production of Bakery Products	1.08	1.29	2.32
3118	Production and Refining of Sugar	1.04	1.06	1.12
3133	Beer	1.39	1.39	1.39
3140	Tobacco Products	1.25	1.39	-2.77
3211	Spinning, Weaving and Finishing of Textiles	2.25	2.62	-25.71
3311	Sawmills and Woodworking	0.96	1.52	2.18
3419	Pulp, Paper and Cardboard Products, n.e.s.	1.57	1.72	2.25
3511	Basic Industrial Chemicals exc. Fertilizers	0.57	0.57	0.57
3522	Pharmaceuticals & Medicines	0.52	1.71	2.02
3529	Chemical Products n.e.s.	1.48	9.40	-1.58
3692	Production of Cement, Calcium & Plaster	1.14	1.92	1.95
3699	Concrete, Stone and Other Non-Metallic Prods.	1.09	1.95	2.40
3812	Metal Furniture and Acces.	1.87	2.16	41.62
3822	Machinery and Equipment	0.53	0.70	1.91
3843	Busses and Motorized Vehicles	1.04	1.13	1.42
3909	Other Manufacturers n.e.s.	0.78	1.94	-0.70
	Doubtful			
3112	Preparation of Meat Products n.e.s.	0.97	2.00	5.11
3115	Vegetable and Animal Oils and Fats	0.78	2.11	2.85
3116	Preparation of Milling Products	1.78	4.36	-8.47
3213	Knittwear exc. Clothing	2.29	2.85	10.37
3220	Clothing Exc. Shoes	1.66	6.68	-3.49
3319	Wood and Cork Products n.e.s.	1.74	2.74	7.70
3320	Wooden Furniture and Acces.	1.33	1.58	2.50
3551	Tires and Innertubes	2.16	2.24	2.54
3560	Plastics	1.54	2.04	-11.12
3811	Knives, Hand Tools and Ferrous Products	1.52	2.59	-7.38
3813	Structural Metal Products	2.08	-24.24	-52.97
3819	Metal Products, n.e.s. exc. Machinery	1.44	2.34	3.14
3832	Radio, TV and Communication Equipment	0.92	1.30	2.69
3839	Electrical Equipment n.e.s.	1.01	4.50	-0.45
3844	Motorcycles and Bicycles	0.95	2.47	-1.62
	Inefficient			
3113	Canning of Fruit and Vegetables	2.52	8.21	-0.44
3119	Production & Refining Chocolate & Sweets	2.87	3.00	3.17
3121	Various Foods	3.00	4.50	-5.02
3131	Alcoholic Beverages	-1.84	-2.69	-3.47
3420	Printing and Publishing	2.46	3.28	4.19
3523	Cosmetics	3.71	3.77	4.20
3559	Rubber Products exc. Tires and Tubes	2.76	-8.50	-1.37

146

It is worth reflecting on the relatively large proportion of production that is found in efficient sectors in both countries, particularly in the short run. Some of this efficiency reflects the underemployment of labor. Another part reflects the existence of large amounts of unused capacity, some of it due to the depression reigning in Central America. Yet another part reflects the scarcity of foreign exchange (high shadow price) which was particularly noticeable as the Common Market ran into trouble in the 80's. The medium term figures remove one of these elements, namely the underutilization of capacity, replacing it by an assumption of the need to renovate equipment. Even so, the percentage of efficient sectors for Guatemala is quite considerable and still respectable for Honduras.

Were calculations to be undertaken on somewhat different assumptions, perhaps reflecting different circumstances, the results would naturally change. Of particular interest in this regard is the impact on the computations of taking the Central American price as given. If these were to be replaced by third country world prices, the value of sales to Central America would be reduced, and the cost of inputs bought from Central America would be reduced as well. These adjustments would affect the DRC's in opposite directions; which effect predominates depends on the relative importance of sales to and procurement from the Common Market for individual firms and sectors. It is very hard

as a result to guesstimate the impact although one might expect that for Guatemala, sales predominate over purchases and thus DRC's would rise, while the opposite would occur in Honduras. It is possible, morever, to undertake sensitivity analysis to test the stability of the results to various permutations and combinations of the assumptions. Thus, in the case of Guatemala, for example, reducing the world value of output by 15% in the short run calculation, transfers about 23% of production from efficient to doubtful but only increases measured inefficiency by $^1/_2$%. Recall in this context that the doubtful group comprises a circle range running from 79.9% efficient to 79.9% inefficient. For Honduras, the comparable excercise transfers 14% production to the doubtful category and adds nothing to the inefficient group. Even after this correction, Guatemala appears as having 66% of industrial production in the efficient group in the short run, while Honduras has 70%.

Various specific sectors also raise question marks that bear further detailed examination. For instance, in Guatemala, it is surprising to find that sector 3112, milk products, is in the doubtful category, and furthermore that it is very capital intensive (compare short and medium term DRCs). The answer probably lies in the difficulty of identifying a world price for fresh milk, on the one hand, and in the type of milk products involved (e.g. canning) on the other. One would also have

143

expected wood related production to be efficient. However, total DRC group the whole string of related activities together. Thus, efficient activities in the chain of production may be overwhelmed by other less efficient ones. Moreover, wood related activities clearly include a number of very efficient producers (e.g. min. DRCs).

In Honduras, wood related products appear in the doubtful group despite the country's endowment with forests. This finding may have the same explanation as in Guatemala, although the fact that forest exploitation is nationalized may also play a role. Alcoholic beverages (sector 3131) also presents questions, however, in this case, the bottles seem to be at fault rather than the distilling.

No doubt further examination would reveal additional anomalies. Yet the overall results are so robust to sensitivity analysis that they cannot be dismissed on the basis of casual examination of some sectors. On the other hand, further research would certainly appear to be justified.

IV. PROTECTION AND EFFICIENCY

Two different kinds of effects of protection on efficiency are usually distinguished: (a) allocative inefficiency, i.e., the allocation of resources to one sector rather than another because of the tariff, and, (b) X-inefficiency, i.e., the operation at more than minimum cost levels.

The DRC calculations presented in the previous section bear on the question of the allocative efficiency of Central American industrial production. Whether one regards this as good or bad depends in good measure on what comparison benchmark one wishes to use. There is no question that a range of efficiency exists. Thus if one chooses to compare all production to the most efficient of existing plants, then surely a lot of inefficiency exists. On the other hand, if one compares costs of production to the shadow price of foreign exchange, then a very large amount of efficient production exists. By the same token, if one starts from the assumption that the common external tariff was the prime determinant of the allocation of resources, then one could argue that the tariff was bad insofar as it fostered some inefficient industries, but one could also argue that it was good insofar as it made possible some efficient industries, indeed apparently a rather larger volume of these than the others. However, a definitive judgement would require much more to be known about

the actual empirical effect of tariffs on the allocation of resources in Central America as well as on the tipping points in the region, i.e., tariff levels below which no output would be forthcoming and no investment would take place. Moreover, information would be required on the evolution of costs over time, as well as of the speed of such evolution. Finally, it would be necessary to arrive at a judgement of the extent to which the observed situation and the associated shadow prices reflect the short run crisis and thus overstate normal efficiency.

The DRC data do clearly indicate that a theoretical expectation that protection leads to inefficiency does not receive clear support from the data.

On the question of X-inefficiency, the DRC calculations shed very little light. It could very well be that with lower tariffs, quantities of inputs required for the production process would also be lower and therefore the DRC's would be lower. The only piece of information that may have bearing on this issue comes from the range of variation of DRC's within sectors. However, this range must be interpreted with care, for even at the four-digit sector level, there is still substantial differentiation of product and therefore of process within each sector. On the other hand, it is consoling to note that even if

the tariffs have induced some X-inefficiency, 88.7% in Guatemala and 88% in Honduras of existing industrial production are nonetheless efficient in the short run, and 82.5% and 56.1% are efficient in the medium term.

On balance, the conclusions that one can arrive at from the DRC studies are the following: the case that protection has been bad for industrial efficiency in Central America is not proven; the case that protection has been good for Central America is not proven either! However, the evidence is stronger on the first point than on the second. For if tariffs had been bad for Central American efficiency, we shouldn't see so large a fraction of efficient output. By contrast, the existence of precisely such a large fraction of efficient production could be regarded as the result of a learning process induced by the tariffs. However, to adequately substantiate such inference, information on changing productivity would be needed, consisting at a minimum of DRC observations at different points in time for the same enterprises.

FOOTNOTES

1/ For early statements, see Diamand, Marcelo, Doctrinas Economicas, Desarrollo e Independencia, Buenos Aires: Paidos 1973, and Schydlowsky, Daniel M., "Latin American Trade Policies in the 1970's: A Prospective Appraisal", Quarterly Journal of Economics, May 1972.

2/ See Schydlowsky, "Latin American Trade Policies in the 1970's: A Prospective Appraisal", Quarterly Journal of Economics, May 1972 for a detailed discussion.

3/ For Latin America, generally, see Schydlowsky, Daniel M., "Capital Utilization, Growth, Employment, Balance of Payments and Price Stabilization", Planning and Short-term Macroeconomic Policy in Latin America, Jere Berman and James Hanson, eds., Ballinger, 1979; or "The Short Run Potential for Employment Generation on Installed Capacity in Latin America" in Human Resources, Employment and Development, volume 4, Latin America, Victor L. Urguidi and Saul Trejo Reyes, eds., Hong Kong: The MacMillan Press, Ltd, 1983, pp.311-347. For Costa Rica, see the above as well as "Utilizacion de la capacidad instalada y contratos de licencia: Restricciones o posibilidades para la reactivicion industrial", Ennio Rodriguez and Anabelle Ulate Q., Documento de Trabajo numero 35, May 1982, University of Costa Rica, Instituto de Investigaciones en Ciencias Economicas.

4/ If in addition to fixed capital, firms also have contractual debt, the calculation is further complicated. Payment of interest and amortization on such debt may well be a necessary part of the firm's cost calculation, since lack of sufficient profitability to service such debt will lead to bankruptcy. By comparison, from the economy's point of view, bankruptcy only signifies a transfer of assets from one economic agent to another and thus should not enter into the calculation. Consequently, a further source of inefficiency illusion would arise.

5/ This ratio was originally presented to the professional community in Bruno, Michael, "The optimal choice of import-substituting and export promoting projects", in Planning the External Sector: Techniques, Problems Policies, New York: United Nations, 1967. For a more recent review see Schydlowsky, Daniel M., "A Policy Maker's Guide to Comparative Advantage", World Development, April 1984.

6/ Note that if we have an activity where the value of ouput at world prices is less than the cost of the inputs at world prices, we will have a foreign exchange losing activity rather than a foreign exchange saving activity. Such activity is also known as one with negative value added at world prices. When taking the

ratio of the domestic resource cost to the net loss of foreign exchange, we will come up with a negative number. Such a number will be algebraically smaller than the shadow price of foreign exchange but nonetheless indicates an inefficient activity because it loses rather than saves foreign exchange.

7/ For discussion see Balassa, Bela and Schydlowsky, Daniel M., "Effective tariffs, the domestic cost of foreign exchange and the equilibrium exchange rate", Journal of Political Economy, February 1968; Bruno, Michael "Domestic Resource Costs and Effective Protection: Clarification and Synthesis", Journal of Political Economy, 1972; Lucas, Robert, "On the Theory of D.R.C. Criteria", Journal of Development Economics, vol. 14, 1984.

8/ Levy, Santiago, Rodrigo Parot, and Daniel M. Schydlowsky, "La Ventaja Comparativa de Corto Plazo en la Produccion Manufacturera de Guatemala", Boston University, Center for Latin American Development Studies, mimeo, January 31, 1984; Levy, Santiago, Rodrigo Parot, and Daniel M. Schydlowsky, "La Ventaja Comparativa de Corto Plazo en la Produccion Manufacturera de Honduras", Boston University, Center for Latin American Development Studies, mimeo, January 31, 1984.

9/ Chapter II, section 6 of each study discusses the issues of this approach in detail.

10/ The estimate for the medium term shadow price is lower than the estimate for the short run shadow price as a result of assuming that excess capacity will decline over time.

CHAPTER 5

IMPORT PROTECTION AND EXPORT SUPPLY

by

Juan J. Fernandez Ansola
Daniel M. Schydlowsky

CENTER FOR LATIN AMERICAN DEVELOPMENT STUDIES
Boston University, Boston, Massachusetts

TABLE OF CONTENTS

	Page
I. Introduction	1
II. Perfect Competition	4
A. The Perfect Substitutes Case	4
B. The Imperfect Substitutes Case	10
III. Monopoly	15
A. The Perfect Substitutes Case	15
B. The Imperfect Substitutes Case	19
IV. Global Effects	23
A. Effective Protection	23
B. General Equilibrium Effects	25
V. Conclusions	29

I. INTRODUCTION

It is intuitively obvious that import protection must affect export supply. However, there is more than one effect at work, and not all effects operate in the same direction. For example, import protection makes the domestic market relatively more profitable than the export market, thus, one would expect this to indicate a negative effect on export volume. On the other hand, it may well be that without import protection, no production would occur at all, and therefore no exportable surplus would be available. Therefore, protection would have a positive effect on export volume. Likewise, an import protection system will generate a revaluation of the exchange rate under some circumstances. That will, in turn, depress the domestic prices of exportables, and thereby the costs of later stages of fabrication of exportables. Now, the revaluation of the exchange rate should reduce exports, while the lowering of costs of processing industries would act in the opposite direction.

In general, it is useful to distinguish two different levels of effects of import protection on export supply; (i) specific effects, which also can be thought of as partial equilibrium effects, and which refer to the direct impact of tariffs on

157

prices and costs; and, (ii) global effects, which also might be called general equilibrium effects, which comprise on the one hand, the effects of one firm's output being another firm's input, i.e. all the issues surrounding effective protection, and on the other, the impact of the protection system on the exchange rate and on aggregate demand. The two sets of effects are not independent of each other. Thus, the global effects are the result of the accumulation of the specific effects. At the same time, the global effects also modify the specific effects.

The specific effects of import protection naturally depend on the conditions in the market to which protection is applied. In turn, the state of the market will be determined substantially by the following elements:

(i) shape and level of domestic and export demand curves for the product being protected;

(ii) whether imports are perfect of imperfect substitutes of domestic production;

(iii) shape and level of cost curves of domestic production and supply of imports;

(iv) market structure, i.e. perfect competition, monopoly, monopolistic competition, etc..

As can be seen, the above set of elements yield a rather large number of computations and permutations. Of those, this paper

will isolate a few to treat in depth. The following sections will concentrate on analyzing the specific effects of protection on output and on inputs in domestic markets which are either perfectly competitive or monopolized, and when domestic production and imports are alternatively perfect and imperfect substitutes. A final section will touch briefly on the global effects involving effective protection, exchange rate, and aggregate demand adjustments.

II. PERFECT COMPETITION

A. The Perfect Substitute Case

(1) Product Protection

Consider the standard supply diagram shown in Figure 1. Domestic demand is shown as DD, and domestic supply as SS_1. The equilibrium price is shown as Pe_1. If we make the small country assumption, world supply will be a horizontal line at the level of the CIF price. Given an initial tariff of T_1, supply in the domestic market will be at the curve indicated by CIF + T_1. Under these conditions, there will be Q_1 supplied by domestic producers, E_1 demanded by domestic consumers, and the difference will be imported. As the industry matures, the cost curve shifts downward, and the domestic market looks as shown in Figure 2. We still have demand in the domestic market as DD, but we now have SS_2 as a new supply curve. This means that the equilibrium price will be Pe_2 at which demand and supply will equate in the domestic market. There will be no imports, and there will be water in the tariff equivalent to the numerical difference between the price at CIF + T_1 and Pe_2.

For exports to occur in this more mature market, the realized export revenue must be above the price Pe_2, otherwise, no

160

Figure 1

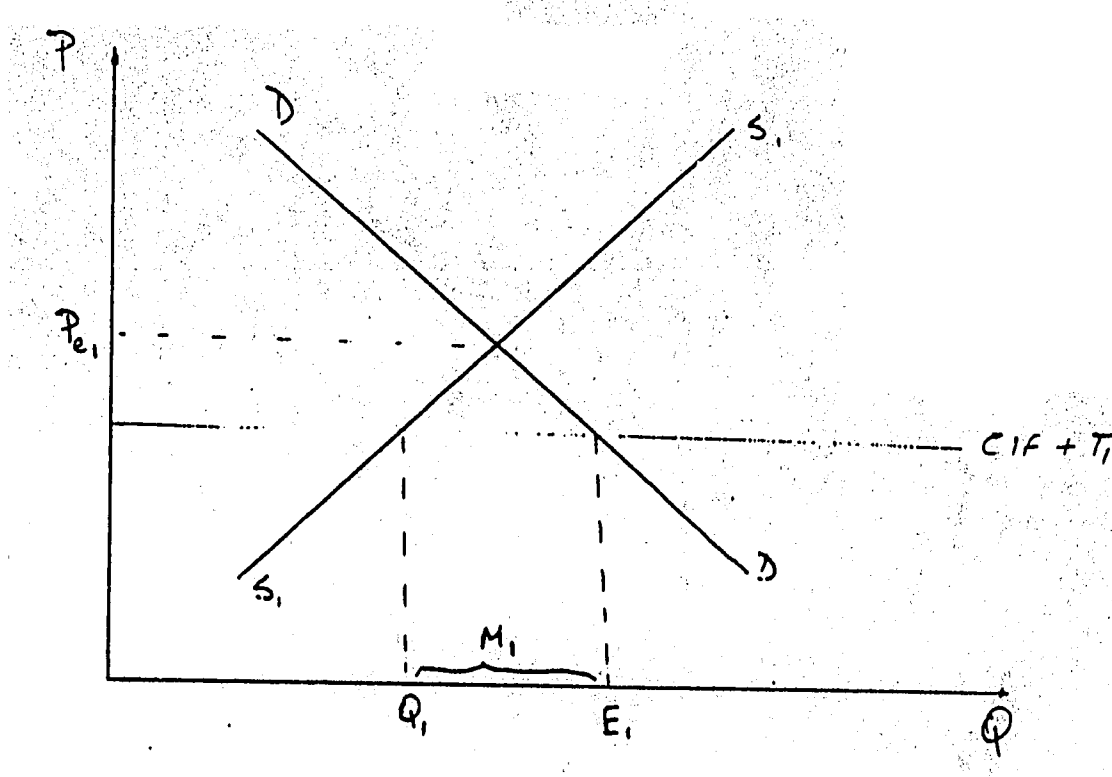
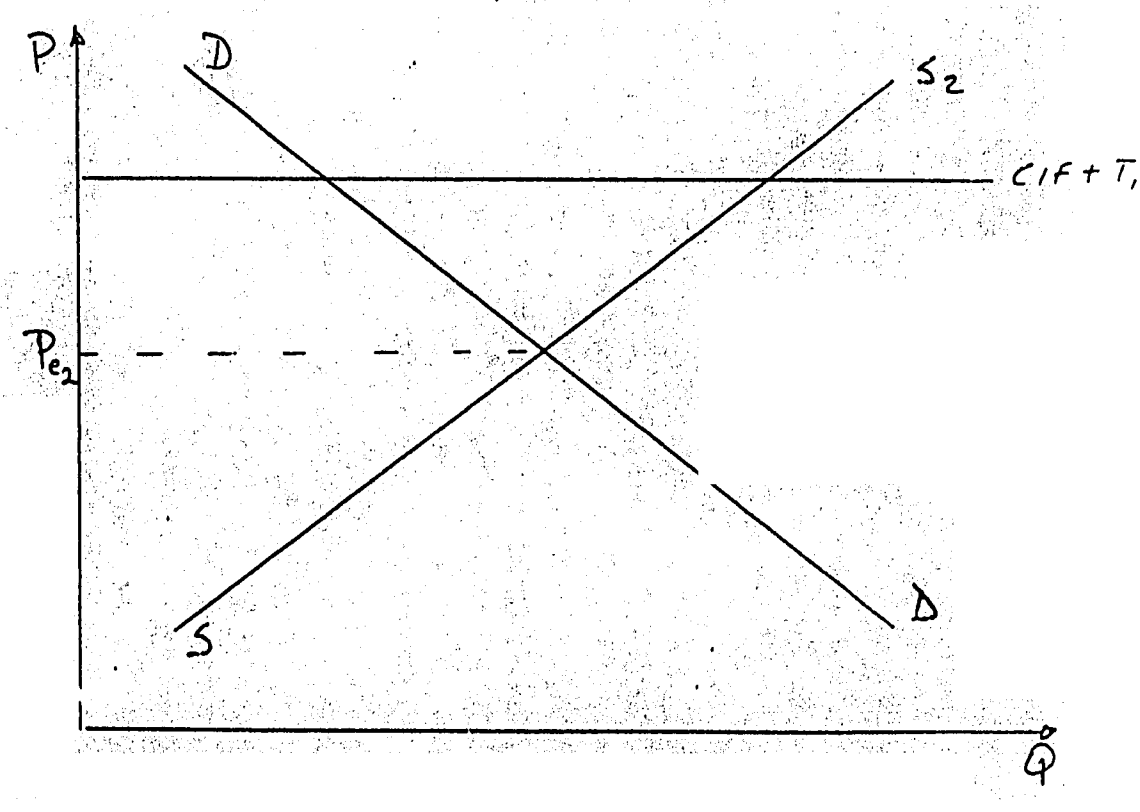


Figure 2



domestic supplier will be prepared to sell abroad. Thus, on the assumption that there are some export supports, we would have export demand PFOB + S greater than Pe_2. The relevant situation is shown in Figure 3, where domestic production appears as Q_2, domestic consumption appears as E_2, and the difference is exported.

Figure 3 indicates the only conditions under which exports can occur in a competitive market. Therefore, it is useful to examine it in a little greater detail. Notice in particular the following features:

(i) There is water in the tariff. If there were no water in the tariff, the CIF + T price would be below the FOB + S price; that would mean that it would be profitable to import merchandise for reexport in unprocessed fashion.

(ii) The tariff (T) has to be greater than the export supports (S) whenever the CIF and FOB prices are equal, otherwise, reexport will result. Since the assumption of no transportation is usually made in studies of protection, a situation in which exports can occur will lead to measured relative anti-export bias. If one were to assume, instead, that the CIF price is greater than the FOB price, there is some room for the tariff to be less than the export supports, in so far as it does not overpower the "natural protection" given by transportation costs.

162

Figure 3

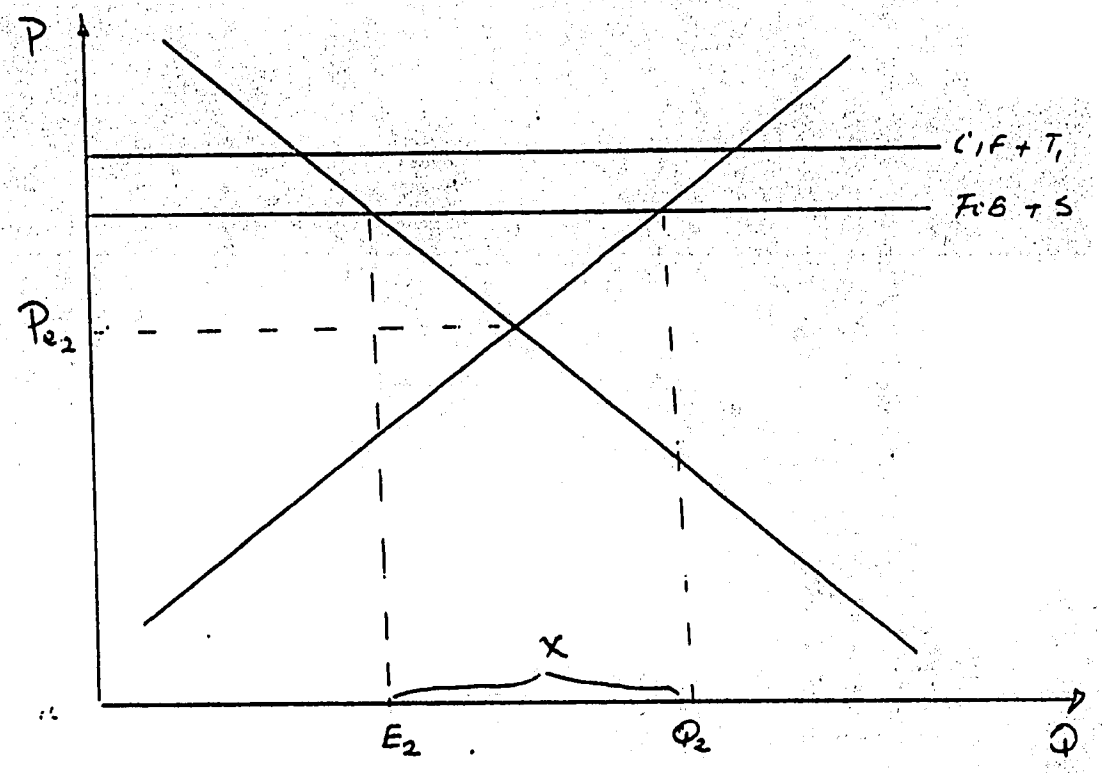
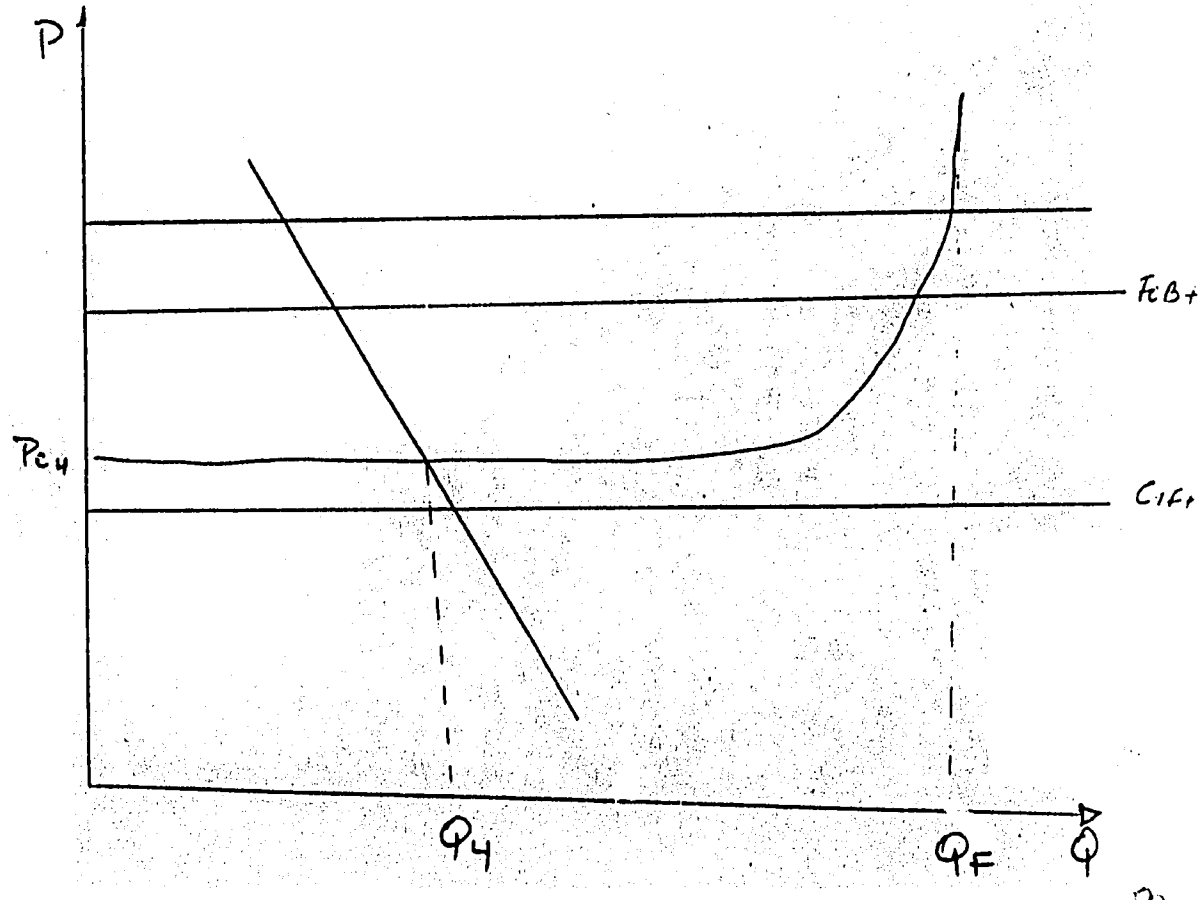


Figure 4



(iii) If the tariff is sufficiently lower than the export supports, or, as indicated before, if there is no water in the tariff, then reexports will occur. If export supports are only available for domestic production, and are enforced by a certificate of origin, indirect reexporting will occur; domestic consumers will buy imported goods in preference to domestic production, and domestic production will be exported in preference to being sold on the domestic market. As a result, the country will incur excess imports at the CIF price and excess exports at the FOB price. With the latter being lower than the former, then a loss of foreign exchange will ensue.

Now consider as an alternative the case of constant cost of production, which may be a better approximation of modern industrial process than the more standard upward-sloping supply curve. The case of such a market is shown in figure 4. Again, DD is the demand, SS is the supply, and imports come in at CIF + T_1. Domestic price will now settle at Pe_4, and the quantity domestically produced and sold will be Q_4. Notice that in the diagram no imports come in, there is water in the tariff, and excess capacity of the amount Q_4QF exists. Were T_1 to be lowered so that CIF + T_2 were below the horizontal part of the cost curve, domestic production would shut down, and the whole of domestic demand would be satisfied from imports.

For exports to take place in this market, it is necessary once again for export revenue (FOB + S) to be greater than the domestic price, which in this case is exactly equal to the constant cost of production. Once again, it will be true that for exports to occur, water must exist in the tariff, that the tariff must be greater than the export supports, except insofar as a CIF price exceeds the FOB price, and that if these conditions are not adhered to, reexports directly or indirectly will ocurr.

One might think that these results are dependent upon the small country assumption on the export side, i.e. that an infinitely elastic demand curve at FOB + S is essential. Thus, it is useful to modify that assumption and examine the effect. A certain amount of empirical data indicate that from many small new exporters, the world market is really not an undifferentiated whole. Rather, new exporters sell into particular market niches, on the basis of geographic or other differentiation. Thus, the demand curve facing a new exporter might be thought of as consisting of a number of downward steps of limited size, such as depicted in Figure 5. Naturally, as exporting experience grows, the length of these steps, i.e. the size of each particular market, expands. But at any moment in time, the price elasticity in each market is extremely low or perhaps nonexistent.

When such an export market is incorporated into Figure 4, we obtain a market shown in Figure 6. Notice that the total demand curve now comprises portions coming from the downward-sloping domestic demand curve, and portions coming from the step-function world market demand. Under these market conditions, excess capacity need not be fully used up by export sales, even if these contribute to a significant extent to the level of output. For exports to occur in any market, the relevant FOB + support price must exceed domestic price which, in turn, equals domestic costs. However, in this case, FOB + support prices can exceed the CIF + tariff price, because reexport will not be as profitable as export of domestic products until installed capacity is fully utilized. Hence, water in the tariff will only be required for exports to go forward when there is no excess capacity.

We can now conclude the analysis of import protection under competition by noting that if tariffs alone are reduced, while export supports are maintained, trans-shipment and reexports will result in the small country case. If both tariffs and export supports are reduced, imports will go up, exports will go down, and if the liberalization is pursued far enough, domestic output may shut down all together. Maintaining a tariff with water in it and at a sufficient level to exceed the export supports by a appropriate margin is therefore clearly a

Figure 5

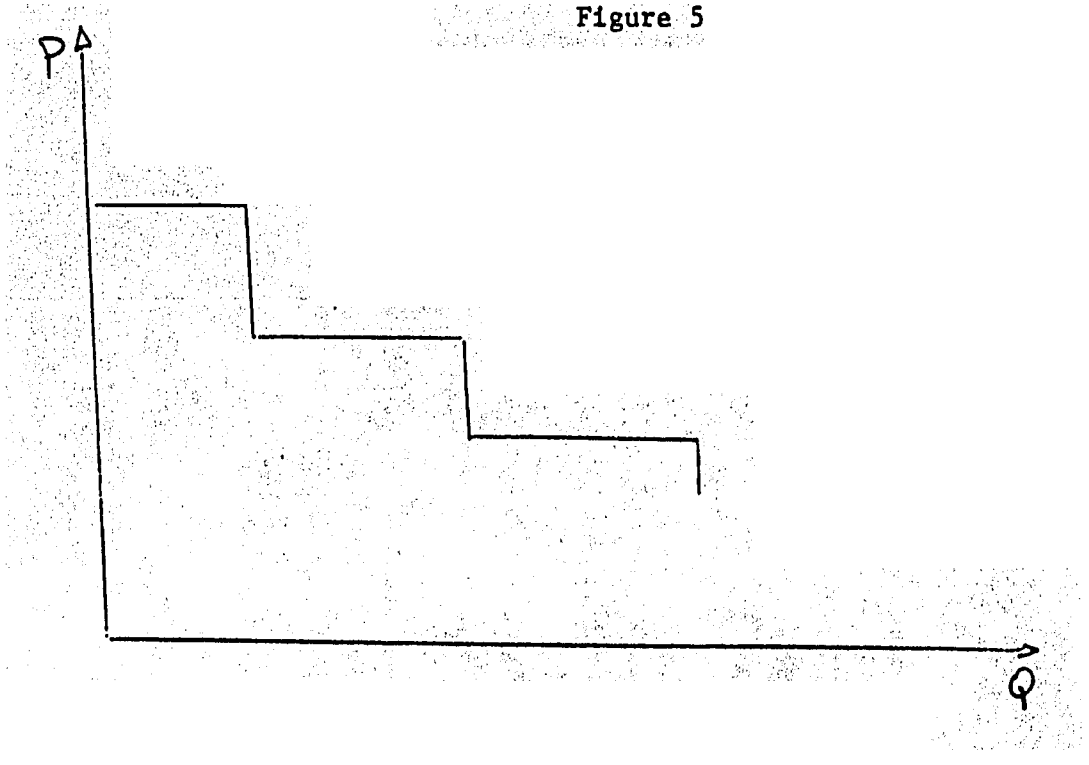
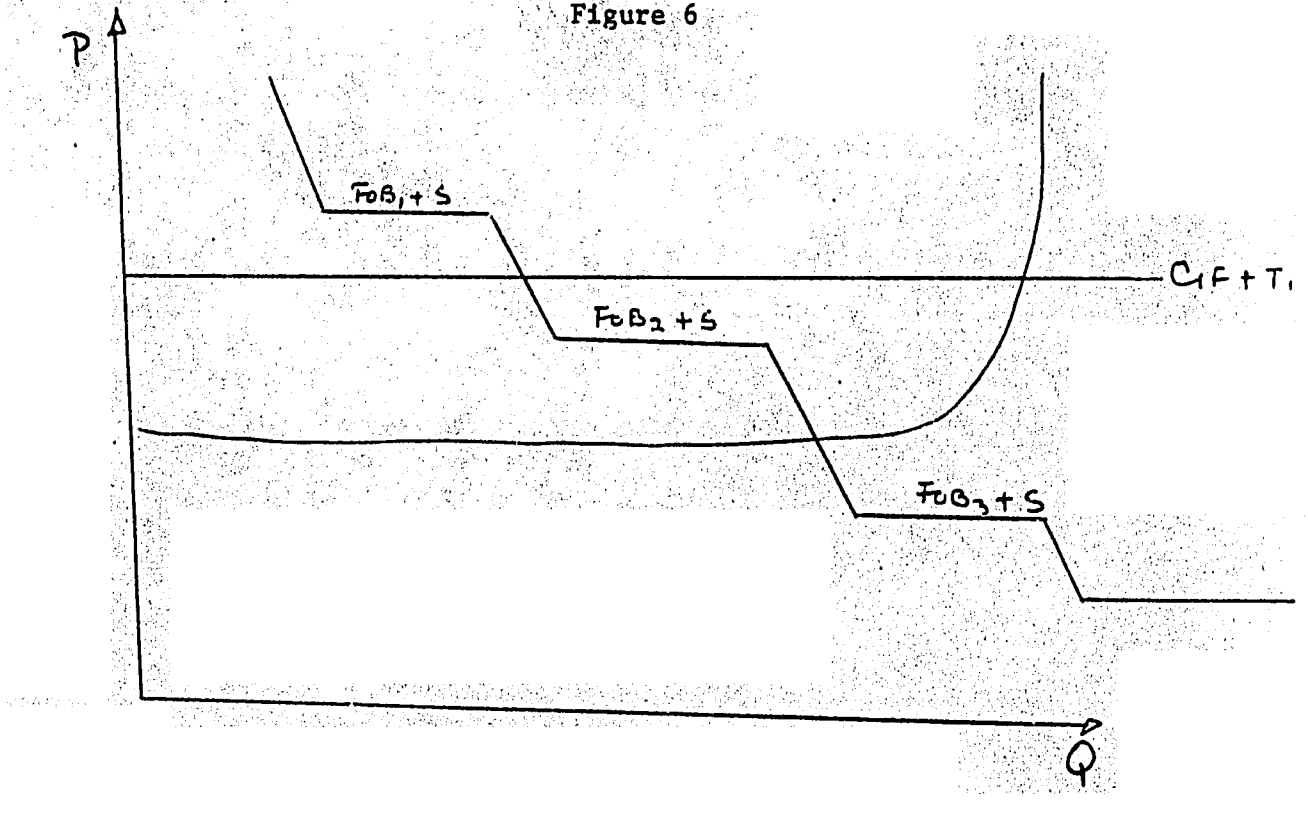


Figure 6



requirement for exports to exist under competitive conditions in the domestic market as long as the small country assumption is maintained or when no excess capacity exists.

(2) Input Protection

A tariff on an input raises costs directly if the input used is imported. It also raises costs if the input used is domestically produced but is import competing. Thus, input protection shifts the cost curve upwards and to the left. This can be seen in Figures 7 and 8. In the former, the upward-sloping nature of the supply curve causes exports to fall whereas the same result holds true in the cost case only insofar as marginal costs rise at capacity. Were a supply perfectly L-shaped, no effect would occur.

If the small country assumption is abandoned, and a step-function is adopted for export demand, the effect of input protection will vary depending on where the export steps are located compared to the cost curve. This can be seen in Figures 9 and 10. In the first of these, marginal demand is entirely domestic. Thus, as costs shift upward from SS to S_1S, the domestic price rises and domestic consumption falls as indicated. On the other hand, in the situation shown in Figure 10, costs have risen by enough to make the last step of export

Figure 7

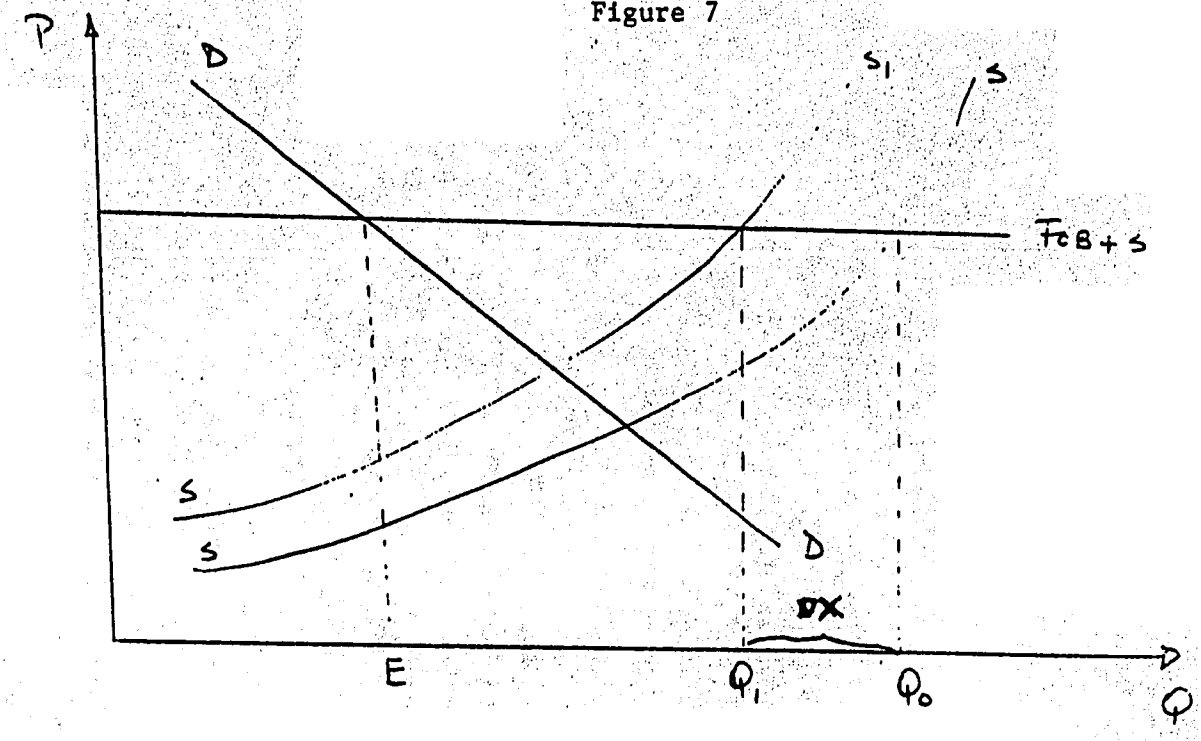


Figure 8

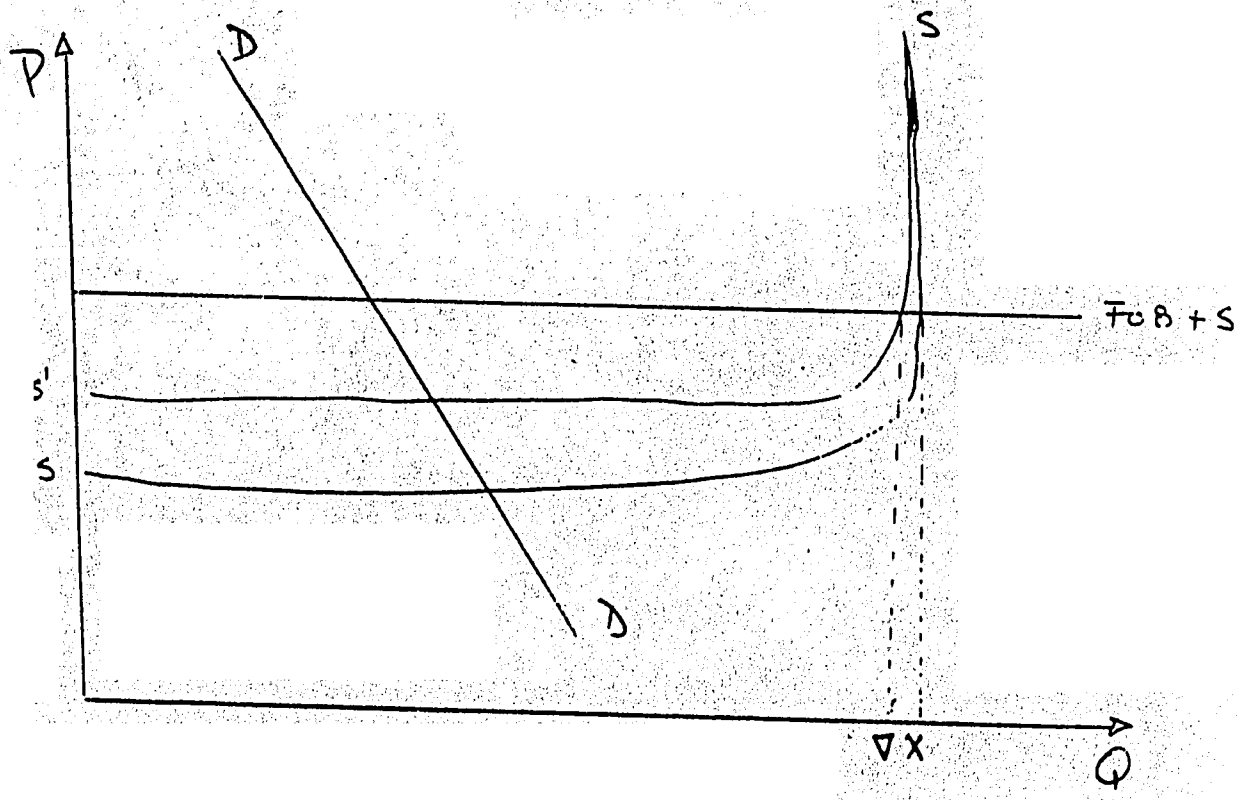


Figure 9

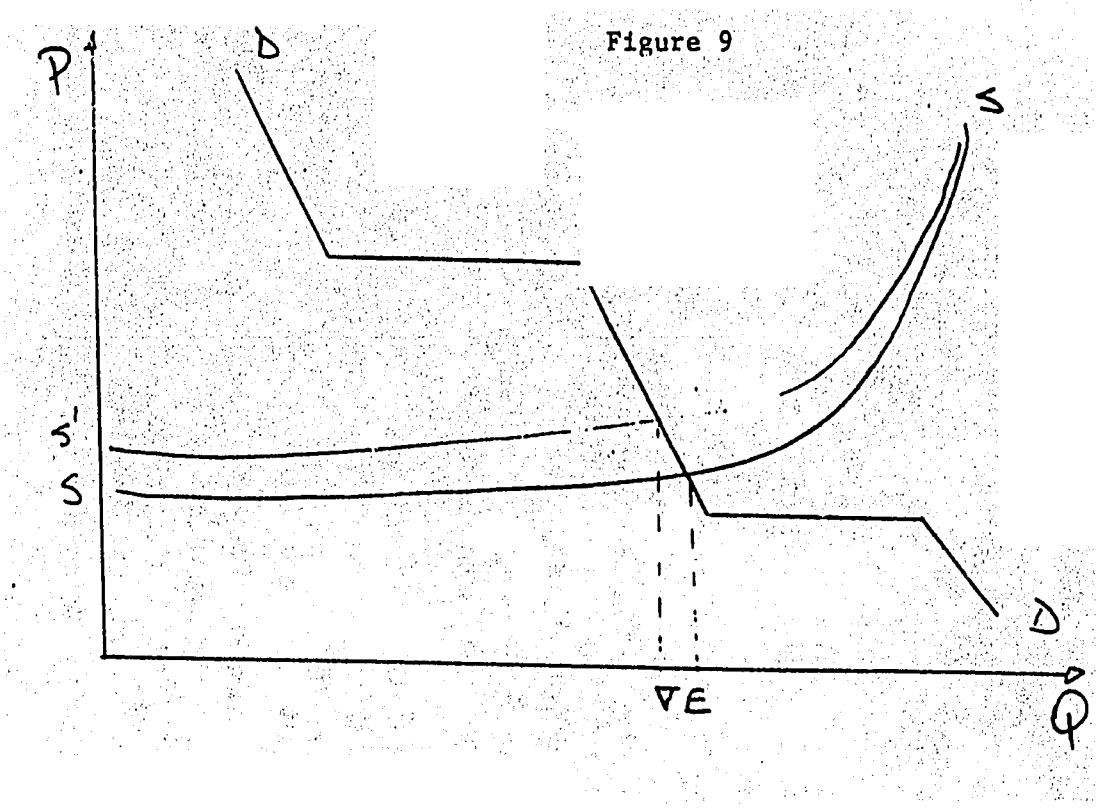
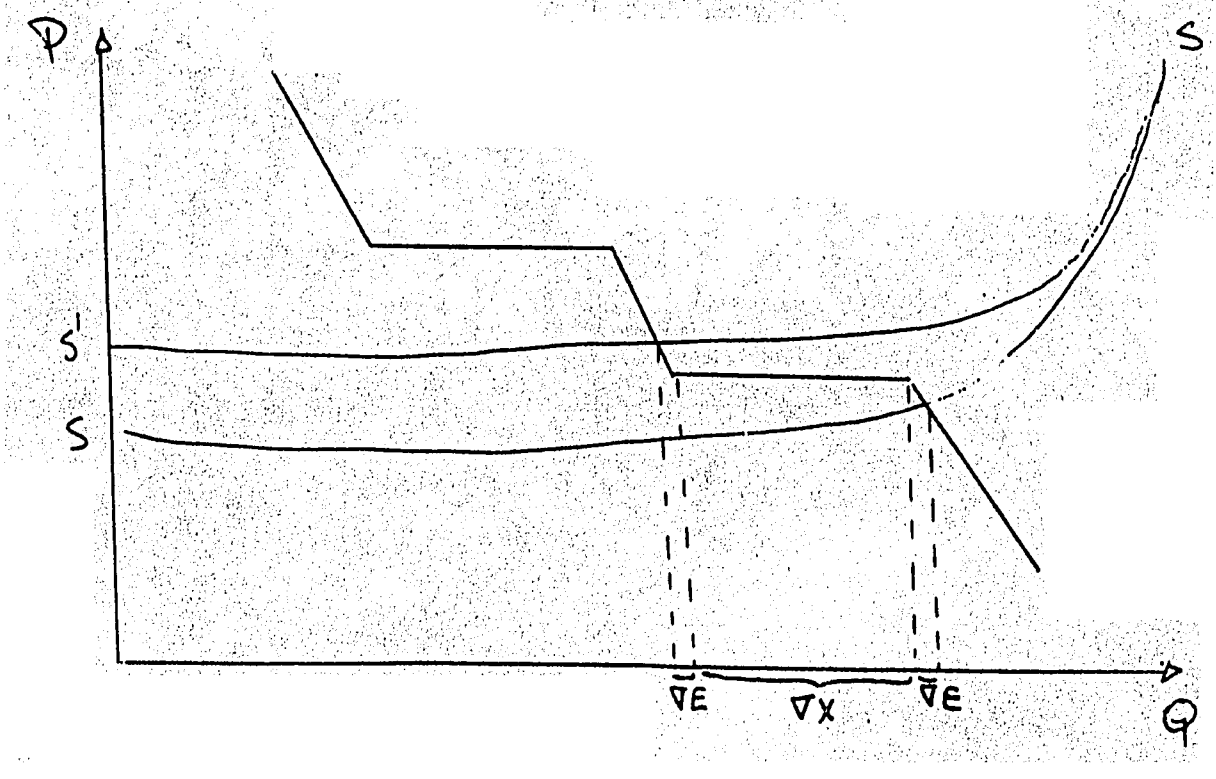


Figure 10



sales unprofitable. Thus, in this alternative, both exports and domestic demand have gone down.

Since input protection either reduces export supply or leaves it unchanged, by the same token, input liberalization either increases exports or leaves them unchanged. It should be noted, however, that one producer's input is another producer's output, hence, an input tariff will have the effects on output in the suppling industry corresponding to the conditions obtaining in that market.

B. The Imperfect Substitute Case

(1) Product Protection

When domestic output and imports are imperfect substitutes of each other, no import supply appears in the domestic product market diagram. Rather, the demand curve for the domestic product is a function of the price of imports, and therefore of protection. This can be seen in Figure 11. For exports to occur, The FOB + S price has to be greater than the domestic market equilibrium price Pe. Where this equilibrium price is situated depends on the level of demand, which in turn depends on the tariff of the imported imperfect substitute. When that tariff is reduced from say T_j to T^1_j, demand shifts to the

Figure 11

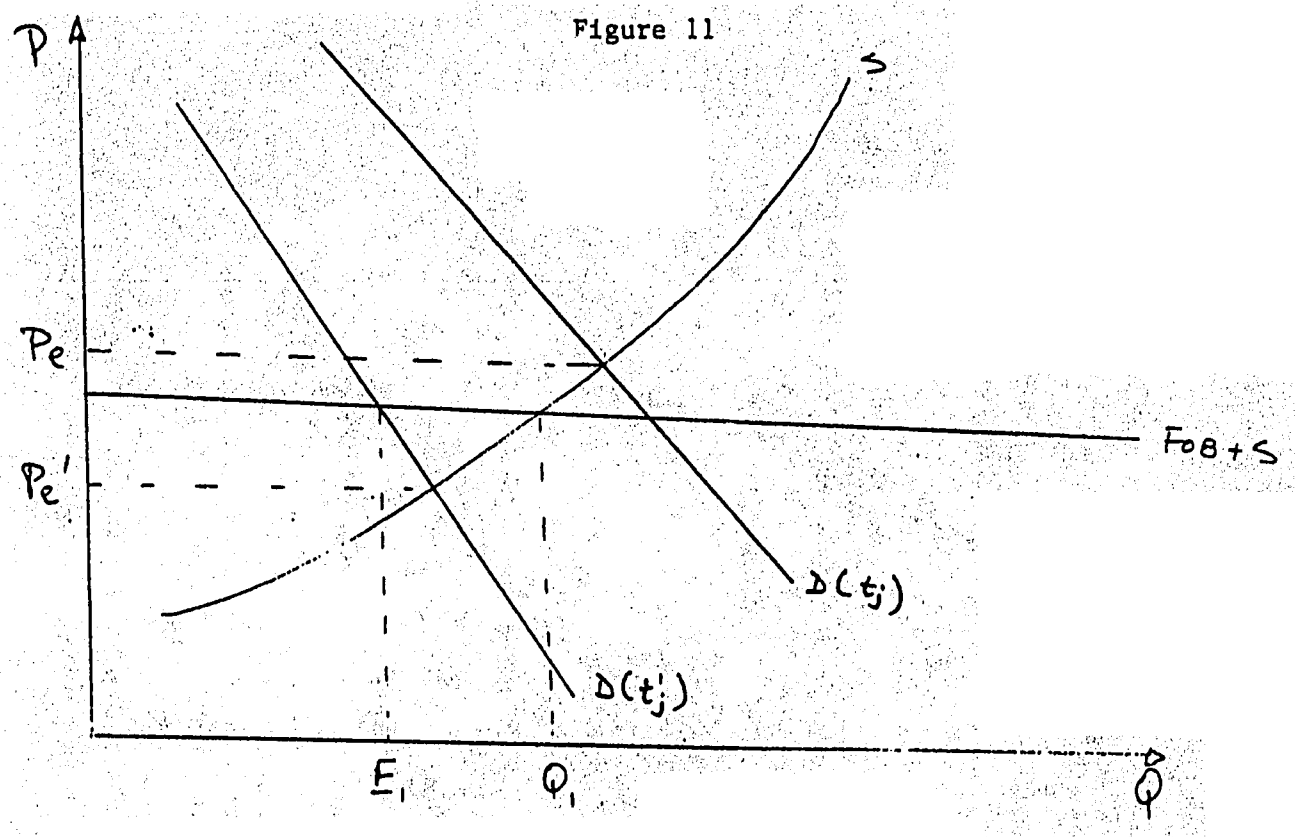
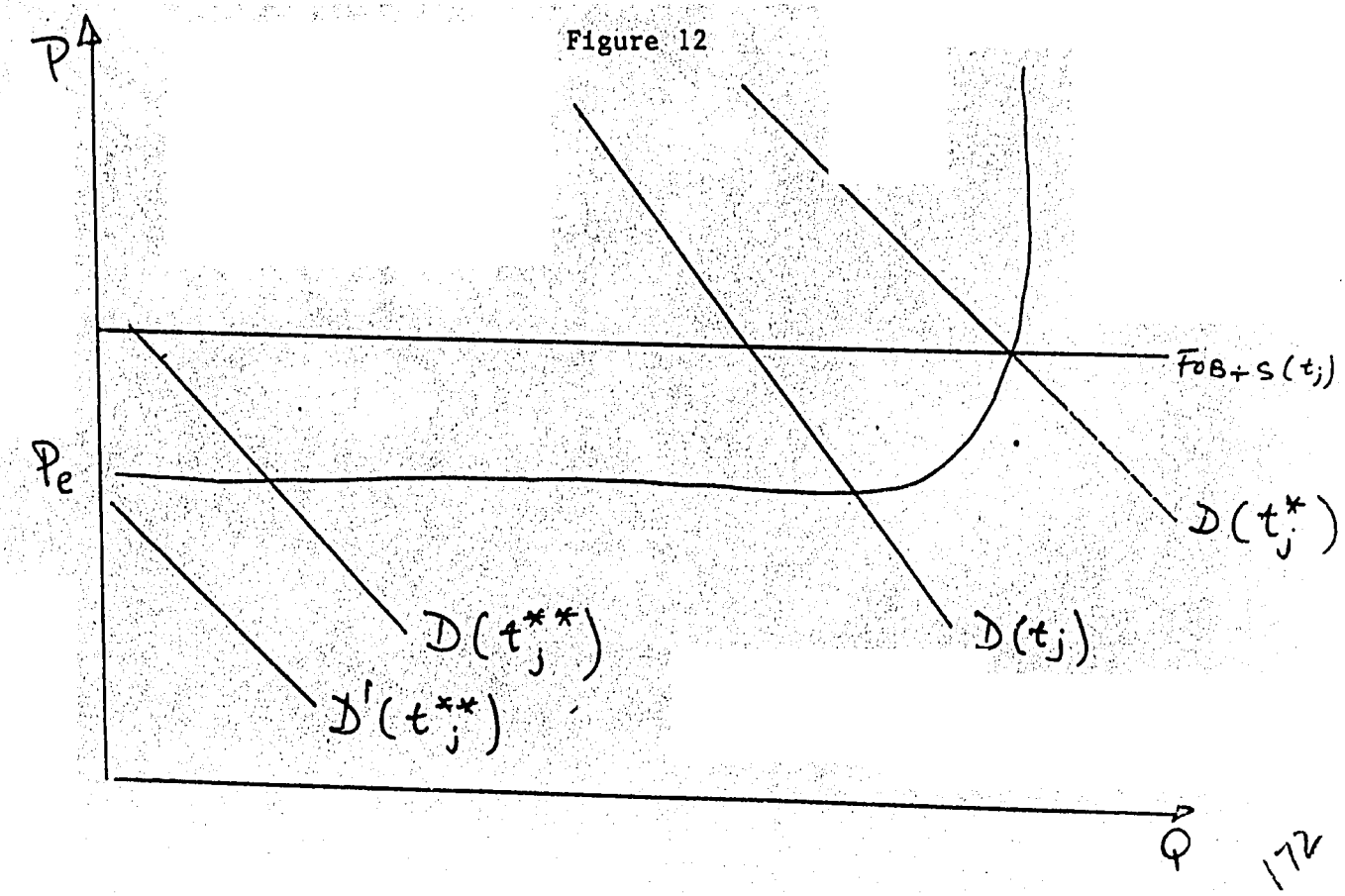


Figure 12



172

left are indicated in the diagram. Pe falls to Pe^1, and exportable surplus appears, equal to E_1Q_1. The lower the tariff on the imported substitute, presumably the less demand there will be for the domestic good, and therefore the greater the export supply. Naturally, the greater the elasticity of substitution between the domestic good and the import substitute, the greater the impact of the tariff on the movement of the domestic demand curve.

A number of further relationships between the price of the domestic product and the imported substitute are worth pointing out:

(i) the lower the tariff on the import, the less does the export support need to be, because the domestic equilibrium price rests crucially on the tariff;

(ii) there will be two-way trade in the similar goods: while the import substitute will be imported, the domestic product will be exported;

(iii) unless the tariff classification is very fine and/or the quality difference can be adequately quantified, it will appear as though there is water in the tariff; however, this water simply represents the unidentified quality difference;

(iv) the tariff on the import has to be greater than the export support on the domestic product by an amount

sufficient to prevent reexport of the imported good.

Notice in this regard that while export supports raise the price of the domestic product in the local market, they reduce the price in the foreign market. Thus, higher export supports will lower the amount of the domestic product sold domestically, shifting demand toward the import. However, if the export support were to become greater than the tariff, it would be obvious that the foreigner would be delighted to buy back his own product at a lower price. Indeed, the difference between CIF and FOB is once again crucial in the extent to which such a pro-export bias is sustainable. Certificates of origin can be helpful in preventing direct reexport; however, indirect reexport through excessive domestic consumption of imported goods and excess export of the domestic substitute cannot be prevented thereby. The possibility of reexport places a limit, therefore, on the extent to which tariff reductions on the imported good will stimulate exports of the domestic substitute.

The effect of the floor on the tariff of the imperfect imported substitute provided by the export supports is seen more clearly in the constant cost case shown in Figure 12. For exports to occur, FOB + S has to be greater than domestic costs, which are also equal to the domestic price. If tj is high enough, say greater than t*j, then domestic demand will be so great that

there will be no exportable surplus. On the other hand, if the tariff is low enough, reexports of imported goods will preempt the sale abroad of domestic production. Therefore, at some point the foreign demand curve, indicated in the diagram as FOB + S, becomes a function of tariffs. Whether with such a tariff, say t**j, there is any domestic demand left for the domestic product is open to question. In principle, it is possible that even at a price of the imported good below the cost of production of the domestic substitute, there will be some domestic consumers who prefer their own native home product. On the other hand, it is equally possible that at such a price, all buyers would prefer to buy the import. Such situations are indicated in the diagram as the $D(t^{**}j)$ and the $D^{1}(t^{**}j)$.

In conclusion, when imports are imperfect substitutes for domestic production, raising tariffs on the imported good will lower export supply, while lowering such a tariff will raise export supply up to a point where reexports become profitable. At this point, the export of the domestic good will be wiped out all together and domestic production may cease as well.

Now, consider further the case where export demand is not infinitely elastic at the FOB price, but the country faces a step-function such as that shown in Figure 13. Now, the tariff level on the competing import will regulate excess capacity in

the domestic market rather than exports, provided only that the tariff on the competing import is high enough to make the price of the import absolutely greater than the cost of production of the domestic substitute, after quality differences have been considered. Were that not the case, reexports would arise, and domestic production would be wiped out completely unless some fraction of domestic users maintained product loyalty to the home good.

(2) Input Protection

The tariff on a product which is an imperfect substitute of a domestically produced input will uniformly raise the price of the domestic product. Therefore, the cost of the user industries will uniformly shift upward, and the analysis undertaken for the perfect substitute case holds fully. No special analysis is therefore required in this case. Note again, however, that while no difference exists with regard to the situation of such a product as an input, in its own product market such differences will exist, as analyzed in the previous subsection of this chapter.

III. MONOPOLY

A. The Perfect Substitute Case

(1) Product Protection

Consider the standard monopolist maximizing profits shown in Figure 14. Equating marginal revenue to marginal cost will yield an equilibrium quantity of output Qe and the corresponding domestic price of Pe. Now, if imports enter the picture, the effective demand curve for the monopolist and therefore also the effective marginal revenue curve will change. They will now appear as shown in Figure 15. The marginal revenue curve now runs partially along the foreign supply curve, at a level of CIF + T, then is discontinuous and continues on down the domestic marginal revenue curve. As drawn in Figure 15, the domestic equilibrium is not affected by imports. But as the tariff rate is lowered, the local producer loses his monopoly power. When the tariff is low enough to bring the price of imports below the domestic unconstrained equilibrium price Pe, to the level CIF + T_1 in Figure 16, the domestic price/quantity equilibrium will be modified, quantity produced will go up, and price charged will come down. As can be seen, marginal cost cuts marginal revenue in a discontinuous section, and therefore the import price, as modified by the tariff, T_1, has effectively set the

Figure 13

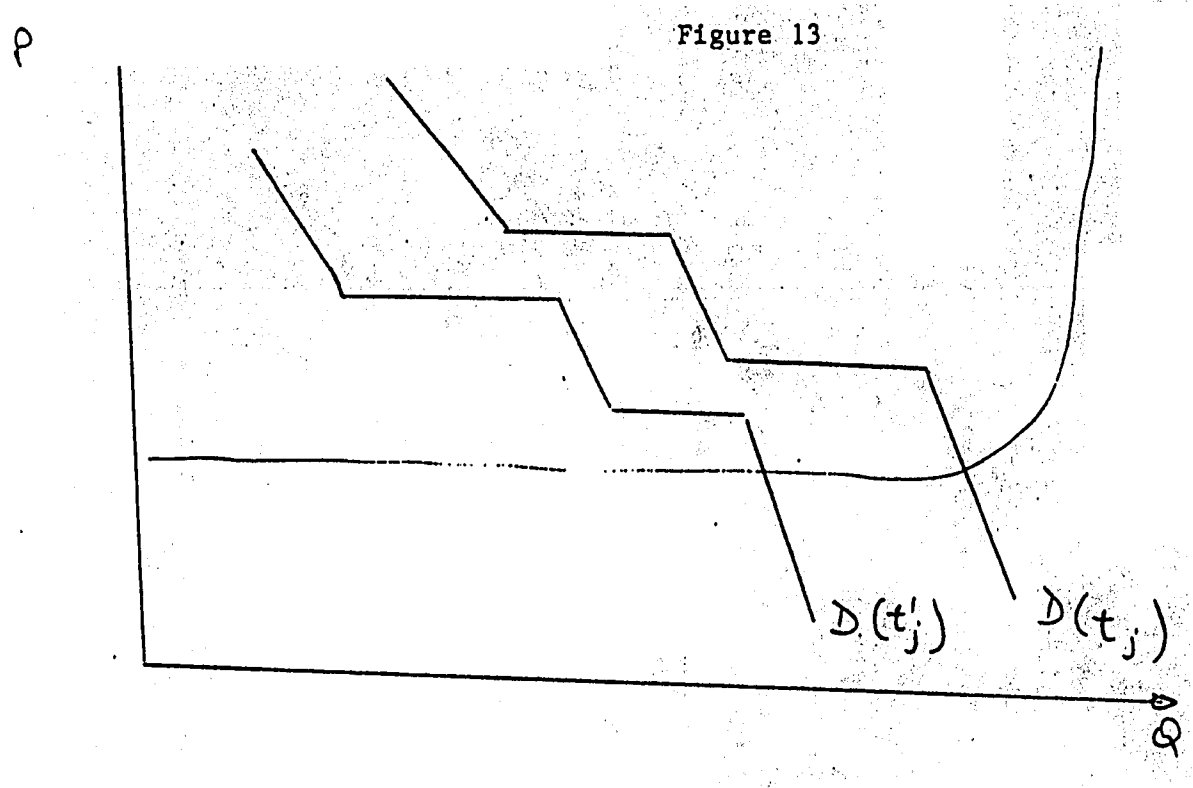


Figure 14

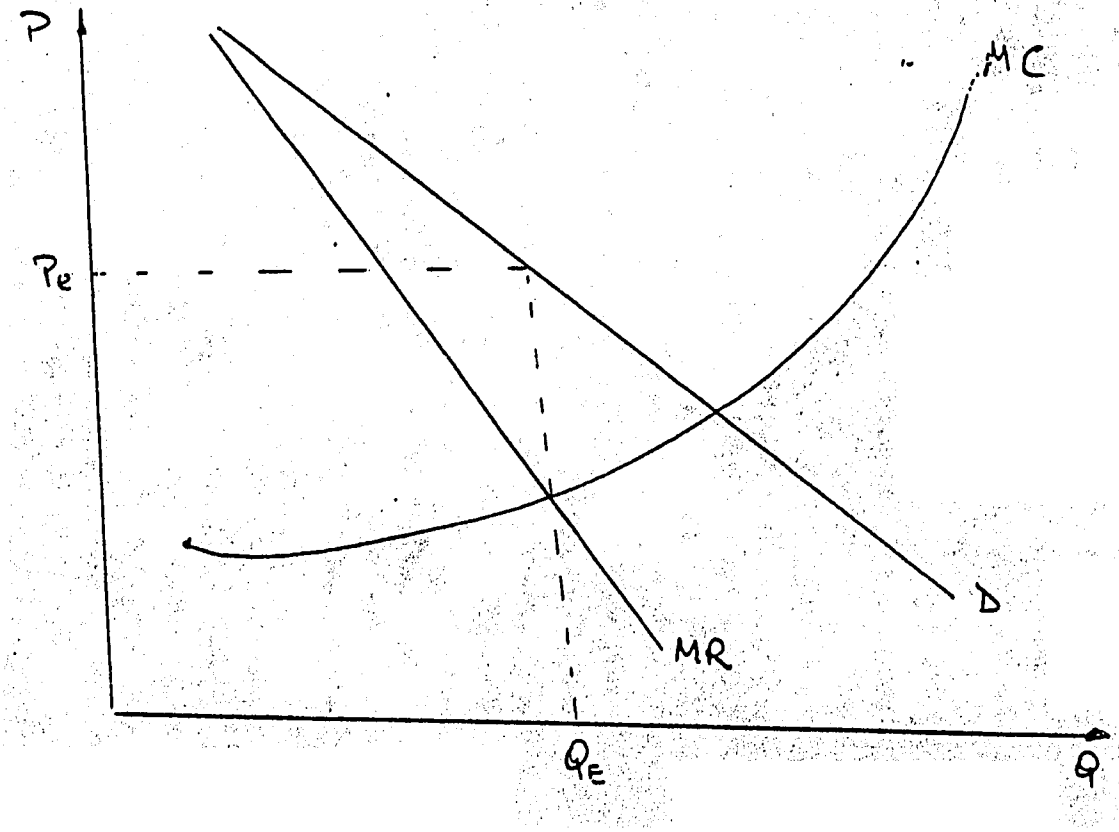


Figure 15

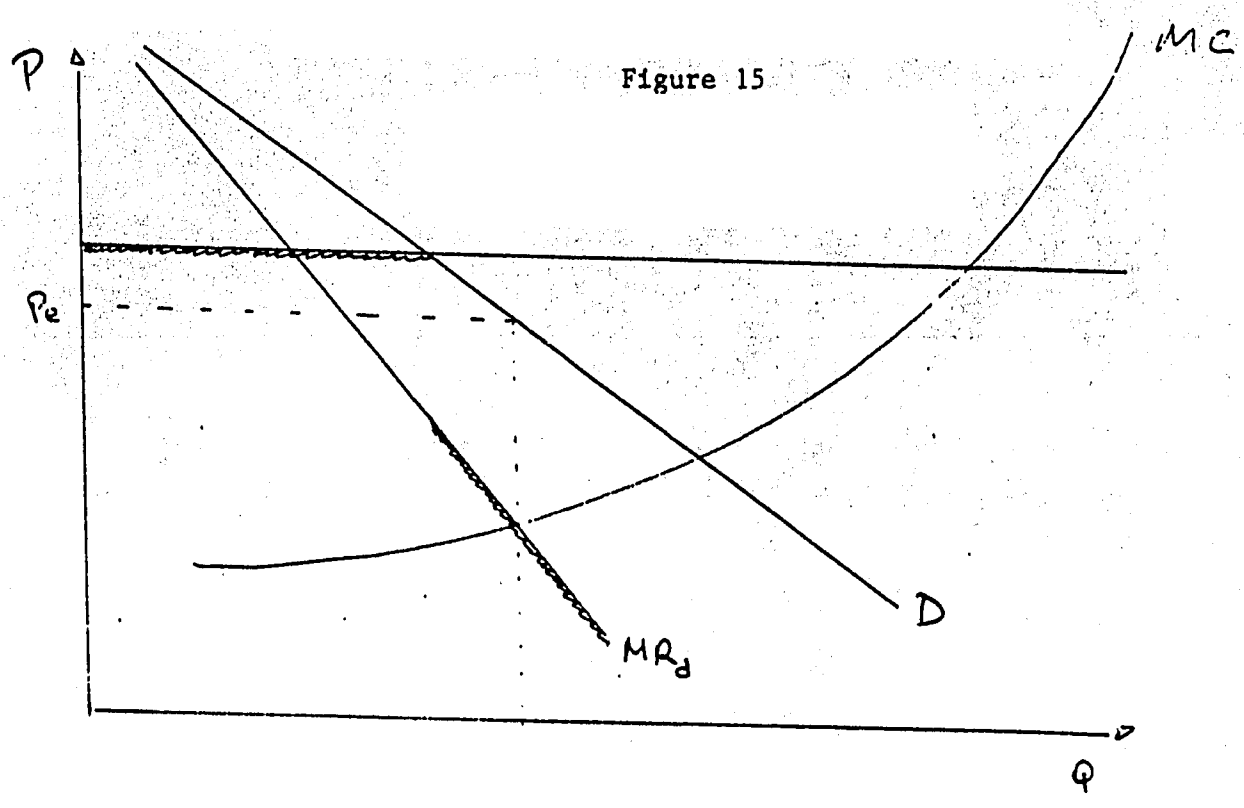
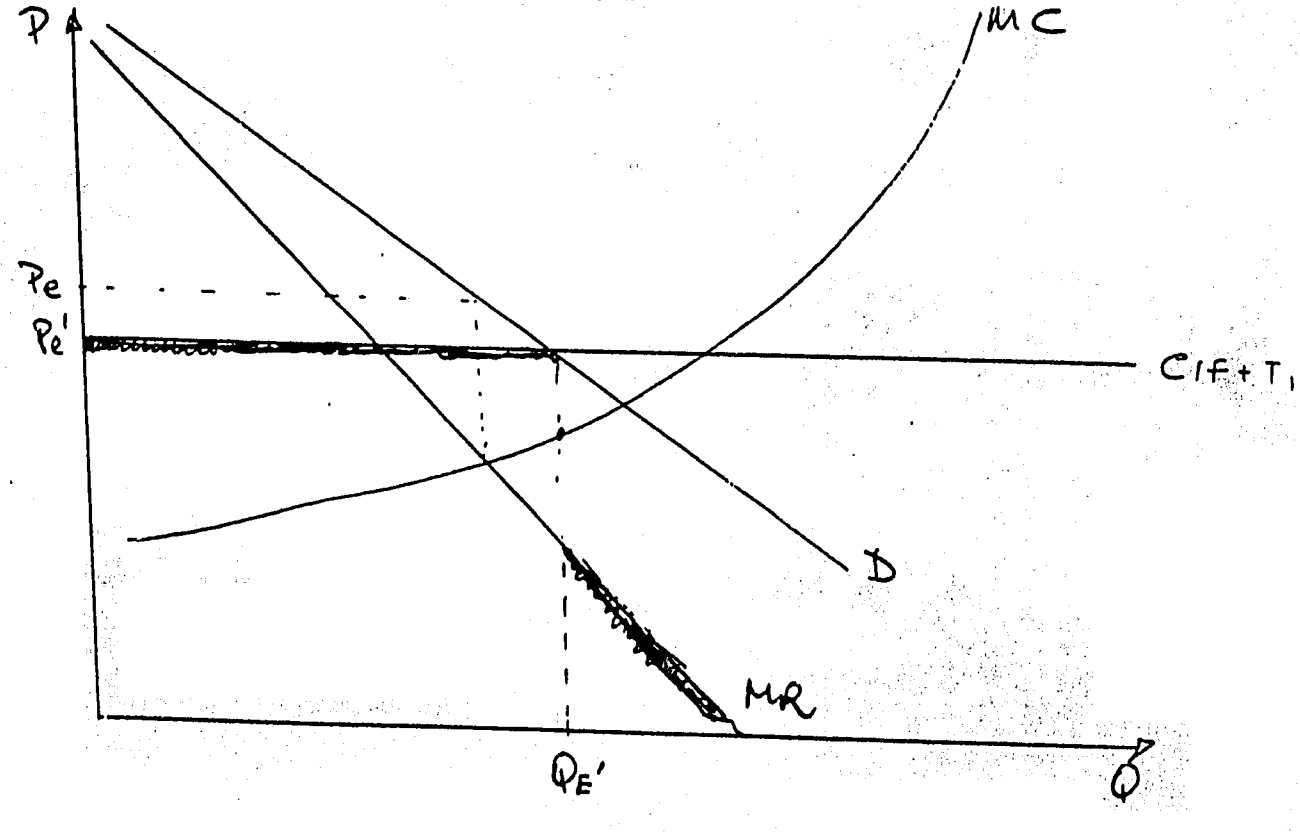


Figure 16



domestic price. Notice, however, that the price charged is still higher than the one which would rule under competition.

Now consider the possibility of exports. Since the producer is a monopolist in the domestic market, he will be able to discriminate between the market, in which he is sole supplier, and the rest of the world. Therefore, he will equate marginal revenue in both markets, and equate those in turn to marginal cost. In the absence of import interference on his domestic market, the situation is described in Figure 17. Notice that the marginal revenue curve now has three segments; one running along the import competing supply line CIF + T, another running down the domestic marginal revenue curve and the third one running along the export demand curve FOB + S. Equilibrium is found where this composite marginal revenue curve is cut by the marginal cost curve which occurs at volume Qe. Discriminating between markets indicates that domestic sales will be at a quantity E, and are priced Pe. In turn, export volume will be Qe - E.

If the tariff is lowered, one can immediately see that it will start impinging on domestic price when it falls below Pe in Figure 17. At that point, the marginal revenue curve will consist only of two discontinuous segments, one running along the CIF + T import supply curve and the other running along the

Figure 17

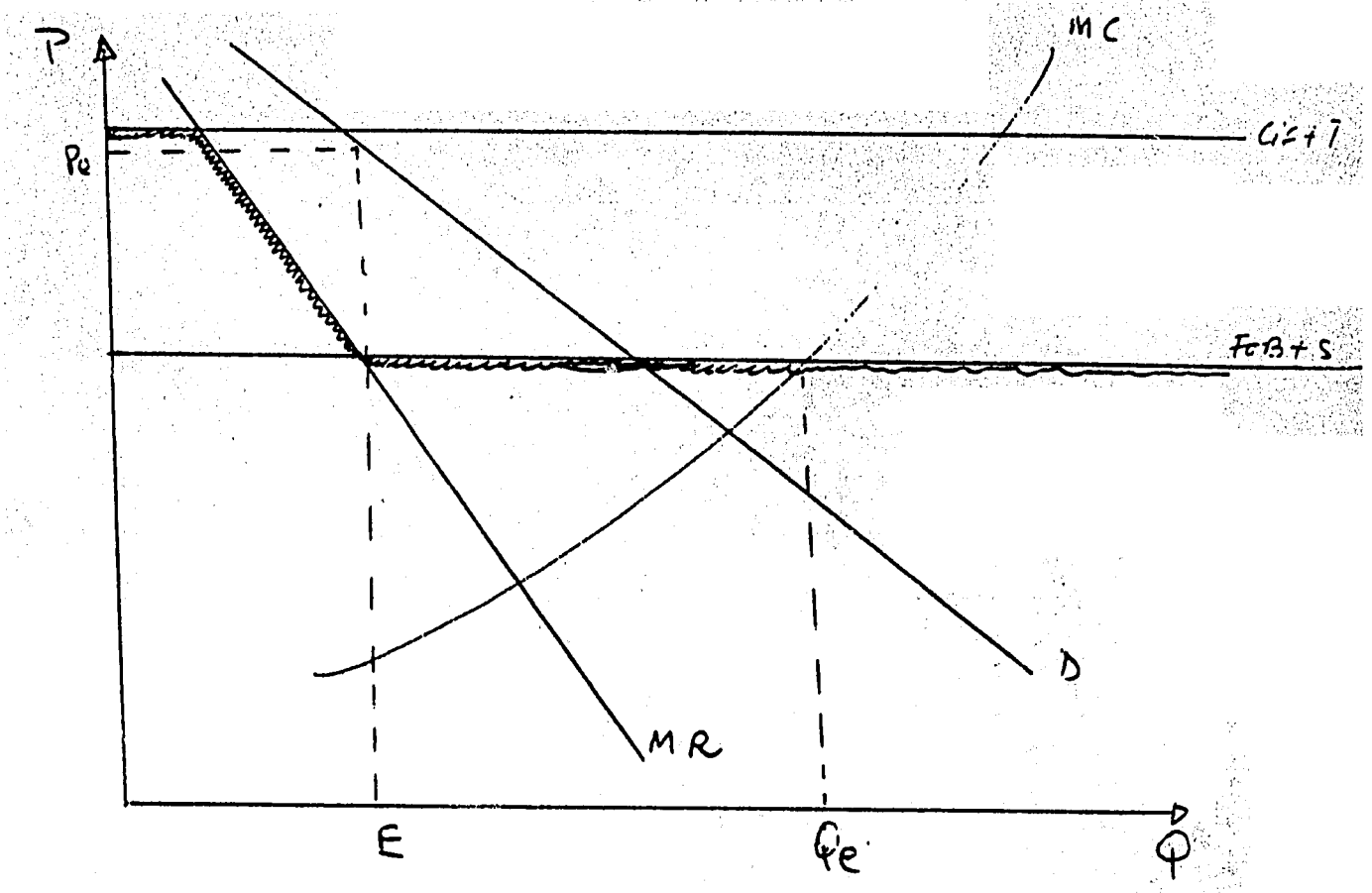
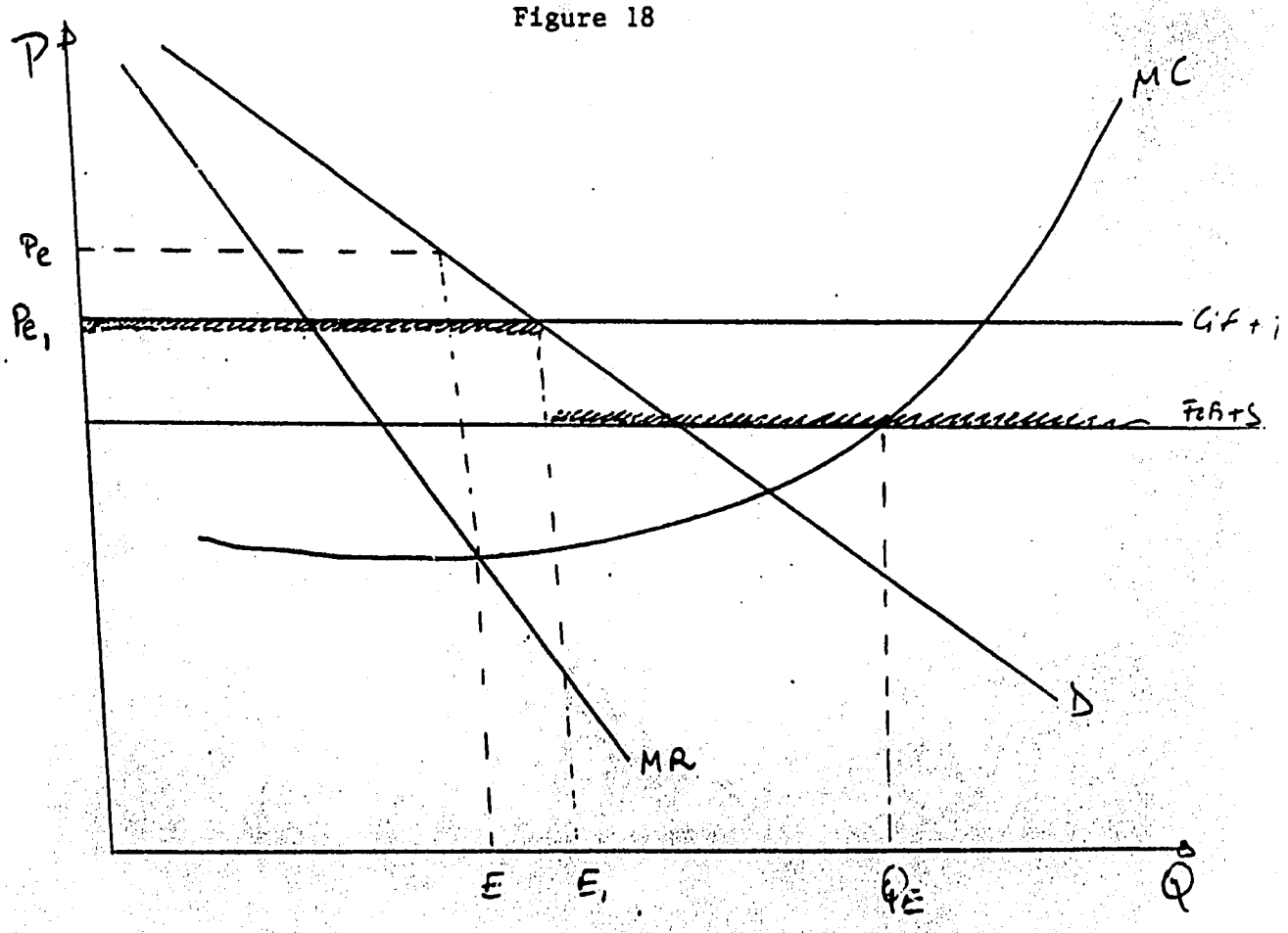


Figure 18



FOB + S export demand curve. This is shown in Figure 18. The equilibrium quantity of output is not changed since this still arises from the intersection of the marginal cost curve and the marginal revenue curve in its export segment. However, the distribution between domestic market and exports had been modified. With price now lower in the domestic market, more volume gets sold in this market to the detriment of exports. Thus, import liberalization has reduced export supply through its reduction in domestic monopoloy power. It follows that export volume will be an inverse function of the tariff between two limits, the upper given by the domestic monopoly price and the lower one given by the FOB + S price at which point reexports will become profitable. Notice further that nowhere in this process do imports actually come into the country! The threat of their contesting the domestic market is sufficient to affect the monopolist's behavior and the supply of exports.

Substituting constant marginal cost for a range rather than rising marginal cost throughout does not change the analysis. In turn, were export demand facing a downward step-function, exports might or might not be affected by import liberalization, depending on whether excess capacity existed initially and whether or not the increase in domestic demand pursuant to liberalization eliminated it altogether. In the event that imports caused enough of a price reduction to more than absorb

the existing excess capacity, exports would fall in the same way as they do in the standard case.

(2) Input Protection

Protection to a monopolized input will have effects depending on the price changes occuring in that input's market. Since tariff increases uniformly increase the domestic market price up to the point of unconstrained monopoly profit maximization, by the same token increases in protection will raise the cost of user industries accordingly. In turn, as marginal cost rises, the equilibrium level of output will fall. Higher marginal cost should also mean supply restriction to the local market and an increase in price, provided that import competition, as represented by CIF + T does not prevent such a price increase from occuring. Exports will be the residual in the story. If domestic sales have gone down, exports will decrease by less than the fall in production. On the other hand, if the domestic price has been constrained from rising by the import competition, then exports will bear the full brunt of the fall in production. If excess capacity existed initially, it may be this variable which absorbs the cost increase depending on the extent of such excess capacity and the relative position of the supply and demand curves.

B. The Imperfect Substitutes Case

(1) Product Protection

Demand with imperfect substitution between domestic production and imports behaves in the case of monopoly exactly as it does in the case of perfect competition, i.e., the higher the tariff on the import, the greater is the demand for the domestic product and the lower the tariff on the import, the lesser the demand for the domestic product. In other words, the demand curve will shift to the right or to the left depending on the level of tariff. In the monopoly case, however, what matters for market equilibrium is marginal revenue, and therefore it becomes crucial to know how the marginal revenue curve shifts as a result of the movements in the tariff on import-competing goods.

The relationship between marginal revenue and demand depends on the price elasticity of the latter. The higher the price elasticity, the closer will marginal revenue be to demand, and the lower the elasticity, the greater the gap between marginal revenue and price. Interestingly enough, the own price elasticity for any one of two imperfect substitutes depends on the relative price of the two substitutes. Thus, as the price

184

of imports comes down, pursuant to a tariff reduction, the demand elasticity for the domestic good will rise and the opposite will happen when the price of the import goes up. This is intuitively plausible if we bear in mind that a reduction in the price of imports erodes the monopoly power of the domestic producer. Moreover, as elasticity rises, the gap between marginal revenue and price narrows. Thus although the demand curve shifts to the left, the marginal revenue curve shifts to the right! The consequence is that pursuant to a reduction in tariff on the import good, domestic price will fall and the domestic quantity produced will rise. This can be seen in Figure 19 where the equilibrium for the domestic monopoly moves from Qe_0 to Qe_2 while price comes down from Pe_0 to Pe_2.

Consider now the effect on exports. Figure 20 introduces the standard small country export demand curve at Fob + S. Equilibrium output will be at Qe, where marginal cost intersects with marginal revenue of exports. Sales in the domestic market will be at E_0 for the higher tariffs, their volume derived by equating the original domestic marginal revenue (MR_0) to Fob + S. When the tariff on the competing import is lowered, the demand curve shifts to the left to D_1 and the marginal revenue curve shifts to the right to MR_1. Now, the domestic offtake will be E_1, and the corresponding domestic price Pe_1. E_1

185

Figure 19

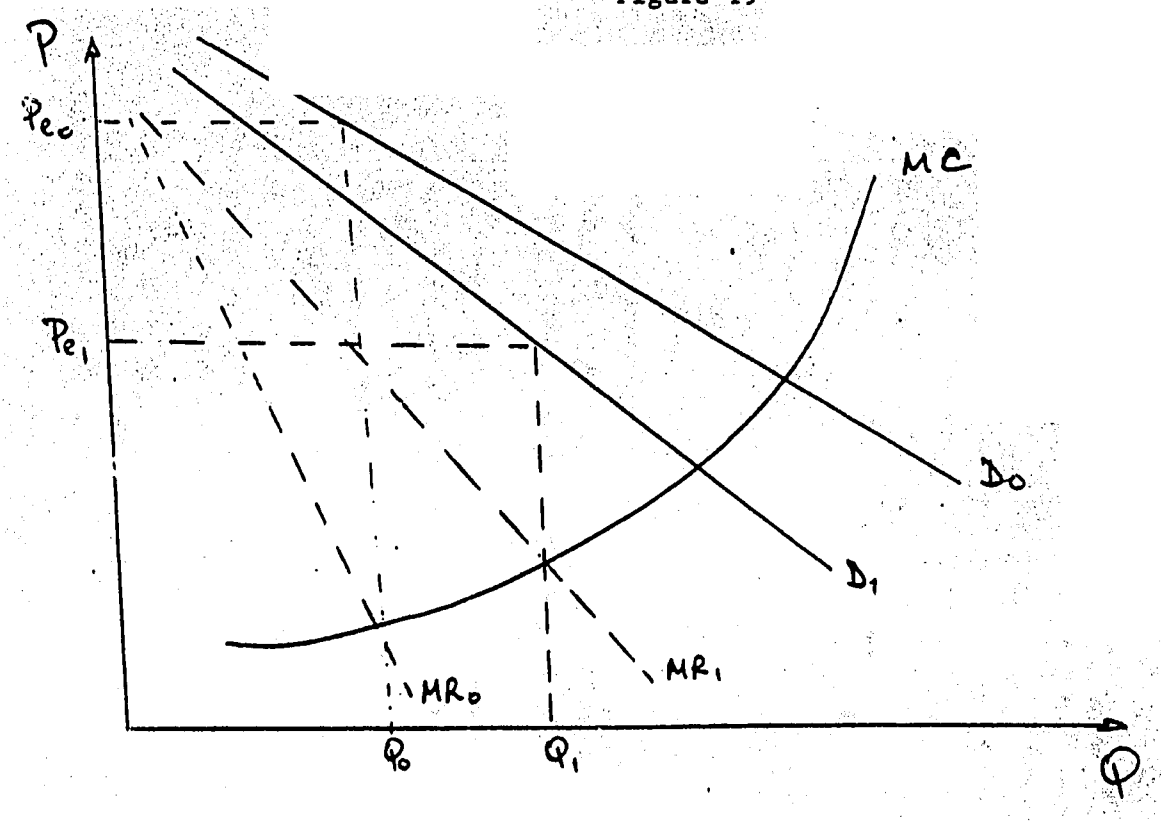
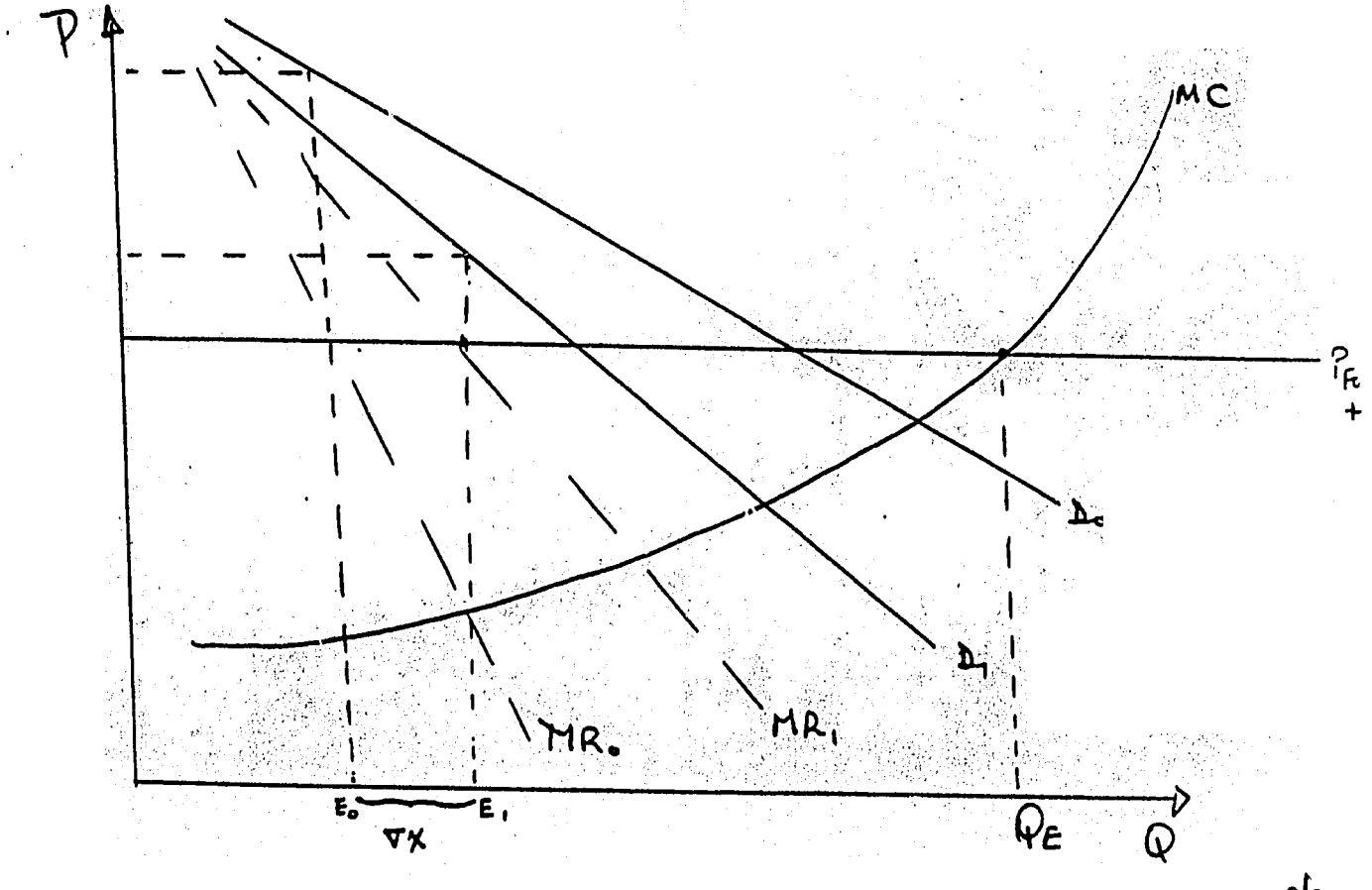


Figure 20



is larger than E_0 and exports fall by the corresponding amount.

The situation does not change if we assume constant costs except that we must be aware that at full capacity, marginal costs turn upward. Such a situation would be illustrated in a diagram exactly like Figure 20 except that the marginal cost curve would be a lying-down "L" with the short leg at Qe.

In the case in which the demand curve is a downward-facing step, function two different situations need to be distinguished: (i) the monopolist sells his marginal unit of production on the domestic market, and, (ii) the monopolist sells his marginal unit to one of his export markets. In both cases, when the tariff comes down, domestic price will fall; domestic marginal revenue will rise, and volume sold on the domestic market will increase. When export sales are not marginal, the increase in domestic marginal revenue will signify a new higher equilibrium output for the monopolist. At the same time, since exports are intra- marginal, they will not be effected. If exports are the marginal market, then at the margin, marginal revenue is not affected and output stays constant. By the same token, with domestic sales higher, exports will fall. It is possible also for decrease in domestic sales to shift the monopolist's marginal market from domestic to export. In other words, the

increased sales of the domestic market may lead to an increase in output which is insufficient to satisfy the additional sales to the local market. The shortfall is then satisfied by export reduction.

In summary, the case of imperfect substitutes is analytically more complex than that of perfect substitutes, but the qualitative conclusions are the same. Lower tariffs on imports produced by a local monopolist will lead to lower exports.

The Appendix provides mathematical proof of the proposition put forward.

(2) Input Protection

In the case of monopolized imperfect substitutes, there is a clear relationship between the level of the tariff of the import good and the price of the domestic good: the higher the tariff, the higher the domestic price, and vice versa. Since this relationship is exactly the same as in the case of perfect substitutes and the case of competition, this category is no different from from those already discussed.

IV. GLOBAL EFFECTS

A. Effective Protection

The purpose of effective protection calculations is to put together the impact of protection on output and protection on inputs to ascertain the net impact on the level of output and on the returns received by value added.

In the case at hand, our interest focuses on the effect of different levels of effective protection for domestic sales on the volume of exports. Evidently, this effect will be a combination of the effects of tariffs on output and tariffs on inputs. In turn, since the effect of tariffs on inputs is uniformly negative, i.e., the higher the tariffs on inputs the less will exports be, the qualitative nature of the effective protection result will depend crucially on the effect of the tariff on output. When the effect of a tariff increase is to raise exports, then it will be necessary to determine whether the output or the input effect predominates. Unfortunately, that is precisely the effect for most of the cases of market organization examined.

The principal case in which protection on competing imports lowers exports is that of the competitive market with imperfect

substitutes. In this case, a higher tariff increases domestic demand and thus reduces exportable supply. At the same time, a high input tariff raises marginal cost and thereby reduces the total supply, leaving even less for export. Traditional effective protection measurements will give a poor indicator of these combined effects, for effective protection is reduced either when output tariffs fall or input tariffs rise. However, when ouput tariffs come down in this type of market, exports will rise, while when input tariffs rise, exports will fall. Thus in this kind of market, as effective protection falls, exports may either rise or fall! This is not what would intuitively be expected.

A different situation occurs in the case of monopoly with perfect substitutes. Here it is clear that if input protection goes up, exports will fall, while if output protection falls, exports also fall. Now effective protection will fall because output tariffs are lower or input tariffs higher. Both yield lower exports. Thus, in this type of market, lower effective protection is associated with lower exports. The correlation is again counter-intuitive.

It follows from the above that changes in effective protection are not by themselves a good measure for the effect of tariffs on export supply. It is necessary, rather, to distinguish

changes in tariffs on outputs from those on inputs and to pay attention as well to the structure of the markets that are at issue.

B. General Equilibrium Effect

Changes in export volume, be it up or down, imply changes in the overall balance of trade and balance of payments situation. Therefore, the effects will not stay contained in the sectors in which they occur, rather, further changes in the general economic environment will ensue. These can take two major forms: (i) modifications in the exchange rate, and, (ii) changes in the level of activity. It is useful therefore to briefly explore whether such changes reinforce or offset the initial changes in exports caused by modifications in tariffs.

Consider first the exchange rate adjustment. Assume that the initial effect of a change in tariffs is to increase exports. Since this implies an improvement in the balance of trade, one would expect the exchange rate to appreciate. Appreciation will mean an increase in imports and a decrease in exports until the balance of payments is brought into equilibrium once again. The adjustment will be shared on the import and export sides in accordance with the relevant elasticities. Unless the elasticity of imports to the exchange rate is zero, imports will

bear some of the burden of adjustment; therefore, the induced reduction in exports will be less than the original increase in exports which set the whole process in motion. Thus one can conclude that the general equilibrium exchange rate effects of an increase in exports will induce an offsetting reduction in exports, but less than its original size.

Now consider incorporating the original change in tariffs. Assume we are analyzing a case in which tariff reductions have led to reductions in exports. In that case we find pressure on the exchange rate both from the initial liberalization as well from the reduction in exports. We know that the resulting devaluation will lead to a reduction in imports and to an increase in exports proportional to the respective elasticities, with the secondary reduction in imports being smaller than the increase in imports due to the initial liberalization. What is unclear is whether the devaluation induced by the liberalization has a sufficient export-boosting effect as to overwhelm the direct impact of the liberalization in reducing exports. If the net effect continues to be a reduction in exports, then this reduction will be further diluted by a "second round" devaluation. Should the effect be an increase in exports, then a "second round" appreciation will occur which will dampen the ultimate net effect of increased exports (but also produce more imports). In sum, the total effect of liberalization on

exports, after the general equilibrium effects through the exchange rate are taken into account, depends entirely on the elasticities in the specific markets and in the foreign exchange market, without the possibility of making any a priori statement.

Consider now the income adjustment. If a sector's exports grow as a result of liberalization, as in the case of a competitive market with imperfect substitutes, a foreign trade multiplier will ensue, and the increases in domestic demand will reduce exportable surplusses. However, because some of the adjustment will take place on the import side, through the marginal propensity to import, the induced reduction in exports will be less than the initial export increase. Thus, the activation of the economy resulting from the initial export increase will not reverse the sign of the effect.

When the impact of the initial liberalization is taken into account, the situation gets more complicated. Consider the case of a monopolist where reduction in tariffs causes exports to fall. The initial reduction in tariffs, however, also causes a deflationary effect on the economy. The resulting foreign trade multiplier effect will move domestic demand curves to the left, and increase exportable supply. Given the appropriate elasticities, it is possible for this deflationary effect to

overwhelm the microeconomic specific effect in the market. Were that not the case, if exports fell, then a futher deflationary balance of trade multiplier would come into play, and exports on that basis would have fallen, even though somewhat less than otherwise expected. On the other hand, if the specific sectoral effects are overwhelmed by the deflation, and exports go up, they will set in force foreign trade multiplier which somewhat reactivates the economy, thus dampening the growth of exports. Again, the overall effect cannot be specified unless the marginal propensities to import and to consume domestic exports as well as the relevant income elasticities of these different demands are known.

CONCLUSIONS

Tariffs have a range of different effects on exports. While the preceding analysis shows that tariffs on input invariably raise costs and thereby discourage exports, different outcomes can be found from changes in output tariffs. Depending on market structure, a reduction in an output tariff may increase or decrease exports. Correspondingly, an increase in output tariffs may increase or decrease exports as well. Effective protection, as a result, does not have a direct correlation with export levels. A fall in effective protection may be associated with an increase in exports or with a decrease in exports, depending (i) on whether it is the output tariff or the input tariff which cause a change in the effective rate and (ii) for the output tariff, what the nature of the market for the product is.

As a result of this ambiguity, the standard measures for anti-export bias are open to questionable interpretations. While the absolute anti-export bias, measuring increased inputs costs appears to be associated uniformly with falls in exports, the same cannot be said about relative anti-export bias. In some cases, having a higher effective protection on domestic sales than on export sales will stimulate exports, in other cases it will hinder them. It all depends on the structure of the market!

When a whole range of tariffs change at the same time, i.e. when large scale liberalization or tariff reform is undertaken, the general equilibrium effects become particularly important. Under such circumstances, the modifications of the tariff system as a whole will show up in particular markets as changes in aggregate demand or in the exchange rate and may well overwhelm the particular adjustments specific to that market, reversing the effects that one would otherwise find. This analysis in some sense corresponds to a generalization of the effective protection analysis which is usually undertaken.

In sum, the analysis of market structure needs to be incorporated into the analysis of tariffs, to have more reliable predictions of the effect of tariff changes on the division of output between the domestic and the foreign market. No conclusion on the effect of tariff changes on exports can safely be drawn without having information on what fraction of economic activity falls under which kinds of market.

The cases analyzed in the preceding sections cover only competitive and monopolistic markets. However, reality also shows a wide range of industries operating in a monopolistic competitive fashion, others in which oligopolists operate and in others in which producers do not maximize profits but exhibit various kinds of satisficing behavior. It is to be expected that those market modalities are likely to present particular adjustment patterns to

changes in protection as well each would have to be analyzed in its own right, for it is unlikely that one could extrapolate from the analyses of competitive and monopolistic markets to those other modalities.

APPENDIX

Imperfect Substitutes with Monopoly in Domestic Production

Consumers have a utility function where they trade-off domestic and foreign goods with a given elasticity of substitution. Their problem will then be:

$$\text{Max } U(D,M) = (D^{\rho} + M^{\rho})^{1/\rho}$$

$$\text{s.t.} \quad P_D D + P_M M = Y$$

where:

D = Domestic goods

M = Imported goods

$\sigma = {}^{1}/_{1-\rho}$ is the elasticity of substitution between goods. $0 < \rho < 1$

P_D, P_M = Prices of domestic and imported goods.

Y = Income devoted to the comsumption of the composite.

Utility functions are invariant to monotonic transformations therefore we will work with,

$$U(D,M) = D^{\rho} + M^{\rho}$$

The first order conditions are 1/

$$(1) \quad \rho D^{\rho-1} - \lambda P_D = 0$$

1/ Second order conditions are satisfied for an interior solution.

$$(2)\quad \rho M^{\rho-1} - \lambda P_M = 0 \qquad \lambda \text{ is the Lagrange}$$

$$(3)\quad Y - P_D D - P_M M = 0 \qquad \text{Multiplier}$$

From (1) and (2),

$$\left(\frac{M}{D}\right) = \left(\frac{P_D}{P_M}\right)^{1/1-\rho}$$

combine with (3) to get:

$$(4)\quad D = \left(\frac{P_D^{-\sigma}}{P_D^{1-\sigma} + P_M^{1-\sigma}}\right) Y$$

We would like to relate the price elasticity of demand facing the firm to the elasticity of substitution between goods. With this in mind find:

$$\frac{\partial D}{\partial P_D} = \left[\frac{-\sigma P_D^{-\sigma-1} (P_M^{1-\sigma} + P_D^{1-\sigma}) - P_D^{-\sigma} (1-\sigma) P_D^{-\sigma}}{(P_M^{1-\sigma} + P_D^{1-\sigma})^2}\right]$$

From here we go to the price elasticity of demand which turns out to be:

$$(5)\quad E_P = \sigma + (1-\sigma) \left[\frac{P_D^{1-\sigma}}{M^{1-\sigma} + P_D^{1-\sigma}}\right]$$

Now we have the expression for the price elasticity of demand in terms of .

In other studies 2/ Ep = σ because the assumption is that there

---

2/ Martin Weitzman "The Simple Macroeconomics of Profit Sharing" American Economic Review, Dec. 1985. Elhanan Helpman and Paul Krugman "Market Structure and Foreign Trade: Increasing Returns, Imperfect Competition and the International Economics", The MIT Press, Cambridge, 1985.

are many products (P's). By symmetry their prices are the same and then,

$$\lim_{n \to \infty} Ep = \sigma + \frac{1-\sigma}{n} = \sigma$$

We do not want to assume this for this study because this disconnects the relationship between P_M and Ep that is important in our analysis.

The domestic firm will be facing a demand curve of the following form,

$$(6)\quad Q_D = A\, P_D^{-\sigma - (1-\sigma)\left(\frac{P_D^{1-\sigma}}{P_D^{1-\sigma} + P_M^{1-\sigma}}\right)}$$

and will set the P_D that satisfies,

$$(7)\quad P_D \left[1 - \frac{1}{\sigma + (1-\sigma)\left(\frac{P_D^{1-\sigma}}{P_D^{1-\sigma} + P_M^{1-\sigma}}\right)}\right] = P_{FOB} + S$$

where P_{FOB} is the export price and S the export support.

EFFECTS OF CHANGES IN P_M ON Ep

To find this out partially differentiate (5),

$$\frac{E_P}{P_M} = \frac{-(1-\sigma)\, P_D^{1-\sigma}}{(P_M^{1-\sigma} + P_D^{1-\sigma})}\,(1-\sigma)\, P_M^{-\sigma} < 0$$

200

As one would expect intuitively, a fall in the price of imports (decrease in tariffs) will increase the elasticity faced by the domestic producer, decreasing his monopoly power. The result of the perfect substitute case goes through in this case also. The decrease in monopoly power will imply falling P_D and increased Q_D, with the subsequent decrease in exports.

A NUMERICAL EXAMPLE

Take (6) and (7). In (6) there are a series of shifting factors in A that will be considered equal to one.

Initial equilibrium:

$\sigma = 3$

$Q_D = 1$

$P_D = 1$

$E_{P_1} = 2$

$P_{FOB} = .5$

Decrease P_M by 50% (decrease tariffs), and the new equilibrium will be:

$\sigma = 3$

$Q_{D_2} = 1.5$

$E_{P_2} = 2.49$

$P_{O_2} = .85$

$P_{M_2} = .5$

The result as expected is:

$$P_{M_2} < P_{M_1}$$

$$E_{P_2} > E_{P_1}$$

$$Q_{D_2} > Q_{D_1}$$

$$P_{D_2} < P_{D_1}$$

Consequently, exports are decreased in the new equilibrium.