ABSTRACT

EVALUATION OF THE AFRICAN ASSOCIATED STATES RESPONSE TO TARIFF PREFERENCES GRANTED BY THE EUROPEAN ECONOMIC COMMUNITY

By

Moïse Allal

In 1958, 18 African countries were associated with the European Economic Community (EEC), and were thus granted preferential treatment for their exports to EEC countries. The purpose of this study was to evaluate the way in which 14 members of the African Associated States (AAS) responded to the EEC tariff preferences during the 1962-1969 period. The evaluation of the AAS response was limited to manufactured exports.

The study was designed to meet three major objectives.

The first objective of the study was to evaluate empirically the impact of tariff preferences on AAS manufactured exports to the EEC. For this purpose, a methodology was developed which takes into consideration changes in EEC demand and AAS supply conditions over the period of analysis (1962-1969). The methodology makes use of two groups of "control" countries: "Other LDCs" (i.e., non-beneficiary developing countries) and "Other DMECs" (i.e., developed market economy countries other than the EEC countries). It

was applied at various degrees of commodity aggregation, from total AAS manufactured exports to commodities at the 5-digit level of the CST Commodity Classification (i.e., the classification system adopted by the EEC). It was shown that, in general, the AAS failed to respond to EEC preferences by expanding manufactured exports to EEC countries at a higher rate than would have prevailed in the absence of such preferences. With respect to individual manufactured commodities, the analyses indicated a positive AAS response for only a small fraction of the total number of commodities investigated, these being generally raw materials - intensive semi-manufactures. Moreover, newly produced consumer goods (i.e., goods first produced after the granting of EEC preferences) were exported primarily to developing countries in Africa.

The second objective of the study was to test a trade model based on the Linder similarity of preferences theory in order to determine whether the theory explains the geographical intensity of AAS exports. A regression equation of the following general form was tested:

$$(API) = f(\,|\Delta PCI|\,,\ D,\ L,\ P)$$

where:

API = average propensity to import.

$|\Delta PCI|$ = absolute difference between the per capita income of the exporting country and that of the importing country.

D = distance between the importing and exporting countries.

L = binary variable (values of 0 or 1). If the official language of the importing country is the same as that of the exporting country, L = 1. If it is not the same, L = 0.

P = binary variable (values of 0 or 1). If a special trading agreement exists between the importing and exporting countries, P = 1. If it does not, P = 0.

The Linder theory implies that the regression coefficients for $|\Delta PCI|$ and D should be negative while the coefficient for L should be positive. Furthermore, the regression coefficient for P should not be significant. Findings from the test generally supported the theory. The regression coefficients for $|\Delta PCI|$, D and L were in most cases significant and with the predicted sign, while the coefficient for P was generally non-significant. Moreover, as implied by the Linder theory, the model applied better to consumer goods than to semi-manufactures.

The third and final objective of the study was to examine, on the basis of the evaluation of the AAS response and the results of the test of the Linder theory, two contrasting trade strategies which could be adopted by the AAS: a trade strategy based on an expansion of manufactured exports to industrialized countries, and a trade strategy based on an expansion of intra-regional trade. It was argued that, given the characteristics of the AAS, the latter strategy would have more chance to succeed than would the former strategy.

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By

Moïse Allal

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CHAPTER I

INTRODUCTION

In trade negociations over the past two decades, it has often been proposed that industrialized nations could greatly contribute to the economic development of the less developed countries by granting tariff and quota preferences to manufactured imports from these countries. Politically, if not economically, the granting of preferences has been regarded by the developing countries as a superior form of aid because the preferential system, once established, would be less sensitive to political conditions in the preference granting countries.

It is not certain, however, that the granting of tariff preferences will yield the positive impact expected by developing countries. Many of these countries may be unable to supply the type and quality of goods demanded in industrialized countries. A number of factors - such as a low technological level, high transport costs, lack of marketing skills - may be much more constraining than the tariffs and quotas imposed by industrialized countries on manufactured imports. It is therefore of interest to analyze the impact of preferential schemes which have been in existence for a period of time. Such an analysis could help developing countries to reassess their trade strategies, especially those based on expansion of manufactured exports to industrialized countries.

In 1958, 18 African countries were associated with the European Economic Community (EEC), and were thus granted preferential treatment for their exports to EEC countries. The purpose of this study is to evaluate, in the light of existing trade theories, the way in which 14 members of the African Associated States (AAS)[1] responded to EEC tariff preferences during the 1962-1969 period.

Although the AAS countries export mostly agricultural and raw materials, this study focuses on manufactured exports for the following reason. The General System of Preferences (GSP) schemes implemented by various industrialized countries since 1971 apply to manufactured exports from developing countries.[2] Findings from this study may therefore be useful in predicting the impact of these schemes on manufactured exports from countries at a similar level of development as the AAS countries.

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[1]The 14 countries are Cameroon, Togo, Senegal, Madagascar, Ivory Coast, Congo, Dahomey, Niger, Upper Volta, Chad, Mali, Mauretania, Gabon, and Central African Republic. Due to lack of data, 4 AAS countries (Zaire, Rwanda, Burundi, Somaliland) are not included in the study.

[2]On July 1, 1971, the EEC exempted from custom duties (within the limits of a tariff-quota system) all imports of manufactures and semi-manufactures from 91 developing countries. In the following months, other industrialized countries (Japan, Norway, U.K., Denmark, Finland, Ireland, New Zealand, Sweden, Switzerland and Austria) followed the EEC move and implemented their own General System of Preferences (GSP). The U.S. GSP scheme was implemented in 1976.

The tariff preferences granted by the EEC to the AAS are much less restrictive than those included in the various GSP schemes. Furthermore, during the 1962-1969 period (i.e., the period covered by this study), the AAS could still benefit from a potentially high level of trade diversion since most of the other developing countries did not yet benefit from similar trade preferences. Thus, the AAS countries response to EEC preferences should be greater than that of similar countries to the GSP schemes. A failure of the AAS to respond positively and significantly to the EEC preferences would raise doubts as to the usefulness of the GSP schemes in expanding manufactured exports from highly underdeveloped countries to industrialized countries.

1. The Association Convention between the EEC and the African Associated States

During the negotiations leading up to the 1957 Treaty of Rome, France campaigned vigorously for the association of its overseas territories with the European Community. As a result, 18 African countries, colonies of France, Belgium and Italy, became "associate members" of the EEC on January 1,1958.

The goals of the association convention were to perpetuate the existing preferential treatment granted by some EEC members to their colonies. As associate members, the AAS countries cannot legally influence the policies of the EEC, do not have to contribute to the budget of the community, and are not expected to carry out the obligations of the Treaty of

Rome, except for the special provisions of the Treaty which apply to them.

The Treaty of Rome, which became effective on January 1, 1958, granted the AAS substantial trade preferences, as well as important financial aid and technical assistance. In return, the AAS countries granted the EEC countries reverse preferences in trade and investment. The association convention was extended in 1963 for a five-year period (First Yaoundé Convention), and on January 1, 1970, was extended for another five-year period (Second Yaoundé Convention). The Yaoundé Conventions introduced certain distinctions between the treatment of the AAS and that of the French Departments and Territories. The provisions of these conventions have recently been superceded by the Lomé Convention of February 28, 1975, which covers trade and aid relations between the present members of the EEC and 46 African, Caribbean and Pacific countries (ACPs), including the AAS. The Lomé Convention terms represent a change in policy by the EEC on reverse preferences. The ACP countries are not required to grant reverse preferences, but must give the EEC the most favored nation treatment and must avoid discrimination between EEC member states.

In many instances, the tariff preferences granted by the EEC to the AAS were less favorable than those which existed prior to 1958 under bilateral arrangements between individual EEC members and their colonies. However, since preferences apply to a much larger market than that of the metropolitan country, the AAS countries should benefit from the association.

The Treaty of Rome and the two Yaoundé Conventions contain a number of special provisions with respect to tropical products of great interest to the AAS. With respect to manufactured exports, the AAS enjoys the same tariff preferences as individual EEC members. From 1958 to 1968, tariff duties imposed on manufactured imports by EEC countries from the AAS were gradually reduced, reaching a zero value in 1968. During the same period, the EEC countries imposed a common external tariff on manufactured imports from non-associated countries.

2. Objectives of the study

This study is designed to meet four major objectives.

First, trade preferences granted by the EEC to the AAS are examined in the light of existing trade theories in order to identify and compare the various types of response to preferences suggested by these theories.

Second, the effect of tariff preferences on the AAS export of manufactures to the EEC is evaluated empirically both from the view point of AAS exports and from that of EEC imports. In the case of AAS exports, the growth of the value of exports of various manufactured goods to the EEC and other regions of the world is estimated for the period 1962-1969. The growth of the market share of exports to these various regions is also estimated for the same period. A similar analysis is undertaken for the same commodities and the same period with respect to EEC imports. In this analysis the growth of EEC imports from the AAS and from other regions of the world are estimated in terms of both value and market share. The AAS response to tariff preferences is subsequently evaluated on the basis of a comparison of import and export growths using the method described in chapter II.

Third, a trade model based on the Linder similarity of preferences theory is tested with respect to AAS exports. The test is performed for each AAS country and for the AAS as a whole. In each case, the test is repeated for 13 groups of manufactured exports, seven groups of consumer goods, and six groups of intermediate manufactured goods. Exports are divided into consumer goods and intermediate goods in order to determine whether, as implied by the Linder theory, the proposed trade model applies better to the former goods than to the latter ones. Test results are subsequently evaluated in the light of the previous findings regarding the AAS response to tariff preferences.

Finally, on the basis of the evaluation of the AAS response and the results of the test of the trade model, a number of foreign trade strategies which could be adopted by the AAS countries are considered. These strategies are discussed with respect to various economic development models of potential interest for the AAS.

CHAPTER II

IMPACT OF TRADE PREFERENCES: THEORETICAL CONSIDERATIONS

This chapter will present the implications of current trade theories with respect to the potential impact of tariff preferences granted by the EEC to the AAS. First, the theory of customs unions will be briefly described, and then applied to the EEC-AAS trading arrangement in order to identify the potential effects of tariff preferences on AAS exports to the EEC. Second, a methodology will be developed in order to evaluate, in chapter III, the AAS response to EEC tariff preferences. Third, various trade theories will be reviewed, and their implications for AAS-EEC trade discussed. Particular attention will be given to the Linder similarity of preferences theory which provides the basis for the trade model tested in chapter IV.

1. The theory of customs unions and trade preferences

Customs unions theory encompasses trading arrangements from the simple preferential area to total economic integration. The theory, as first proposed by Viner (1), dealt mostly with the effects of tariff preferences - or discriminatory tariffs - on world welfare. It was not concerned with the effects of the free flow of factors of production associated with a common market such as that of the EEC, or the effects of common monetary, fiscal, and social policies associated with total economic integration.

Viner analyzed the effects of a customs union on the production patterns of member and non-member countries. He assumed that the establishment of a customs union does not affect consumption in the member countries. The two main effects of a union, according to Viner, are trade creation and trade diversion. Trade creation occurs when tariff preferences lead to an increase in imports from lower-cost member countries at the expense of higher-cost domestic production. Trade diversion occurs when preferences lead to a decrease in imports from lower-cost non-member countries, and their displacement by imports from member countries.

In Viner's model, it is implicitly assumed that the price elasticity of demand for any imported commodity is zero. It is probable, however, that tariff preferences alter relative prices, and lead to changes in consumption patterns. An elastic demand means that the creation of a union will have positive and negative consumption effects similar to the production effects described above. Meade (2) analyzed these consumption effects in a model which assumed a fixed pattern of production (i.e., zero elasticities of supply), but allowed the pattern of consumption to change with the creation of the union. By comparing the ratios of the marginal utility of products within individual countries - as indicated by their domestic price ratios-Meade was able to evaluate the effects of changes in the exports and imports of these countries.

There is actually no reason to treat production effects and consumption effects separately since shifts in production will affect consumption and vice versa. Lipsey (3) introduces the concepts of <u>inter-country substitution</u> and <u>inter-commodity substitution</u> in order to differentiate the effects of a union. Inter-country substitution consists of trade creation and trade diversion due to shifts in the locus of production, while inter-commodity substitution consists of the substitution of one commodity for another as a result of a change in relative prices. Either substitution yields both production and consumption effects.

The preceding review of the theory of customs union was concerned only with the static effects of a union (i.e., consumption, production and terms of trade effects). A union could also yield substantial dynamic effects in the form of increasing competitiveness, increasing investments, and an increasing rate of technological change. Since dynamic effects take place over a relatively long period of time, and the period of analysis used in this study (1962-1969) is relatively short, only static effects will be considered.

Determinants of the static effects of a union

The static effects of a union are a function of a number of variables whose impact may be evaluated within the framework of a partial equilibrium analysis (1,2,3), or a general equilibrium analysis. No attempt will be made to go into the details of these analyses since they are fairly standard, and may be found in a large number of books dealing with the welfare impact of customs unions. Rather, a summary of the results of these analyses will be provided.

The static effects of a union are mainly a function of domestic supply and demand elasticities, the elasticity of supply of exports from member and non-member countries, the level of the preferential margin enjoyed by member countries, and the production cost differential between member and non-member countries.

The higher the elasticities of demand and supply for goods traded between member countries within the union, the greater will be the scope for trade creation. On the other hand, the higher the elasticity of supply of exports from non-member countries to the union, and the higher the elasticity of demand by member countries for these same exports, the greater will be the scope for trade diversion. Trade diversion will be larger than trade creation if the proportion of pre-union trade with non-member countries is relatively high and vice versa.

The level of tariffs will also affect trade creation and trade diversion. The higher the level of pre-union tariffs imposed on imports from member countries, the greater will be the scope for trade creation. Similarly, the higher the level of tariffs imposed by member countries on imports from non-member countries, the greater will be the likelihood of a shift in production from the latter countries to the former, and therefore the scope for trade diversion. Finally, the greater the efficiency of non-member countries over member countries in production, the greater will be the welfare loss per unit of trade diversion.

The determinants of static effects may also be analyzed in the two special cases where the elasticity of demand and the elasticity of supply are assumed to be, respectively, equal to zero. If demand is assumed to be completely inelastic, trade creation will be larger the greater the elasticity of supply in member countries. Similarly, the larger the elasticity of domestic supply in non-member countries, the greater will be trade diversion. On the other hand, if the elasticity of supply is assumed to be equal to zero, it may be shown that the higher the original tariff of union members relative to that of non-member countries, the greater will be the scope for trade creation. Furthermore, the lower the degree of substitutability among products of member countries, and the higher the degree of substitutability between products of member countries and those of non-members, the smaller will be the scope for trade creation and the larger the scope for trade diversion.

One important question not raised above is whether the net impact of trade creation and diversion is a function, all else being equal, of the mix of countries entering into a union. Prior to the publication of Viner's book, it was thought that a union of complementary economies should yield a higher increase in net welfare than a union of rival economies. Viner took an opposite view arguing that a union of rival economies should be more beneficial because there is greater scope for trade creation than for trade diversion (1, p.51). Actually, it can be shown that, depending on circumstances, either type of union may be more beneficial to world welfare. Let us define:

Q_C = volume of trade resulting from trade creation (in tons)

$(\Delta P)_C$ = difference between the domestic price of the higher-cost member country and the C.I.F. export price from the lower-cost member country (in dollars)

Q_D = volume of trade resulting from trade diversion (in tons)

$(\Delta P)_D$ = difference between the C.I.F. export price from the lower-cost non-member country and the C.I.F. export price from the higher-cost member country.

Thus $(\Delta P)_C((\Delta P)_D)$ measures the welfare gain (loss) per unit of volume of trade, while $Q_C(Q_D)$ measures the volume of trade associated with trade creation (diversion).

If a union gives rise to both trade creation and trade diversion, the net impact on world welfare, W, will be equal to:

$$W = Q_C \cdot (\Delta P)_C - Q_D \cdot (\Delta P)_D$$

The difference $(Q_C - Q_D)$ should be greater for a union formed of rival economies than for a union formed of complementary economies. On the other hand, the difference $((\Delta P)_C - (\Delta P)_D)$ should be smaller for the former union than for the latter one. Thus, it cannot be concluded that one type of union is necessarely more beneficial to world welfare than the other.

Having defined, in broad terms, the static effects of a union and reviewed the factors which determine the size of these effects, the general conclusions derived above will now be applied to the particular case of the EEC-AAS trade arrangement.

2. Application of the theory of customs unions to the EEC-AAS trade agreement

The EEC-AAS trade arrangement constitutes a preferential area between a group of developed countries and a group of developing countries. It is far from constituting a free trade area because the AAS did not abolish tariffs on imports from the EEC. Rather, it imposed lower tariffs on EEC imports than on imports from other countries, and also abolished quantitative restrictions on the former imports while maintaining them on the latter.

The potential impact of tariff preferences on AAS exports to the EEC will be considered only for manufactured exports. Two cases will be discussed: (i) exports of standardized commodities, and (ii) exports of differentiated commodities.

Impact of tariff preferences on AAS exports of standardized manufactures

As will be shown in chapter III, standardized commodities exported by the AAS to the EEC consist largely of processed agricultural products and processed raw materials which are not produced in the EEC countries. Furthermore, few substitutes for these commodities are produced in the EEC. Under these circumstances, increased AAS exports to the EEC due to tariff preferences should yield relatively greater trade diversion than trade creation. The same outcome should also apply to EEC exports to the AAS. Thus, for standardized commodities, the main impact of tariff preferences should be trade diversion. In particular, this impact should be caused by a shift of EEC imports from Latin American and British Commonwealth Countries to the AAS. The size of the impact will be a function of the elasticity of supply of exports from the AAS and non-beneficiary countries, the elasticity of demand of imports by the EEC, the height of the tariff imposed on imports from non-beneficiary countries, and the difference in productive efficiency between the AAS and the latter countries.

First, let us consider the case where the world supply of a commodity is perfectly elastic, and the AAS supplies a small fraction of the total EEC imports - an assumption which applies to many commodities exported by the AAS to the EEC. In this case, various developments could take place.

In the short-term, the AAS may not be able to increase supply, especially if an increase in supply means a larger agricultural production. It will therefore simply increase its export prices by a percentage equal to the height of the tariff. In other words, the AAS will improve its terms of trade vis-à-vis the EEC. This outcome will not take place, however, if importers in the EEC countries have a monopoly power on imports from the AAS[1], and thus appropriate most of the value of the tariff in place of the AAS producers.

In the longer term, and if the AAS producers do benefit from the tariff preferences, supply of exports from the AAS could be increased as a result of the higher prices AAS producers receive for their exports. If increase in production takes place at constant cost, increased diversion will occur in favour of the AAS. The only constraint to this diversion will be the productive capacity of the AAS. However, if the increase in production takes place under increasing costs, the competitive edge afforded the AAS by the tariff preference will be lowered. AAS exporters will increase exports up to the point where profits are maximized. In general, this will occur before the tariff preference is fully absorbed by the increase in production costs.

Another case treated by Johnson (4, pp. 189-190) may also apply to the AAS. This is the case where the supply

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[1]Monopoly power could exist in cases where exporting firms in the AAS are subsidiaries of importing firms in the EEC.

capacity of the AAS is large relative to the import demand of the EEC. As will be shown in chapter III, this case may apply to four or five commodities exported by the AAS to the EEC. Under conditions of perfect competition the AAS must, in this situation, sell its products to the EEC at the world market price. The only impact of trade preferences will be an increase of the quantity of AAS exports to the EEC. The AAS terms of trade with the EEC will not, in this case, improve. However, if the condition of perfect competition is dropped, the AAS may institute a system of price discrimination whereby export prices to the EEC may be set higher than export prices to the rest of the world, but lower or equal to the price that EEC importers would have to pay in the absence of tariff preferences. Being in a monopoly position, the AAS could adjust the export price to the EEC so as to maximize profits. In this case, exports to the EEC could be increased, and the AAS may in addition benefit from an improvement in its terms of trade with the EEC.

A third situation which may be considered is one whereby EEC imports originate from a very small number of major exporters, some of these being AAS countries. In this case, AAS exporters could adjust their export prices to the EEC so as to maximize profits. This price adjustment would normally be accompanied by a shift of EEC imports from non-beneficiary countries to the AAS. However, this outcome will take place only under the condition where the non-beneficiary suppliers to the EEC are unable to lower their export prices in order to maintain their market share in the EEC. These suppliers' export prices would have to be lowered by the full amount of the tariff imposed on their exports to the EEC, or by a fraction of the tariff if the AAS were to increase its export prices to the EEC. The capacity of non-beneficiary suppliers to offset the advantage afforded the AAS by tariff preferences will be a function of two factors: the height of the tariff and the production cost differential between AAS suppliers and non-beneficiary suppliers. In general, the lower the tariff and the higher the difference in production costs between AAS suppliers and non-beneficiary suppliers, the easier it will be for these latter suppliers to offset the AAS advantage. In any case, total exports to the EEC should increase. Depending on the circumstances, this increase will be supplied solely by the AAS or, proportionately, by all EEC suppliers.

Impact of tariff preferences on AAS exports of differentiated commodities

Differentiated commodities produced by countries within the AAS include a variety of goods from SITC Groups 0, 1, 5, and 8 (see chapter III). While the EEC countries produce few of the standardized commodities described earlier, or few substitutes for these commodities, they do produce a large number of the above differentiated commodities. Thus, the granting of tariff preferences could lead, in the case of these commodities, to both trade creation and trade diversion. For example, an increase of EEC imports of shoes from the AAS due to the tariff preferences could lead to a decrease of domestic production in the EEC countries, as well as a decrease of imports from non-beneficiary countries.

The analysis used for standardized commodities can also be applied to differentiated commodities, and would yield similar conclusions. Two variables should, however, play a greater role in the case of differentiated commodities. These variables are (i) the elasticity of substitution of commodities exported by the AAS for those produced in the EEC, and (ii) the elasticity of substitution of commodities exported to the EEC by the AAS for those exported to the EEC by non-beneficiary countries. In general, the higher the value of these elasticities of substitution, the greater will be the scope for trade diversion and trade creation.

It should also be noted that differentiated commodities include a larger proportion of consumer goods than do standardized commodities. Since tariff duties tend to be relatively high for consumer goods, the potential impact of tariff preferences should be relatively greater for differentiated commodities than for standardized ones. It is not, however, certain that the AAS will actually take advantage of these preferences by substantially increasing its export of the differentiated commodities to the EEC. A number of factors which may constrain such an expansion will be reviewed in section 4 of this chapter.

3. Methodology for the evaluation of the AAS response to EEC tariff preferences

There exists a large number of methods for evaluating the impact of various forms of economic integration. Some of these methods were reviewed by Kreinin (5) who concluded that "each approach... is fraught with dangers arising from its own heroic assumptions", and "the only hope of arriving at approximate orders of magnitude lies in utilising a variety of methods and comparing the results" (5, p.900).

In this section, various evaluation methods will be reviewed, including the one selected for this study. These methods were developed in order either to predict the impact of a potential or recently established union, or to determine whether a union has had the expected impact. Given the purpose of this study, we will be concerned primarily with the latter type of evaluation methods.

Comparing hypothetical estimates to actual values

One method of determining whether tariff preferences have had the expected impact is to compare hypothetical estimates of what trade flows, growth rates, market shares, etc. would have been in the absence of preferences to the actual values of these parameters. If the hypothetical estimates are approximately equal to the actual values, it may be concluded that the tariff preferences have had the expected impact. Various hypothetical estimates have been used to determine whether a union has had the expected impact.

One approach, reviewed by Kreinin (5) and used by the EFTA secretariat (6), among others, compared the hypothetical share of imports in total consumption to the actual share for the year 1965. The hypothetical share was estimated on the basis of a projection of pre-integration trends during the 1954-59 period. The EFTA secretariat thus obtained estimates of trade creation and trade diversion for major commodity groups. In this approach, it is assumed that the share of imports in total consumption would have developed over the 1959-65 period in the same manner as during the 1954-59 period.

Similar approaches have been used, ranging from simple extrapolations of pre-integration growth rates of export values or market shares to extrapolation of a world trade matrix. These approaches suffer from many weaknesses. First, in most cases they do not take into consideration new developments in world trade, such as other trade agreements, or trade negociations yielding global tariff cuts. Second, income and price movements are not usually taken into consideration. Third, changes in the countries' competitive position which affect the ratio of import to domestic prices are usually neglected. Despite these weaknesses, the above approaches can be useful if applied in conjunction with other approaches.

Comparing pre-integration to post-integration estimates of various parameters

One evaluation method adopted by Balassa (7) compares the post-integration income elasticity of demand for imports to the pre-integration income elasticity. Let us define:

M_I = intra-union imports

M_E = extra-union imports

Y = sum of the GNPs of member countries.

The income elasticity of demand for intra-union imports, α, and that for extra-union imports, β, may then be estimated from the following equations:

$$\text{Log } M_I = a + \alpha \text{Log } Y$$

$$\text{and Log } M_E = b + \beta \text{Log } Y$$

Trade creation is indicated by an increase in the value of α from a period preceeding the union to a period following the union. On the other hand, trade diversion is indicated by a decrease in the value of β between the same two periods.

There are two main criticisms of this evaluation method. First, it assumes that income elasticities of import demand would have remained unchanged in the absence of the union. Second, it neglects changes in supply conditions (e.g., changes in competitiveness).

A second evaluation method, used by Kreinin (5) to evaluate trade creation and trade diversion resulting from the establishment of the EEC, compares the pre-integration import/consumption ratio to the post-integration ratio. The change in the "total imports/consumption" ratio measures trade creation while the change in the "extra-EEC imports/consumption" ratio measures trade diversion. Kreinin recognizes that factors other than economic integration could affect the import/consumption ratios (e.g., income and price movements). In order to isolate the integration effect, it is necessary to know what changes in the ratios would have occured in the absence of integration. Kreinin uses for this purpose a "control group" or "normaliser" approach. He assumes that "the factors affecting the import/consumption ratios moved over the period of the 1960s in an identical fashion in both the EEC and in the 'control' countries, and that the reaction of the economy to these changes was the same in both markets". (5, p.902). Consequently, import/consumption ratios may be adjusted for non-integration effects.

Kreinin's method is an improvement over other methods in the sense that it isolates the integration effects from other effects. Its application may, however, present several problems. First, it may be difficult to find the proper "control group" or "normaliser". Second, the statistical data which are required (e.g., output, wholesale prices) are not usually available for many developing countries.

Use of multiple regression analysis

Another evaluation method makes use of multiple regression analysis with trade preferences being one of the independent variables. Aitken and Obutelewicz (8) applied such a method to evaluate the respective impacts of EEC tariff preferences on AAS exports, and of AAS tariff preferences on EEC exports. Two different regression equations were fitted to estimate these two impacts. Given the relevance of the Aitken-Obutelewicz paper to this study, their evaluation method is reviewed in some detail.

The two regression equations are shown below:

$$LX_{ad} = b'_o + b_1LD_{ad} + b_2LY_a + b_3LY_d + b_4LP_{ad}^{BC} + b_5LP_{ad}^{EEC} + b_6LP_{ad}^{FTM} + b_7LP_{ad}^{FA} + e'_{ad} \quad \ldots\ldots (1)$$

$$LX_{da} = b'_o + b_1LD_{da} + b_2LY_a + b_3LY_d + b_4LP_{da}^{CB} + b_5LP_{da}^{AAC} + b_6LP_{da}^{TMF} + b_7LP_{da}^{AF} + b_8LA_{da} + e'_{da} \quad \ldots\ldots (2)$$

where:

- L = Log
- X = value of exports, in dollars
- a = African country
- d = developed country

  a and d stand for the exporting country when used as the first subscript, and for the importing country when used as the second subscript.
- D = distance between the importing and exporting country
- Y = GNP
- P_{ad}^{BC}, P_{ad}^{EEC}, P_{ad}^{FTM}, and P_{ad}^{FA} are dummy variables corresponding, respectively, to the British preference for the exports

of African Commonwealth countries, the preference of the EEC countries other than France for the exports of the AAS, the French preference for Tunisian-Moroccan exports, and the French preference for the export of AAS countries which are former colonies of France.

- In equation (2) the dummy preference variables represent the African country's preference for the exports of the respective developed countries with which the African country has a trade preference agreement.
- A_{da} = dollar value of aid from d to a.
- e'_{ad}, e'_{da} = error terms.

The authors estimated the two regression equations for each year of the 1958-1971 period. They considered that tariff preferences had an impact on AAS exports to the EEC if the P^{EEC} coefficient increased in value from 1958 to 1971, and was statistically non-significant at the beginning of the period but significant in the latter part of the period. The same type of results for the coefficient P^{AAC} was considered to show that the AAS preferences had an impact on EEC exports to the AAS.

The above evaluation method should, theoretically, isolate the effect of tariff preferences on exports from the preference-receiving country. However, its application by

Aitken and Obutelewicz calls for two main criticisms. First, with respect to equation 1 (impact of EEC preferences on AAS exports), the authors should not have restricted the analysis to African exporters only. It is possible that AAS exports to the EEC compete primarily with exports from non-African countries, either developed or developing. If this were the case, P^{EEC} would reflect both the impact of tariff preferences and the increased competitiveness of the AAS. It may not, therefore, be concluded that a large and significant P^{EEC} coefficient at the end of the period proves that the tariff preferences had an impact.

Second, the authors should have applied their evaluation method to individual commodities rather than to global exports. Let us suppose that a large proportion of commodities exported by the AAS to the EEC differ in type and quality from those exported by non-AAS African countries (e.g., Tunisia and Morocco). Let us further suppose that a shift in EEC demand in favor of AAS products occurs for reasons unrelated to tariff preferences (e.g., as the result of a change in taste, a substitution for other products, etc.). Under these circumstances the EEC would increase its imports relatively more from the AAS than from non-AAS African countries. Thus, it could not be concluded that a high and significant P^{EEC} coefficient proves that tariff preferences had the expected impact. If the evaluation method were applied to individual commodities, especially standardized commodities, the possibility of changes in demand due to factors other than tariff preferences would be greatly reduced.

Evaluation method used in this study

The evaluation method adopted in this study is a modified version of that used by Young (9). The method can be reliably used in order to determine whether the AAS responded positively to the EEC tariff preferences. It may also be used, with less reliability, in order to estimate the net impact of tariff preferences. It may not, however, be used to obtain separate estimates of trade diversion and trade creation for the purpose of estimating the net welfare impact of these preferences. The method will now be described in general terms, and it will then be shown how it could be applied to the EEC-AAS trade arrangement.

The rate of growth of exports from one country to any other country is a function of the following four factors: (i) the growth of effective demand for imports in the importing country, (ii) the ability of the exporting country to increase its exports so as to meet this growth of demand, and its ability to produce these exports at competitive prices, (iii) the granting of tariff preferences in favor of the exporting country, and (iv) the establishment of a special relationship between the exporting and importing country, giving rise to special privileges in favor of the two countries (e.g., monetary arrangement, foreign investment privileges).

The purpose of the evaluation is to isolate the impact of factor (iii). This may be achieved by using two groups of

"control" countries in addition to the groups of preference-receiving and preference-giving countries.

Let us define X_1 and X_2 as, respectively, the group of exporters which was granted tariff preferences and that which was not. Let us also define I_1 and I_2 as, respectively, the group of importing countries which granted the tariff preferences to X_1, and that which did not. Let us finally define G_{ij} as the rate of growth of exports from country i to country j during the period since the preferences were granted. We may then set out the following table of growth rates:

	I_1	I_2
X_1	G_{11}	G_{12}
X_2	G_{21}	G_{22}

A high value of G_{11} may be due to factor (i) - i.e., a high rate of growth of imports by I_1 due to increased demand, or to factors (iii) - tariff preferences - and (iv) - special privileges. Let us assume, for the time being, that no special privileges were established during the period of analysis. Then, in order to isolate the effect of tariff preferences, we first consider the difference between G_{11} and G_{21}. A difference greater than zero could be an indication that the tariff preferences had the expected positive impact on X_1 exports to I_1 since changes in I_1 demand should affect exports from X_1 and X_2 equally.

A difference of growth rates greater than zero does not, however, indicate by itself a positive impact of tariff preferences. A higher growth rate of exports from X_1 could also be an indication of an increased over-all competitiveness of X_1 exporters (i.e., a higher growth rate could be attributed to factor (ii)). An indication of this increased competitiveness may be provided by a comparison of G_{12} to G_{22}. If the difference between G_{12} and G_{22} is greater than zero, it may be concluded that the X_1 countries have become, over-all, more competitive.

If the higher growth rate of exports from X_1 countries to I_1 countries were due only to the greater competitiveness of the former countries, then the following relationship should hold:

$$(G_{11} - G_{21}) - (G_{12} - G_{22}) = 0$$

If the above difference is greater than zero, it can be concluded that the tariff preferences had an impact on X_1 exports to I_1.

If it is known that special privileges were established during the period of analysis, it is not possible to conclude that tariff preferences had an impact (i.e., the difference between G_{11} and G_{21} may be due to special privileges only). Under these circumstances, the analysis becomes extremely complicated since it is difficult to quantify the effect of special privileges on X_1 exports to I_1.

Let us now show how the above evaluation method could be applied to the EEC-AAS trade arrangement.

First, it may be noted that special privileges and ties do exist between the AAS and France. However, these privileges were already established prior to the association arrangement, and have not changed substantially since then. The effect of special privileges may therefore be considered to have remained constant over the period of analysis.[1]

Next, this method of evaluation requires that a choice be made of "control" countries. Three alternative choices of X_2 countries could be of potential interest: (i) the world, excluding the EEC[2] and AAS countries, (ii) all other developing countries, and (iii) a group of developing countries similar in many characteristics (e.g., per capita income, size) to the AAS countries.

The choice among the above alternatives will depend on the purpose of the analysis. In the present study, the purpose is to determine whether the AAS has displaced its principal competitors on the EEC market as a result of tariff preferences. AAS exports to the EEC compete primarily with exports from other African countries and from countries in Latin America and Asia. The group of X_2 countries adopted for this study therefore includes all developing countries, with the exclusion of the AAS.

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[1]It is possible that de-colonisation has reduced the importance of these privileges. However, since the period of analysis (1962-69) directly follows the granting of independence, the impact of decolonisation may be considered constant over the period of analysis.

[2]The EEC countries are excluded because they benefit from the same tariff preferences.

The choice of I_2 countries is much easier to make. As will be shown in chapter III, the bulk of AAS exports goes to AAS countries and to industrialized countries outside the socialist bloc. The group of I_2 countries adopted for this study thus includes industrialized countries other than the EEC and socialist countries.

Having chosen the "control" countries, it must be decided whether the evaluation method should be applied to individual commodities or to over-all exports or groups of exports. The application of the method to individual commodities (e.g., commodities at the 5 digit SITC level) seems preferable for two reasons. First, as stated earlier with respect to the Aitken-Obutelewicz study (8), application of the method to over-all exports could yield invalid conclusions. Second, it is of interest to find out if the size of the impact is function of the height of the tariff imposed on non-beneficiary countries.

4. Trade theories and tariff preferences

As indicated in section 1, the impact of tariff preferences on exports from the preference-receiving country depends in part on the height of the tariff prevailing prior to the establishment of the union and on production cost differentials between the preference-receiving country and both the preference-giving and the non-beneficiary countries. Cost differentials reflect the comparative advantage or disadvantage that the preference-receiving country has vis-à-vis the other countries in the production and export of particular commodities.

For trade creation to take place with respect to a given commodity, the preference-receiving country must enjoy a comparative advantage vis-à-vis the preference-giving country. On the other hand, for trade diversion to take place, the preference-receiving country must have both a comparative advantage vis-à-vis the preference-giving country and a comparative disadvantage vis-à-vis non-beneficiary countries.

In order to demonstrate that a country has responded as fully as possible to tariff preferences, it must be shown that: (i) its exports of manufactures to the preference-giving country have grown at the expected rate, and (ii) all commodities for which it has a comparative advantage vis-à-vis the preference-giving country were in fact exported to this country. The evaluation method described in section 3 of this chapter fulfills only condition (i). In order to fulfill condition (ii), a list of commodities for which the preference-receiving country enjoys a comparative advantage should be established and compared to the list of commodities actually exported to the preference-giving country. Such a comparison will indicate the extent to which the preference-receiving country has taken advantage of tariff preferences.

To establish the above list, one must apply current comparative advantage theories with respect to the preference-receiving and preference-giving countries.

There are currently six main comparative advantage theories[1], ranging from the path-breaking Heckscher-Ohlin (H-O) theory of international trade to more recent theories such as the technological gap and the product cycle theories. Theoretically, the application of these different theories to a given country would yield different lists of commodities for which the country enjoys a comparative advantage. However, as shown by Hufbauer (10), there is a great deal of overlap among these theories, and there should therefore be considerable overlap among the commodity lists resulting from the application of the theories.

It is outside the scope of this study to identify the commodities for which the AAS enjoys a comparative advantage vis-à-vis the EEC. We must therefore rely on completed studies relating to developing countries, the assumption being that conclusions derived from these studies apply at least in part to the AAS. A study by Lary (11) adopted the approach advocated by Kenen (12) who combines the H-O factor proportions theory and the human skills theory into a "new" factor proportions theory of trade. In this approach, "value added per employee" is used as a guide to factor intensity in manufacturing. The higher the value added per employee, the more capital-intensive is the industry; the lower the value added, the more labour-intensive it is. Using this approach, Lary established a long list of labour-intensive commodities of potential interest to

[1]For a review of these theories, see Hufbauer (10).

less developed countries. This list was used in this study to identify the commodities for which the AAS is likely to enjoy a comparative advantage vis-à-vis the EEC.

Obviously, it is not necessary that the AAS export <u>all</u> commodities in the above list to the EEC in order to conclude that there was a positive response to tariff preferences. Given the economic size of the AAS countries, they can specialize in the production and export of only some of these commodities. It was therefore decided to select from the list only those commodities produced in the AAS during the period under review. This shortened list was compared to the list of commodities actually exported to the EEC in order to assess the extent to which the AAS responded to the tariff preferences.

Potential constraints on the AAS response

The fact that a country enjoys a comparative advantage in the production and export of a number of commodities does not imply that these commodities will actually be exported. A potential comparative advantage may not be exploited for a number of reasons. One important reason, which does not apply to AAS exports to the EEC, is the existence of various barriers to trade (e.g., quotas, prohibitive tariffs) imposed by the importing country. Other reasons include high transport costs, adoption of industrial policies focusing on import substitution rather than export expansion, etc.

Two main factors may constrain AAS attempts to respond to EEC tariff preferences by producing and exporting to the EEC commodities for which it enjoys a potential comparative advantage.

First, although the AAS may enjoy a potential comparative advantage in the production and export of labour-intensive, low-skill intensive commodities, it may not have the capacity to produce and export these commodities to the EEC. Industrial production, however labour-intensive or low-skill intensive, requires a minimal level of technological know-how, quality control, and skilled labour in order to yield goods of the type and quality required by EEC consumers. Furthermore, the marketing of these goods requires good managerial skills and the existence of good marketing channels. The lack of indigenous technical and managerial skills, or the lack of foreign investors who provide such skills, may impede the growth of AAS exports to the EEC.

Second, with respect to finished goods, tariff preferences may have little impact on trade expansion from the AAS if, as hypothesized by Brown (13), product differentiation is more important than price differentiation as a determinant of the pattern of trade. Brown's hypothesis is that the competitiveness of an exporter is less a function of the price of the exported commodity than of the particular characteristics of the commodity which differentiate it from other commodities of the same type. Thus, product differentiation provides the exporter with a competitive edge which is not offset by existing price differentials. Brown's hypothesis is supported by several instances of empirical evidence. For example, the creation of the EEC did not make the export structure of individual EEC countries more skewed. Instead, each country is exporting and importing more, but trade is more heavily intra-industry than inter-industry (14). In a similar vein, the Swedish textile industry has been rejuvenated by specializing in luxury textile products instead of competing against exports from LDCs.

An implication of comparative advantage theories is that the more dissimilar the economic structures of two countries, the greater should be the scope for mutually beneficial trade. Thus, the lowering or removal of trade barriers between a group of developed countries and a group of developing countries should result in a substantial expansion of trade between these two groups. This expansion may not, however, take place if, as hypothesized by Linder (15), trade is likely to be more intense between countries with similar rather than dissimilar economic structures. If the Linder theory is valid, the impact of trade preferences granted to developing countries should be minimal. It is therefore of interest to determine whether the AAS export pattern supports the Linder theory. The following section will describe this theory in some detail.

5. The Linder similarity of preferences theory and tariff preferences[1]

In his Essay on Trade and Transformation (15), Linder distinguishes between trade in primary products and trade in

[1] The material in this section refers to chapter III of Linder's book (15).

manufactures. While he accepts the orthodox theories of the determinants of trade patterns (e.g., the H-O theory, the product cycle theory) for the former products, he rejects these theories for the latter products. Linder's theory contrasts sharply with other theories of the commodity composition of trade because it predicts that trade in manufactures should be most intense between countries with similar, rather than dissimilar, economic structures.

The Linder theory

According to Linder, the qualities and types of manufactured commodities consumed by a country are characteristic of its level of development and industrial structure. Thus, manufactures must be of a type and quality which cater to the needs and tastes of the local population. This proposition regarding the effects of demand is fairly obvious and does not need further elaboration.

The Linder approach differs from other approaches primarily with respect to the supply side. According to the orthodox trade theories, comparative advantage, however defined, determines what is produced in a country. Thus, commodities may be produced for the foreign markets even though there is no demand for such goods in the home market. In other words, home demand does not necessarily dictate the pattern of local production. Furthermore, since countries which differ in terms of comparative advantage also differ in terms of their economic structures, trade should be most intense between countries which have differing economic structures.

When analysing the factors which determine home production, Linder reaches different conclusions. According to Linder, entrepreneurs involved in the production of manufactured goods tend to respond first to the needs of the society in which they live. Four main reasons are offered to explain this behavior. First, when faced with uncertainty, producers are more likely to respond to the profit opportunities of which they have the greatest knowledge. These opportunities inevitably appear in the home market. Second, local needs are the most likely to stimulate technological change and innovation, the result being that newly developed products are usually unsuited to foreign needs and tastes. Third, the production and marketing of manufactured goods, especially differentiated commodities, generally requires development work that must be carried out in close contact with the market. Crucial information must be readily available to the entrepreneur during the trial-and-error period that occurs during the early stages of production. Finally, psychological as well as material factors (e.g., administrative problems, high marketing costs, distance) further explain why an entrepreneur tends to learn about profit opportunities in the domestic market before investigating profit opportunities abroad.

In summary, it can be said that the production functions of manufactures demanded at home tend to be viewed as relatively more advantageous by the entrepreneurs. Consequently, domestic production tends to reflect domestic demand, and only in special cases does it also reflect factors underlying orthodox comparative advantage theories.

As the home market becomes more and more saturated, leaving little room for further expansion, entrepreneurs begin investigating the possibilities of exporting their products to foreign markets. Linder sees international trade as "nothing but an extension across national frontiers of a country's own web of economic activity" (15, p.88). Production being originally geared to the needs and tastes of the home country, exported goods will have to satisfy similar needs and tastes. Since the types and qualities of goods consumed locally are in part a function of the stage of development of a country, as expressed, for example, by its per capita income (PCI) level, manufactured goods produced in one country are in demand primarily in countries at a similar stage of development (i.e., with a similar PCI level). Thus, according to the Linder theory, export and import "baskets" for a given country should be highly similar. Furthermore, the more similar the economic structures and levels of development of two countries, the more similar one country's composition of exports will be to the other country's composition of imports. Why does trade take place between two countries when their production and consumption patterns are highly similar? Linder answers this question by hypothesizing that mutually beneficial trade stems from the marginal satisfaction which differentiated products bring to consumers in the two trading countries. Linder states, in particular, that "the almost unlimited scope for product differentiation - real or advertised - could, in combination with the seemingly unrestricted buyer idiosyncrasies, make possible flourishing trade in what is virtually the same commodity" (15, p.102). As an illustration of this argument, "buyer idiosyncrasy" could explain why Italy exports Fiats to Germany and imports German VWs.

Linder recognizes that while similarity in economic structures constitutes a trade-creating force, actual trade may not reach its full potential between two countries with similar structures due to various trade-breading forces. Distance between countries is the main trade-breaking force advanced by Linder. Distance is considered a proxy for both transport costs and limited trade horizons (i.e., entrepreneurs are less likely to be aware of market opportunities in far-away countries than in neighboring countries). Other trade-breaking forces include cultural dissimilarity (e.g., different languages), political strains, various types of trade barriers.

Given the importance accorded by Linder to product differentiation as a factor generating trade, the theory should apply better to highly differentiated products (finished consumer goods) than to standardized semimanufactures. Balassa (16) provides support for the Linder theory but suggests that its validity is restricted to finished manufactures. He proposes that, for small countries, orthodox trade theories (e.g., the H-O theory) explain the export pattern of semi-manufactures. The reason is that these products do not generally require the availability of a home market. He illustrates this point by stating that there are "numberous examples, in countries as diverse as Belgium, Hong Kong, and Portugal where domestic consumption plays only a supplementary role as market outlet for standardized manufactures." (16,p.203).

Like any other theory, the Linder similarity of preferences theory applies under a number of assumptions. The most important assumption is that exports are produced by local entrepreneurs rather than by foreign investors. If this is not the case, a country may produce commodities which do not reflect the home demand, and may export these commodities to countries with dissimilar economic and industrial structures. This outcome can be explained by the fact that foreign investors are responding to demand conditions in their <u>own</u> home country, but are producing abroad in order to take advantage of some relatively low priced factor of production (e.g., low wages). Such production usually takes place only after development work in the investors' home country has been completed. Very often, production consists solely in plant assembly of components produced in the investors' country. It may therefore be concluded that the larger the number of foreign investors in a country, the more its export pattern will tend to differ from the one predicted by the Linder theory. In other words, the existence of foreign investments tends to invalidate the Linder theory in the same way as it invalidates the factor proportions theory. In the former case, these investments make it possible for a country to gear its production to satisfy foreign demand, while in the latter case, they make it possible for a country to produce and export commodities for which the country does not enjoy a comparative advantage (e.g., capital-intensive mining products, steel, chemicals). Linder reaches a similar conclusion with respect to trade in raw materials, stating: "If entrepreneurship could not move internationally, it is quite possible that our proposition could be applied to trade in primary products as well as manufactures" (15, p.93).

Previous tests of the Linder theory

Various trade models based on the Linder theory have been tested in recent years.

The first test of the theory was performed by Linder himself. He attempted to show that the average propensity to import (API) of one country from another is negatively correlated with the absolute value of the difference in per capita income between the two countries ($|\Delta PCI|$). Using a sample of 32 developing and developed countries, he plotted for each country the (API) values against the ($|\Delta PCI|$) values. To support the theory, the graph should resemble an inverted V centered around the per capita income level of the exporting country. Although the results of this test were not conclusive, they did suggest that the thesis is worthy of further consideration.

Hufbauer (10) attempted to test two different interpretations of the Linder theory. The first interpretation is that similarity should exist between actual commodities imported and exported by a given nation. The second interpretation is that similarity should exist between commodity characteristics embodied in a nation's imports and exports.

To test the first interpretation of the theory, Hufbauer used, as a measure of trade similarity, the following index:

$$\text{Cos}X_iM_j = \frac{\sum_n x_{in} \cdot m_{jn}}{\sqrt{\sum_n x_{in}^2 \cdot \sum_n m_{jn}^2}}$$

where:

x_{in} = exports of commodity n as a percentage of total manufactured exports from country i

m_{jn} = imports of commodity n as a percentage of total manufactured imports by country j

When $\text{Cos}X_iM_j$ equals one, there is complete identity between exports and imports. On the other, a value of zero means complete dissimilarity.

Values of $\text{Cos}X_iM_j$ derived from the 1965 three-digit trade statistics were then used in the following two regression equations:

$$\text{Cos}X_iM_j = c_1 + a_1A_j + b_1A_i \quad \text{when } A_j \leqslant A_i$$

and

$$\text{Cos}X_iM_j = c_2 + a_2A_j + b_2A_i \quad \text{when } A_j \geqslant A_i$$

where:

A_i, A_j = per capita GDP of country i and country j, respectively

The Linder theory implies that c_1 should be smaller than c_2, that a_1 should be positive, and a_2 should be negative.[1] The converse results would, on the other hand, support the orthodox comparative advantage theories.

Results from the above analysis supported neither Linder nor the orthodox trade theories. Both a_1 and a_2 were found to be positive, with approximately the same small value. Furthermore, it was found that the richer the trading partners, the more similar are imports and exports (i.e., the higher the value of $CosX_iM_j$). Hufbauer concluded: "Broadly speaking, these findings represent nothing more than the diversification of exports and imports which accompanies greater affluence. Owing to concentration, especially export concentration, the opposing trade vectors of two poor countries, say Hong Kong and Portugal, will substantially differ, while thanks to diversification the import-export vectors of two rich nations, for example the United Kingdom and Sweden, will roughly coincide." (10, p.201).

Hufbauer also tested the second interpretation of the Linder theory, i.e., similarity of characteristics embodied in imports and exports. This was done by ranking national imports

[1]Hufbauer included the variable A_i in the two regression equations because the value of the cosine should also be a function of the economic level of the exporting country.

and exports separately with respect to commodity characteristics. A positive correlation between the two rank lists would support the Linder theory, while a negative correlation would support the orthodox theories. The Spearman correlations were all found to be negative, but not significantly different from zero at the 1% level. On the basis of the results of the above two tests, Hufbauer concluded: "The comparatively weak showing of Heckscher-Ohlin might be interpreted either as a modest triumph for Linder or as the inevitable outcome of restrictive tariffs and quotas. The major point, though, is that trade does involve some exchange of characteristics."(10, p.207).

Fortune (17) tested the Linder theory for finished manufactures in S.I.T.C. groups 7 and 8. He used the following regression equation:

$$M_{ij}/Y_i = a + b \cdot |Y_j / N_j - Y_i / N_i| + cD_{ij}$$

where:

M_{ij} = imports of country i from country j

Y_j, Y_i = GNP of countries j and i, in dollars

N_j, N_i = population of countries j and i

D_{ij} = distance between countries i and j, in miles

The regression equation was estimated for each of 23 exporting countries. The total number of observations for each regression was equal to 50 importing countries.

Negative and significant values for the coefficients b and c would support the Linder theory. However, the findings provided only limited support for the theory. The coefficient of the distance variable was negative in all cases, and was significant at the 5% level in eleven of the 23 regressions. The difference in per capita income variable was significant at the 5% level in 9 cases, with the coefficient being negative in 7 out of the 9 cases (It was negative, but non-significant in 11 other cases.) Fortune concluded: "Nevertheless, the results do give some support to the Linder hypothesis concerning similarities in income levels as a prerequisite for trade in finished manufactures. However, the low coefficients of determination for all the regressions show that even in those cases where the per capita income variable is a significant determinant of trade intensities, it is hardly the only one." (17, p.317).

The validity of the Linder theory cannot be assessed unless the theory is properly tested. The fact that the above tests failed to support the theory or provided only limited support, could be due to a too strict interpretation of the theory, or to inadequate testing methodology.

Since it is probable that the theory applies best to differentiated manufactures, testing of the theory should be performed separately for standardized commodities and differentiated commodities. Unfortunately, Linder tested his theory for global exports, including both manufactured and primary commodities, while Hufbauer and Fortune tested the theory for global manufactures, including both standardized and differentiated commodities.

Second, both Linder and Fortune failed to take into consideration the size of the exporting country. Exports from a large country A to a country C should be larger than those of a small country B to the same country C, even though per capita incomes in countries A and B are equal. Thus, import intensity should be partly a function of the size of the exporting country (e.g., GNP of the exporting country).

Third, income distribution should also affect a country's average propensity to import. If two countries have different income distributions, their average propensities to import from a third country may differ even though their per capita incomes are equal. This is recognized by Linder who stated that median rather than average income levels would better reflect the demand structure for imports whenever "the distribution of income within the countries is very uneven." (15, p.113). Thus, the fact that the above tests did not support the theory could be explained by the use of average rather than median PCIs.

Fourth, as suggested by Fortune, difference in per capita income may not constitute the only major independent variable. His test of Linder included a second variable, distance. There may be other major trade-breaking and trade-creating variables. For example, political relations between two countries could either reinforce or impede trade while cultural similarity should favor trade. The validity of the main Linder explanatory variable ($|\Delta PCI|$) can only be assessed if it is included in a model which incorporates all relevant variables.

To summarize, proper testing of the Linder theory requires that the theory be tested separately for differentiated and standardized commodities, that median rather than average income levels be used, that the size of the exporting countries be taken into consideration, and that all relevant independent variables be included. We propose that the test be performed for a Linder-based model of the following general form:

$$(API)_{ij} = f(\ |\Delta PCI_M|_{ij},\ Y_j,\ D_{ij},\ P_{ij},\ C_{ij},\ T_{ij})$$

where:

$(API)_{ij}$ = average propensity to import of country i from country j.

$|\Delta PCI_M|_{ij}$ = absolute difference in median per capita income between countries i and j.

Y_j = GNP of exporting country j.

D_{ij} = distance between countries i and j.

P_{ij} = binary variable for political ties between countries i and j.

C_{ij} = binary variable for cultural similarity.

T_{ij} = binary variable for trade agreement.

In chapter IV, a modified version of the above model will be tested in order to determine whether the AAS export pattern supports the Linder theory.

Linder theory and tariff preferences

From the perspective of the Linder theory, tariff preferences should have a limited impact on exports of manufactured commodities, especially differentiated manufactures, from the preference-receiving country. Since, according to the theory, potential comparative advantage does not determine potential trade intensity between countries with dissimilar economic structures, the removal of trade barriers should not have a significant impact on actual trade intensities between these countries. On the other hand, if trade barriers exist between countries with similar economic structures, they may constitute a major trade-breaking force, and their removal should permit actual trade intensity to coincide with potential trade intensity.

In the case of the EEC-AAS trade arrangement, the theory predicts that the tariff preferences should have virtually no impact on AAS exports of differentiated commodities to the EEC, and only a limited impact on exports of standardized commodities. These two propositions will be tested in chapter IV.

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CHAPTER III

EVALUATION OF THE AFRICAN ASSOCIATED STATES RESPONSE TO TARIFF PREFERENCES GRANTED BY THE EEC

1. The evaluation framework

The purpose of this chapter is to determine whether, during the 1962-1969 period, the AAS responded in a positive manner to tariff preferences granted its manufactured exports by the EEC. Several types of analyses will be used in order to evaluate the AAS response. Although no single analysis yields fully conclusive answers regarding the AAS response, the over-all information generated by the analyses should provide an adequate basis for a reasonably conclusive evaluation of the AAS response.

Section 2 of this chapter describes changes in the pattern of total EEC imports and total AAS exports, and applies the methodology developed in chapter II in order to determine whether the AAS responded to the tariff preferences by expanding its total exports to the EEC. Although this study is concerned with manufactured AAS exports, the analysis of over-all trade will be useful in qualifying findings regarding trade in manufactures. Section 3 applies the same methodology to global manufactured exports from the AAS. Section 4 analyzes the AAS export pattern for various groups of manufactures in order to determine whether the growth of the market share of exports to the EEC is higher or lower than that of exports to other groups of countries. Section 5 applies the methodology developed in chapter II to a number of individual manufactured commodities at the 3-digit SITC level. Homogeneous data at the 5-digit level could not be obtained for this analysis. The data that could be obtained for individual commodities at the 5-digit level are analyzed, in section 6, using a modified version of the methodology developed in chapter II. Section 7 compiles a list of labour-intensive, low-skill intensive commodities exported by the AAS to countries other than EEC countries. Finally, section 8 pools the information generated in the previous sections in order to evaluate the AAS response to EEC tariff preferences.

Period of analysis

Since the EEC-AAS trade agreement took place in 1958, the period of analysis should cover a span from pre-agreement through post-agreement years (e.g., 1950-1970 period). Unfortunately, homogeneous and comprehensive data for AAS exports are not available for years prior to 1962. This year was therefore selected as the first year of the analysis period. The length of the period of analysis was selected on the basis of two criteria. First, it should be long enough to allow for the impact of tariff preferences to take place. Second, as far as possible, the analysis period should not include years in which EEC has established trade agreements with other countries. If these years were included, the evaluation of the AAS response would become much more complex because of lack of proper control countries.

A review of EEC trade agreements with countries other than the AAS shows that, starting in 1969, the EEC has granted tariff preferences to Tunisia and Morocco (1 September 1969), and to the East African Community, i.e., Kenya, Uganda, and Tanzania (Agreement concluded on 24 September 1969, effective beginning 1971). Furthermore, on July 1, 1971, the EEC granted substantial tariff preferences to the majority of LDCs by instituting its own GSP. Under these circumstances, it was decided to adopt a period of analysis covering the years 1962 to 1969. The adopted period should be long enough (11 years from 1958) to allow for the impact of EEC preferences to take place. It could be argued that EEC tariffs imposed on manufactured AAS exports were not fully removed until 1968, and thus, the period should extend beyond 1969. However, as shown in Table 1, tariffs imposed in 1962 on EEC imports from outside the AAS are double those imposed on imports from the AAS. This tariff differential should constitute a substantial incentive for the AAS countries to expand their exports to the EEC at a relatively higher rate than non-beneficiary countries.

Estimation method for growth rates of the value and market share of exports

Growth rates of the value and market share of exports are used in the analyses presented in sections 2 to 6 of this chapter. The method used to estimate these growth

TABLE 1.--Tariff reductions of the EEC on manufactured imports from the AAS

(Per cent)

	1.1.59	1.7.60	1.1.61	1.1.62	1.7.62	1.7.63	1.1.65	1.1.66	1.7.67	1.7.68
Individual reductions made on 1 January 1957 level	10	10	10	10	10	10	10	10	5	15
Cummulative reductions	10	20	30	40	50	60	70	80	85	100
Percentage of the EEC common external tariff which is imposed on imports from the AAS	90	80	70	60	50	40	30	20	15	0

Source: EEC Commission, First General Report on the Activities of the Communities, Brussels: EEC, 1967 (p. 34).

rates is by fitting an exponential trendline to the time series data for the 1962-1969 period, and calculating the growth rate on the bais of the estimated value of the slope.

Let us define:

y_o, y_t = value of the dependent variable (e.g., market share) at years o and year t, respectively.

r = the average growth rate for the period.

Then:

$$y_t = y_o(1 + r)^t$$

Taking the logarithm of the above expression gives:

$$\text{Log } y_t = \text{Log } y_o + t \text{ Log}(1 + r)$$

The above equation may be rewritten:

$$\text{Log } y_t = a + b.t$$

Using the least-square method, we obtain an estimate $\hat{b}$ for b, that is an estimate for Log(1 + r). The estimated average growth rate, $\hat{r}$, is then equal to:

$$\hat{r} = e^{\hat{b}} - 1$$

In applying the least-square method, the values of t range from t = o for 1962 to t = 7 for 1969. The mean for the period is obtained by calculating the expected value of the dependent variable for t = 3.5.

2. Analysis of total AAS exports and EEC imports

Although the purpose of this chapter is to evaluate the AAS response to tariff preferences granted to their manufactured exports, it is of interest to analyze the over-all

AAS response to tariff preferences. On the basis of this analysis, it will be possible to determine whether the over-all AAS response concurs with the AAS response in the case of manufactured exports. The knowledge of whether the two responses concur may help explain the role of tariff preferences with respect to export expansion from beneficiary countries.

First, changes in the EEC pattern of imports will be compared to changes in the AAS pattern of exports over the period of analysis. Second, the methodology developed in chapter II will be used in order to assess the over-all AAS response to tariff preferences.

Changes in the pattern of EEC imports and AAS exports over the period of analysis

Table 2 provides the growth of the share of EEC imports from the world, the AAS and "other LDCs", as well as the growth of the share of AAS exports to the world, the EEC and the "Rest of the World" (ROW). First, it can be seen that the growth rates of the shares of EEC imports from the AAS and "other LDCs" are approximately equal (-3.04 versus -3.21), and both are negative. Thus, tariff preferences do not seem, on the basis of this limited analysis, to have had an impact on AAS exports to the EEC. This conclusion is based on the assumption that the growth rate of the share of imports from "other LDCs" constitutes a proxy of what the growth rate of the share of imports from the AAS would have been in the absence of preferences.

TABLE 2.-- Growth of value and market share of total EEC imports and total AAS exports (1962 - 1969)

V = Value (in $ 1,000)
MS = Market share (in Per Cent)

	V MS	1962	1963	1964	1965	1966	1967	1968	1969	Average growth rate (%)	Mean V Mean MS
EEC Imports from:											
World	V	35,753,600	40,414,000	44,890,900	48,990,300	53,624,100	55,068,000	61,988,000	75,578,500	10.10	50,744,000
	MS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-	100.00
AAS	V	614,200	693,200	806,100	786,900	831,00	859,300	930,500	1,060,400	6.82	813,000
	MS	1.72	1.72	1.80	1.61	1.55	1.56	1.50	1.40	- 3.04	1.60
Other LDCs	V	8,557,400	8,128,800	9,036,900	9,742,100	10,448,900	10,651,700	11,568,100	13,161,600	6.56	9,427,548
	MS	23.93	20.11	20.13	19.89	19.49	19.34	18.66	17.41	- 3.21	20.45
AAS Exports to:											
World	V	691,277	787,212	970,683	967,420	1,066,176	1,083,405	1,303,006	1,384,550	9.74	1,004,294
	MS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-	100.00
EEC	V	497,888	572,741	645,645	626,620	681,314	690,577	802,656	868,117	7.23	664,078
	MS	72.02	72.76	66.51	64.77	63.90	63.74	61.60	62.70	- 2.29	66.12
Rest of the World	V	193,389	214,471	325,038	340,800	384,862	392,828	500,350	516,438	15.08	340,216
	MS	27.98	27.24	33.49	35.23	36.10	36.26	38.40	37.30	4.87	33.88

Source: (1) EEC imports: Statistical Office of the European Communities, Foreign Trade Statistics - Associates - Year book 1969 - 1970, Brussels: Statistical Office of the European Communites, 1971 (Volume I, p. 45)

(2) AAS exports: Statistical Office of the European Communities, Foreign Trade Statistics - Associates - Year book 1967-69, Brussels: Statistical Office of the European Communities, 1970 (Volumes I and II) and: Foreign Trade Statistics - Associates - Year book 1959-66, 1968 and 1969 (14 volumes of trade statistics, one for each AAS country).

Second, an analysis of AAS exports, also provided in Table 2, shows that the lack of over-all AAS response to tariff preferences cannot be attributed to an incapacity of AAS to expand exports so as to meet the EEC demand of imports. The over-all growth of AAS exports to the world (+9.74%) is approximately equal to that of EEC imports from the world (+10.10%). Moreover, as shown in Table 2, the growth rate of the market share of AAS exports to the EEC decreased, on the average, by 2.29% while that of AAS exports to the rest of the world increased, on the average, by 4.87% per annum. The lack of AAS response to tariff preferences must therefore be attributed to factors other than the incapacity of the AAS to expand exports to the EEC.

One such factor could be that the AAS is over-all less price competitive than "other LDCs". Thus, the competitive edge provided by the tariff preferences could be offset by a growth of AAS prices higher than that of "other LDCs". In order to determine whether such factor did affect the AAS export performance, we must find out whether the growth rate of AAS exports to "other DMECs" (i.e., Developed Market Economy Countries other than the EEC Countries) is also lower than that of "other LDCs". This will now be done by applying the methodology developed in chapter II.

AAS response to tariff preferences for over-all exports

It may be recalled, from chapter II, that in order to isolate the impact of tariff preferences, one must control

TABLE 3.-- Total AAS and "Other LDCs" exports to EEC and "Other DMECs" (1962 - 1969)

(in $ 1,000)

	Exports of "All LDCs" to:			Exports of AAS to:			Exports of "Other LDCs" to:		
	DMECs	EEC	"Other DMECs"	DMECs	EEC	"Other DMECs"	DMECs	EEC	"Other DMECs"
1962	20,770,000	6,790,000	13,980,000	590,958	497,488	93,470	20,179,042	6,292,512	13,886,530
1963	22,770,000	7,540,000	15,230,000	691,069	572,741	118,328	22,078,931	6,967,259	15,111,672
1964	24,930,000	8,390,000	16,540,000	839,178	645,645	193,533	24,090,822	7,744,355	16,346,467
1965	26,110,000	8,880,000	17,230,000	824,649	626,620	198,029	25,285,351	8,253,380	17,031,971
1966	28,080,000	9,430,000	18,650,000	910,980	681,314	229,666	27,169,020	8,748,686	18,420,334
1967	29,460,000	9,770,000	19,690,000	916,523	690,517	226,006	28,543,477	9,079,483	19,463,994
1968	32,750,000	10,730,000	22,020,000	1,073,171	802,656	270,515	31,676,829	9,927,344	21,749,485
1969	36,270,000	12,220,000	24,050,000	1,125,224	868,117	257,107	35,144,776	11,351,883	23,792,893

Source: (1) All LDCs exports: UNCTAD, Handbook of International Trade and Development Statistics - 1972, New York: UNCTAD, 1972, Table 3-1

(2) AAS exports: Same as that for AAS exports in Table 2

for changes in both supply and demand conditions in the preference-giving and preference-receiving countries over the period of analysis. To do so, one must use two groups of "control" countries: "other LDCs" needed to control for changes in demand conditions in the EEC, and "other DMECs" needed to control for changes in supply conditions in the AAS. The growth rates of AAS and "other LDCs" exports to the EEC and "other DMECs" are then compared in order to determine whether the AAS responded to EEC tariff preferences. It may be concluded that the AAS response was positive whenever (ΔG) is greater than zero, with:

$$(\Delta G) = (G_{11} - G_{21}) - (G_{12} - G_{22})$$

where:

G_{11}, G_{12} = Growth rates of AAS exports to respectively the EEC and "other DMECs"

G_{21}, G_{22} = Growth rates of "other LDCs" exports to respectively the EEC and "other DMECs".

Table 3 provides the value of exports from the AAS and "other LDCs" to the EEC and "other DMECs"[1] over the 1962-1969 period.

The following growth rates and mean values were estimated:

[1]"Other DMECs" include the following countries: U.S., Canada, EFTA countries, Finland, Ireland, Greece, Spain, Turkey, Yugoslavia, Japan, Australia, New Zealand and South Africa.

	Growth rate (%)	Mean value (in $1,000)
AAS exports to EEC	: G_{11} = 7.24	619,187
AAS exports to "Other DMECs"	: G_{12} = 15.12	162,903
"Other LDCs" exports to EEC	: G_{21} = 7.96	7,792,036
"Other LDCs" exports to "Other DMECs"	: G_{22} = 7.65	16,686,465

The above growth rates yield a value for (ΔG) of -8.19%. Thus, it may be concluded that, in the case of over-all exports, the AAS did not respond to EEC tariff preferences. Indeed, the above findings indicate that, for some unknown reasons, the AAS performed better in the markets of "Other DMECs" than in those of the EEC countries.

At this level of commodity aggregation test findings should be considered with caution. Since there may be many commodities which are exported by "Other LDCs" but not by the AAS - and vice-versa -, the impact of tariff preferences on commodities exported by both groups of countries may be "hidden" by changes in the export of the former commodities. In order to reduce this problem, the evaluation methodology will be applied, in section 5 and 6, to disaggregated commodities at, respectively, the 3-digit and 5-digit SITC levels.

3. Evaluation of AAS response for over-all manufactured exports

The methodology used for global exports is applied, in this section, to total manufactured exports, excluding petroleum products, unworked non-ferrous metals, and a number of manufactured commodities in SITC groups 6 and 7 (e.g., 711 and 735 when exported by LDCs).[1]

In this analysis, the "control" group "Other DMECs" is limited to 13 major countries: the 8 EFTA countries, USA, Canada, Australia, New Zealand, and Japan. Due to lack of readily available data, it was not possible to include 7 additional countries defined by the U.N. as DMECs (i.e., Finland, Iceland, Greece, Turkey, Spain, Yugoslavia and South Africa).

Table 4 provides the value of exports from AAS and "Other LDCs" to EEC and the above group of "Other DMECs" over the 1962-1969 period. The following growth rates and mean values were estimated:

	Growth rate (%)	Mean value (in $1,000)
AAS exports to EEC	$G_{11} = 13.04$	61,540
AAS exports to "Other DMECs":	$G_{12} = 19.19$	16,964
"Other LDCs" exports to EEC :	$G_{21} = 9.04$	933,773
"Other LDCs" exports to "Other DMECs" :	$G_{22} = 15.56$	2,310,553

Given the above growth rates, we obtain a value for (ΔG) of +.37%. This value is positive but very close to zero. Thus, it may be concluded that in the case of total

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[1]The manufactured exports analyzed in this section correspond to those included in UNCTAD's "Total A" (i.e., manufactured goods included in SITC groups 0 to 9, excluding 331.02, 332, 341.2, 351, 513.65, 667, 681, 682.1, 683.1, 685.1, 686.1, 687.1, 689, 711, 735, and 961.0).

TABLE 4.-- Imports of manufactures and semi-manufactures by EEC and "Other DMECs" from the AAS and "Other LDCs" (1962 - 1969)

(in $ 1,000)

	Exports of "All LDCs" to:			Exports of AAS to:			Exports of "Other LDCs" to:		
	18 DMECs	EEC	"Other DMECs"	18 DMECs	EEC	"Other DMECs"	18 DMECs	EEC	"Other DMECs"
1962	2,509,855	841,620	1,668,235	56,482	47,861	8,621	2,453,373	793,759	1,659,614
1963	2,738,822	848,571	1,890,251	66,734	55,692	11,042	2,672,088	792,879	1,879,209
1964	3,157,989	970,115	2,187,874	74,018	57,105	16,913	3,083,971	913,010	2,170,961
1965	3,455,399	1,011,873	2,443,526	85,918	58,190	27,728	3,369,481	953,683	2,415,798
1966	3,968,864	1,193,953	2,774,911	96,079	65,245	30,834	3,872,785	1,128,708	2,744,077
1967	4,281,691	1,088,139	3,193,552	104,999	81,103	23,896	4,176,692	1,007,036	3,169,656
1968	5,171,018	1,260,477	3,910,541	128,801	102,783	26,018	5,042,217	1,157,694	3,884,523
1969	6,426,729	1,715,884	4,710,845	146,523	113,878	32,645	6,280,206	1,602,006	4,678,200

Source: UNCTAD, Imports of manufactures and semi-manufactures, Geneva: UNCTAD, Computer print-outs, no date.

manufactures, the AAS did not respond to EEC tariff preferences.

This finding should be considered with caution for two reasons. First, as in the case of total exports, the test is applied to highly aggregated export data. Second, the bulk of AAS manufactured exports may consist of commodities for which the EEC common tariff is low, and thus does not favor a positive AAS response to preferences. The results of the analysis does not exclude the possibility of a positive AAS response limited to a few commodities for which EEC tariffs are relatively high.

4. AAS exports of various groups of manufactures to the EEC and other groups of countries

This section will provide an over-all view of the pattern of exports from the AAS with respect to various groups of manufactured commodities. It constitutes only a partial evaluation of the AAS response to tariff preferences since "Other LDCs" exports to EEC and to "Other DMECs" are not taken into consideration. Due to lack of data, it was not possible to apply the methodology developed in chapter II to groups of manufactured exports. Nevertheless, findings from this section will be helpful in qualifying those obtained in other sections of this chapter. The analysis in this section is designed to determine: (i) whether, for various groups of manufactured commodities, there was a shift in the geographical pattern of AAS exports in favor of the EEC over the 1962-1969 period, and (ii) whether the size of this shift was a function of the type of commodity being exported (i.e., finished commodities versus semi-manufactures).

The data

Coverage of manufactured exports. The definition of "manufactures" used in this analysis is somewhat less restrictive in coverage than that usually adopted by international organizations and trade economists. Specifically, it covers a number of products from groups 0 and 2 of the CST Commodity Classification[1] which are usually classified as agricultural materials: for example, in Group 0, frozen or chilled meat and simply prepared (dried or salted) fish; in Group 2 wood sawn length wise and railway sleepers. Such goods are included in this study as "manufactures" because their production requires a certain level of processing, albeit a fairly unsophisticated one. The technological level of the AAS is so low that a processing level which may be considered as non-significant in developed countries should be considered as significant in the AAS. Consequently, simply processed raw materials are classified as manufactures.

[1]CST stands for "Statistical and Tariff Classification For International Trade". This is the classification used by the Statistical Office of the European Communities with respect to AAS export statistics.

Exclusion of re-exports. Comprehensive data on exports from the AAS during the 1962-1966 period were published for the first time by the Statistical Office of the European Communities in 1968. Export data for the years 1967 to 1969 were published two years later in 1970. Exports are coded according to the Statistical and Tariff Classification (CST) by groups (1 digit classification), sub-groups (3 digit classification) and by individual commodities (5 digit classification). The published tables provide AAS exports to the world, the EEC and individual countries. These EEC publications constitute the only source of comprehensive foreign trade statistics for all the years included in the period of analysis.

It was noted in the forewords of these publications that in order to improve the reliability of the compiled foreign trade statistics various adjustments of the original data had been carried out. These adjustments did not, however, include the exclusion of re-exports. A cursory look at the export statistics indicates that a number of exported commodities could not have been produced by the AAS countries. The obvious examples are airplane engines and machine tools. Such items either constitute re-exports or are being shipped abroad for repairs. Export items of the above type may be easily identified and excluded from the analysis. However, there also exist questionable export items which cannot be rejected off-hand without checking whether they are actually produced in the exporting country. Examples of such items include bicycles, cars, various chemicals, and even cigarettes.

In order to identify and exclude from the analysis various types of re-exports, it was necessary to compile for each country within the AAS a list of manufactured commodities produced in the country. It was then assumed that if a commodity is actually produced in the country, it constitutes a potential export commodity. If it was subsequently found that this commodity was exported, the export was assumed to be genuine.

Industrial statistics for each AAS country were obtained from a 1971 publication[1] which provides complete and detailed information on the manufacturing industries of each country, including the name, location and size of firms, the starting year and volume of production, and in some cases, the destination of the production of the firms (e.g., local market, foreign market in Africa, EEC). Manufactured exports which could not be identified from the above list were excluded on the assumption that they constituted re-exports. In cases where the list shows that the production of a given manufacture started after 1962, exports between 1962 and the starting year of production were also rejected as re-exports.

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[1]Ediafric-Service (1)

Table A-1 of the Appendix provides a complete list of true exports from each country within the AAS, including the year in which exports of each commodity began.

Grouping of manufactured commodities. The aggregation of manufactured commodities into various groups presents a double interest. First, the separate analysis of individual groups will indicate which type of exports to the EEC the AAS succeeded in expanding or failed to expand. Second, since tariff preferences are generally of greater interest for finished goods than for simply processed raw materials or intermediate goods,[1] it is of interest to determine whether AAS exports of finished goods to the EEC grew at a higher rate than AAS exports of intermediate goods. Tentative conclusions may then be drawn from such cross-sectional analyses as to whether tariff preferences have been successfully used by the AAS to expand their exports of finished goods to the EEC.

In this section, manufactured exports are aggregated into 11 groups: total exports, simply processed raw materials and intermediate goods, finished goods, and each of the CST

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[1]Since the impact of tariff preferences on export expansion is a function of the level of tariff duties, and since these duties tend to be higher as the value added by manufacturing increases, the impact of tariff preferences should be larger for finished goods than for raw materials or intermediate goods. Moreover, this impact should be reinforced by the fact that the difference between the effective tariff and the nominal tariff is much larger for finished manufactures than for semi-manufactures.

groups 0 to 8, excluding Group 3.[1] CST groups 0, 5 and 6 include both intermediate and finished goods. CST groups 1, 7 and 8 include finished goods only, while CST groups 2 and 4 include intermediate goods only. The classification of individual commodities into finished or intermediate goods is provided in Table A-1 of the Appendix. Table 5 provides the over-all share of each of the two types of goods within each group.

In some cases, a commodity could be classified either as an intermediate good or as a finished good, depending on whether it is to be further processed in industrial establishments, or is to be retailed as a consumer good. For example, if palm oil is exported already refined and bottled for home consumption it would be classified as a finished good. On the other hand, if it needs further processing before it could be retailed, it should be classified as an intermediate good. Since the 5-digit CST classification is not always sufficiently disaggregated to permit an unambiguous distinction between finished and intermediate goods, a certain degree of arbitrariness could not be avoided when goods were being classified.

Grouping of importing countries. Countries importing from the AAS are grouped according to specific geographical and economic characteristics. The AAS export

[1]Since exports of commodities in CST group 3 did not take place until the end of the period, they were not included in the analysis.

TABLE 5.--Over-all share of intermediate goods and of finished goods in individual groups of manufactured AAS exports

(Per Cent)

CST Commodity Group	Share of intermediate goods	Share of finished goods
0	53.57	46.43
1	0.00	100.00
2	100.00	0.00
4	100.00	0.00
5	57.06	42.94
6	75.60	24.40
7	0.00	100.00
8	0.00	100.00

Source: Same as Table 2.

performance to various groups of countries may then be compared, and some tentative conclusions reached regarding the relationships between the pattern of AAS exports to groups of countries and the characteristics of these countries.

Countries are aggregated into 5 groups: Africa, "Other LDCs", EEC, "Other DMECs" and Socialist countries of Europe. The group "Africa" consists of all countries in the African continent, including the AAS. The characteristics of this group are (i) geographical proximity to the AAS, and (ii) a development level generally similar to that of the AAS.[1] The group "Other LDCs" includes all developing countries in the Middle East, Latin America and Asia. The characteristics of this group are: (i) large geographical distance from the AAS, and (ii) with some exceptions in the Middle East and Latin America, a development level similar to that of the AAS. The EEC constitutes a special group among the developed countries because of its special trade relationship with the AAS. The "Other DMECs" group includes all developed market economy countries with the exception of the EEC. The characteristics of this group are: (i) large geographical distance from the AAS, and (ii) a high level of development relative to that of the AAS.

[1]An additional characteristic is that some of the AAS countries are grouped within two customs unions (see section 2 of chapter IV), a factor which may favor trade among these countries. Thus, if tariff preferences were to be effective in promoting trade, the growth rates of AAS exports to the EEC and Africa should be higher than those of exports to other groups of countries.

These two characteristics also apply to the EEC. The fifth group includes all socialist countries ("SOC. countries") in Europe. The characteristics of this group are similar to those of "Other DMECs", but its trading policies differ significantly from those of "Other DMECs".[1]

Evaluation of AAS export performance during the 1962-1969 period

This evaluation is based on estimates of growth rates summarized in Table 6. These estimates were calculated from export statistics (values and market shares for the 1962-1969 period) provided in Tables A-2a and A-2b of the Appendix.

Total manufactured exports. As shown in Table 6, total AAS exports to the world grew at the relatively high rate of 8.72% per annum. Close to 99% of total exports were distributed among the EEC (71.43%), Africa (14.52%) and "Other DMECs" (12.72%). The growth rate of exports to Africa (16.45%) is higher than that of exports to the EEC (6.10%) and than that of exports to "Other DMECs" (14.90%).

The growth rate of the share of exports to Africa (7.11%) is higher than that of exports to the EEC (-2.41%) and than that of exports to "Other DMECs" (5.68%). It may therefore be concluded that total manufactured exports grew

[1]Although the countries included in each group are not fully homogeneous with respect to the characteristics listed in each case, it was decided to limit the analysis to these five groups.

TABLE 6.--AAS exports of individual groups of manufactured commodities - Growth rate of value and market share

V = Value of exports
MS = Market share of exports
1 = Mean value (in $ 1,000)
2 = Growth rate of V (in Per cent)
3 = Mean value of MS (in Per cent)
4 = Growth rate of MS (in Per cent)

Commodity Group			Destination					
			World	Africa	"Other LDCs"	EEC	"Other DMECs"	Social. countr. of Europe
Total Manu-	V	1	380,141	54,586	3,127	268,470	47,810	1,843
factured	V	2	8.72	16.45	14.14	6.10	14.90	23.95
exports	MS	3	100.00	14.52	.83	71.43	12.72	.49
	MS	4	-	7.11	5.07	- 2.41	5.68	13.44
Semi-	V	1	289,675	15,558	1,656	228,904	37,751	1,790
manu-	V	2	7.31	13.15	14.62	5.61	16.31	24.16
factured	MS	3	100.00	5.45	.58	80.13	13.22	.63
goods	MS	4	-	5.43	6.63	- 1.58	8.39	15.90
Finished	V	1	89,677	38,606	1,173	39,441	9,611	24
goods	V	2	13.12	17.55	22.89	9.06	10.27	52.36
	MS	3	100.00	43.45	1.32	44.39	10.82	.02
	MS	4	-	3.92	8.75	- 3.59	-2.52	98.63
CST	V	1	134,064	24,464	1,297	86,187	20,333	351
Group 0	V	2	12.27	9.70	6.99	12.67	11.30	77.21
	MS	3	100.00	18.45	.98	64.98	15.33	.26
	MS	4	-	-2.29	- 4.79	.35	- .87	58.21
CST	V	1	2,292	1,871	4	365	0	0
Group 1	V	2	14.02	17.52	80.39	- 2.05	.00	.00
	MS	3	100.00	82.90	.93	16.17	.00	.00
	MS	4	-	3.07	84.51	-14.10	.00	.00
CST	V	1	121,679	5,918	492	96,539	15,318	668
Group 2	V	2	4.42	6.43	29.17	2.55	21.49	- 3.40
	MS	3	100.00	4.98	.41	81.17	12.88	.56
	MS	4	-	1.93	24.30	- 1.79	16.35	- 7.19

TABLE 6.-- (Continued)

Commodity Group			Destination					
			World	Africa	"Other LDCs"	EEC	"Other DMECs"	Social. countr. of Europe
CST Group 4	V	1	58,820	2,336	23	52,647	1,040	10
	V	2	3.56	7.90	-11.97	2.01	80.90	.00
	MS	3	100.00	4.17	.04	93.92	1.86	.02
	MS	4	-	4.21	-16.00	- 1.49	73.22	.00
CST Group 5	V	1	5,493	1,467	33	2,301	1,371	0
	V	2	17.50	49.88	7.68	8.27	8.75	.00
	MS	3	100.00	28.36	.64	44.49	26.51	.00
	MS	4	-	27.22	- 8.33	- 7.86	-7.44	.00
CST Group 6	V	1	44,244	9,893	748	25,539	6,440	17
	V	2	8.09	28.84	32.25	2.27	2.00	17.04
	MS	3	100.00	23.20	1.75	59.90	15.10	.05
	MS	4	-	19.19	22.30	- 3.39	-3.64	6.05
CST Group 7	V	1	3,002	1,709	14	1,052	77	7
	V	2	16.76	20.02	- 4.46	9.29	59.90	31.74
	MS	3	100.00	59.78	.49	36.80	2.69	.24
	MS	4	-	2.79	-18.15	-6.40	37.10	37.48
CST Group 8	V	1	3,270	2,953	13	234	22	0
	V	2	32.33	34.28	21.05	14.29	39.45	.00
	MS	3	100.00	91.65	.40	7.26	.69	.00
	MS	4	-	1.47	1.39	-13.62	5.11	.00

Source: Growth rates estimated on the basis of export statistics provided in Tables A-2a and A-2b of the Appendix.

at a relatively high rate, and that this export expansion favored Africa and "Other DMECs" rather than the EEC.

Exports of semi-manufactured commodities. Over-all exports of intermediate commodities grew at a relatively high rate (7.31% per annum). Close to 99% of total exports were distributed among Africa (5.45%), the EEC (80.13%) and "Other DMECs" (13.22%). The growth of exports to the latter group of countries (16.31%) is higher than that of exports to Africa (13.15%) and than that of exports to the EEC (5.61%). The growth rate of the share of exports to the EEC (-1.58%) is much lower than that of exports to Africa (5.43%) and than that of exports to "Other DMECs" (8.39%). Therefore, the conclusions regarding total manufactured exports also apply to semi-manufactured exports.

Exports of finished commodities. Over-all exports of finished commodities grew at a much higher rate (13.12%) that exports of intermediate commodities. Thus, it would seem that the AAS has applied a greater effort and shown a greater capability in expanding exports of finished goods than in expanding exports of intermediate goods. Close to 99% of total exports of finished goods were distributed among Africa (43.45%), the EEC (44.39%) and "Other DMECs" (10.82%). While Africa ranks third (in terms of the share of exports) in the case of semi-manufactured goods, it ranks second in the case of finished goods. Furthermore, the growth rate of exports of finished goods to Africa (17.55%) is much higher than that of exports to the EEC (9.06%) and than that of exports to "Other DMECs" (10.27%). The growth rate of the share of exports to Africa (3.92%) is also much higher than that of exports to the EEC (-3.59%) and than that of exports to "Other DMECs" (-2.52%).[1] It may also be noted that the growth rate of the share of finished exports to the EEC (-3.59%) is lower than that of semi-manufactured exports to the EEC (-1.58%). Since tariff duties for finished exports are usually higher than those for semi-manufactured exports, it would seem that the granting of tariff preferences to the AAS has failed to have the expected impact (i.e., relatively higher expansion of exports of finished commodities to the EEC than that of semi-manufactured commodities).

Exports of Group 0 commodities (Processed agricultural materials). The growth rate of Group 0 exports (12.27%) is higher than that of over-all exports (8.72%). The growth rate of exports to the EEC (12.67%) is higher than that of exports to Africa (9.70%) and than that of exports to "Other DMECs" (11.30%). Africa, the EEC and "Other DMECs" account for close to 99% of total exports in this group. The growth rate of the share of exports to Africa (-2.9%) is lower than that of exports to the EEC (.35%) and than that of exports to "Other DMECs" (-.87%). Exports in Group 0 are approximately divided between semi-manufactured goods and finished goods (see Table

[1]The fact that preferential trade agreements exist between some AAS countries and some African countries should not provide a full explanation for this high trade intensity of intra-African trade.

5). Since tariff duties are relatively high (20% to 80%) for the finished exports,[1] there may have been an attempt by the AAS to respond positively to tariff preferences. However, given the low growth rate of the share of exports to the EEC (.35%), no firm conclusion can be reached.

Exports of Group 1 commodities (Manufactured tobacco and beverages). Exports to the world grew at a fairly high rate (14.02%), with over 99% of total exports going to Africa (82.90%) and to the EEC (16.17%). The growth rate of exports to Africa (17.52%) is very much higher than that of exports to the EEC (-2.05%). Decreasing exports to the EEC account for the marked decrease of the EEC share of exports (-14.10%), as against the share of Africa (3.07%). These are to some extent surprising results since tariff duties on manufactured tobaccos and beverages are usually very high. For spirits, the main Group 1 export to the EEC, a tariff duty of 107% is imposed on imports from "Other LDCs" (see Table 8). One explanation - assuming that the AAS is as competitive on the EEC market as other groups of countries - is that the AAS is unable to produce beverages or tobacco products of the type and quality which cater to the tastes of EEC consumers.

Export of Group 2 commodities (Processed raw materials). Over-all exports of Group 2 commodities grew at a fairly low rate (4.42%), with over 99% of these exports

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[1]Tariff duties imposed by the EEC on imports from "Other LDCs" are presented in section 6, Table 8.

going to Africa (4.98%), the EEC (81.17%) and "Other DMECs" (12.88%). The growth rate of exports to the EEC (2.55%) is lower than that of exports to Africa (6.43%) and than that of exports to "Other DMECs" (21.49%). Consequently, the share of exports to the EEC decreased by 1.79%, while the share of exports to Africa increased by 1.93%, and that to "Other DMECs" by 16.35%. Given the generally low level of tariffs imposed on Group 2 commodities (2% to 7%),[1] tariff preferences would not be expected to have a significant impact on AAS exports of these commodities.

Exports of Group 4 commodities (Oils and fats). Group 4 exports are of particular interest to the AAS since these commodities are natural resource intensive, and the AAS is a main producer of the raw materials used in their production. Tariff duties on these commodities are moderate, with a tariff of 7% applying to the main Group 4 commodities exported by the AAS (see Table 8). Thus, preferences could be expected to have a moderate impact on the expansion of AAS exports to the EEC.

The over-all growth rate of Group 4 exports is fairly low (3.56%), with over 99% of total exports going to the EEC (93.92%), Africa (4.17%) and "Other DMECs" (1.86%). The growth rate of exports to "Other DMECs" (80.90%) is much higher than that of exports to Africa (7.90%) and than

[1]Tariff duties for Group 2 commodities were obtained from the Statistical Office of the European Communities (2).

that of exports to the EEC (2.01%). Consequently, the share of exports to the EEC declined (-1.49%) while the shares of exports to Africa and to "Other DMECs" increased by 4.21% and 73.22%, respectively. These results suggest that tariff preferences, albeit moderate, did not provide an incentive for the AAS to expand substantially its Group 4 exports to the EEC.

Export of Group 5 commodities (Chemicals). A larger number of chemical products are exported to Africa than to the EEC. The main chemicals exported to the EEC are glycerin (CST 512-26), essential oils and resinoids (CST 551-10), superphosphates (CST 561-29) and starches (599-51). For starches, the tariff duty is 28.1%. For the other commodities duties are low to moderate (0.3% - 6%).

Over-all exports of Group 5 commodities grew at a fairly high rate (17.50%), with over 99% of total exports going to Africa (28.36%), the EEC (44.49%), and "Other DMECs" (26.51%). The growth rate of exports to Africa (49.88%) is much higher than that to the EEC (8.27%) and than that to "Other DMECs" (8.75%). Consequently, the share of exports to Africa increased substantially (27.22%) while the shares of exports to the EEC and to "Other DMECs" decreased by 7.86% and 7.44%, respectively. It would therefore seem that tariff preferences, albeit moderate to low, failed to expand AAS exports to the EEC.

<u>Exports of Group 6 commodities (Mainly processed raw materials)</u>. The main Group 6 exports to the EEC include various leather and wood products, products made of vegetable fibers, and unwrought aluminium and aluminium alloys. As shown in Table 8, tariff duties on these commodities are moderate to high, ranging from 8% to 21%.

Over-all Group 6 exports grew at a relatively high rate (8.09%), with over 98% of total exports going to Africa (23.20%), the EEC (59.90%), and "Other DMECs" (15.10%). The growth rate of exports to Africa (28.84%) is very much higher than that of exports to the EEC (2.27%) and than that of exposts to "Other DMECs" (2.00%). Consequently, the share of exports to Africa increased substantially (19.19%) while the shares of exports to the EEC and to "Other DMECs" decreased, respectively, by 3.39% and 3.64%. It would therefore seem that tariff preferences, although moderate to high, failed to induce the AAS to expand substantially Group 6 exports to the EEC.

<u>Exports of Group 7 commodities (Machinery and transport equipment)</u>. It is suspected that some of Group 7 exports to the EEC constitute re-exports. This suspicion is based on the unevenness of exports statistics for individual commodities over the 1962-1969 period. However, since the AAS produces all Group 7 commodities shown in Table A-1 of the Appendix, it was not possible to exclude certain commodities as re-exports.

Over-all Group 7 exports grew at a fairly high rate (16.76%), with over 99% of total exports going to Africa (59.78%), the EEC (36.80%) and "Other DMECs" (2.69%).

The growth rate of exports to "Other DMECs" (59.90%) is higher than that of exports to Africa (20.02%) and than that of exports to the EEC (9.29%). Consequently, the share of exports to "Other DMECs" and to Africa increased, respectively, by 37.10% and 2.79%, while the share of exports to the EEC decreased by 6.40%. Since tariff duties on Group 7 commodities are usually high (13% to 20% for imports originating from "Other LDCs"),[1] it would seem that tariff preferences failed to induce the AAS to expand substantially its exports to the EEC.

Exports of Group 8 commodities (Mostly non-durable consumer goods). This group of exports is of particular interest to the AAS since it includes a large number of labor-intensive commodities for which the AAS should enjoy a comparative advantage in production and trade, and since tariff duties imposed on these commodities are usually high (on the average, 15-25%).

Over-all Group 8 exports grew at a very high rate (32.33%). Close to 99% of total exports were divided between Africa (91.65%) and the EEC (7.26%). The growth rate of exports to Africa (34.28%) is much more higher than that of exports to the EEC (14.29%). Thus, while the share of exports to Africa grew by 1.47%, that of exports to the EEC decreased by 13.62%. It therefore seems that Group 8 exports

[1]Tariff statistics were obtained from the Statistical Office of the European Communities (2).

represent a clear case where tariff preferences failed to induce the AAS to expand substantially its exports to the EEC.

Summary of findings on the AAS export performance

The preceeding analysis of AAS exports shows that, with exception of Group 4, the growth of exports of manufactures was moderate to high. The over-all export performance of the AAS can therefore be considered as more than satisfactory. Its export performance did not, however, particularly favor the EEC. With the exception of Group 0, where the growth of the share of exports to the EEC was marginally higher than that of exports to "Other DMECs" (.35% versus -.87%), the EEC ranked last, in terms of the growth rate of the market share of exports, after Africa and "Other DMECs".[1] This result prevails not only when EEC tariff duties are low (e.g., Group 2 and Group 5 commodities), but also when duties are moderate to high (e.g., Group 1, 4, 6, 7 and 8 commodities).

On the basis of the analysis conducted in this section, it may be concluded that the high expansion of AAS exports during the 1962-1969 period cannot be attributed to an expansion of exports to the EEC, and that the findings in this section are at odds with those which would be expected on the basis of tariff preferences. It must be noted, however,

[1]Since socialist countries and "Other LDCs" accounted together for generally less than 1% of total exports, they need not be considered when evaluating AAS export performance.

that the above analysis does not permit us to conclude, unambiguously, that the AAS did not respond to EEC tariff preferences. In order to reach firm conclusions about the AAS response, one must also take into consideration "Other LDCs" exports to the EEC and to "Other DMECs". Furthermore, the analysis should be conducted for individual commodities. This type of analysis will be carried out in the following two sections.

5. Evaluation of AAS response with respect to individual commodities at the 3-digit level of the SITC classification

In this section, the evaluation methodology developed in chapter II is applied to 13 major manufactured commodities at the 3-digit level of the SITC classification. Lack of readily available trade data prevented application of the methodology to other major commodities classified as manufactures in the previous section.[1] A few additional commodities were excluded from the analysis because the value of exports to "Other DMECs" was equal or close to zero for the whole period of analysis, and the evaluation methodology could not be reliably applied. These commodities are, however, analysed (at a higher disaggregation level) in section 6.

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[1]Import statistics used in this section were obtained from unpublished UNCTAD statistics on manufactured imports by the EEC and 13 other DMECs. The UNCTAD definition of manufactures is more restrictive than the one adopted in the previous section. Thus, a number of major AAS exports, such as frozen meat, salted or dried fish, milled rice, raw sugar, oil-cake, and various vegetable oils, could not be included in the present analysis.

Commodities analyzed in this section include the following main SITC sub-groups: 053 (fruit, preserved and fruit preparations), 055 (vegetables, preserved or prepared), 072-3 (cocoa butter and paste), 243 (wood, shaped or simply worked), 431 (animal and vegetable oils and fats, processed, and waxes of animal or vegetable origin), 512 (organic-chemicals), 551 (essential oils, perfumes and flavor materials), 599 (chemicals, n.e.s), 611 (leather), 631 (veneers, plywood boards), 632 (wood manufactures, n.e.s.), 657 (floor coverings), and 684 (aluminium).

The two groups of "control" countries used in this section are the same as those used in section 3 (i.e., "Other LDCs" and "Other DMECs", the latter group including 13 major countries).

Table 7 provides the growth rates of EEC and "Other DMECs" imports from the AAS and "Other LDCs". These growth rates were estimated on the basis of import statistics provided in Table A-3 of the Appendix. Table 7 also provides estimates of the parameter (ΔG) which indicates whether the AAS responded to EEC tariff preferences. As shown in the above table, (ΔG) is positive for only 4 commodities (SITC sub-groups 431, 551, 631, and 632) out of 13.

In order to determine whether the AAS response is positively correlated with the height of the EEC common tariff,[1]

[1]Tariffs provided in Table 7 are the average tariffs for the commodities included in each sub-group.

TABLE 7.-- EEC and "Other DMECs" imports from AAS and "Other LDCs" - mean values and growth rates for the period 1962 - 1969

MV = Mean values: in $ 1,000
GR = Growth rates: in Per Cent

SITC Code	EEC imports from:				13 DMECs imports from:				ΔG = ((1) - (2)) - ((3) - (4))	EEC common tariff duty (%)
	AAS		"Other LDCs"		AAS		"Other LDCs"			
	MV	GR (1)	MV	GR (2)	MV	GR (3)	MV	GR (4)		
053	6,111	15.93	40,811	6.95	12	132.72	94,994	11.69	-112.05	23.00
055	1,249	- .64	45,615	9.49	22	18.22	32,611	14.82	- 13.53	19.20
072.3	6,665	37.43	5,072	35.86	1,773	46.85	31,363	10.00	- 35.28	23.00
243	7,064	15.98	67,639	9.29	4,749	29.46	121.389	6.04	- 16.73	1.90
431	389	5.64	4,220	1.67	16	-17.44	12,885	- .86	+ 20.55	0.90
512	73	7.97	17,281	13.62	5	51.59	33,769	21.78	- 35.46	23.60
551	1,224	12.70	17,557	.03	2,365	10.68	27,217	2.44	+ 4.43	1.50
599	414	- 7.64	6,517	- 3.07	42	1.15	23,838	2.08	- 3.64	9.50
611	382	- .64	32,698	25.83	7	-10.95	58,690	9.16	- 6.36	2.90
631	4,819	23.44	4,390	26.50	4,319	4.68	97,475	21.03	+ 13.29	11.90
632	76	22.00	3,901	7.60	7	27.65	14,550	20.23	+ 6.98	13.80
657	447	- 1.08	57,458	13.17	41	6.74	62,992	3.68	- 17.31	22.50
684	19,214	.80	3,672	77.15	652	- 4.34	5,827	67.98	- 4.03	9.90

Source: Mean values and growth rates calculated on the basis of trade statistics provided in Table A-3 of the Appendix
Tariff statistics from the Statistical Office of the European Communities.(2)

(ΔG) was regressed on the tariff level - which measures the margin of preferences. The following estimated regression equation was obtained:

$$(\Delta G) = 13.50 - 2.29T$$

(t=2.562, significant at $p < .05$)

where:

T = tariff level.

The above cross-section findings indicate that the over-all AAS response to EEC tariff preferences is at best weak: the AAS responded positively for only four commodities out of 13, and the estimated regression equation indicates that the AAS response is <u>negatively</u> correlated with the tariff level.

It may be noted that three out of the four SITC sub-groups for which the AAS responded positively include manufactured commodities traditionally exported by the AAS to the EEC. The three sub-groups are 431 (animal and vegetable oils and fats), 551 (essential oils, perfumes), and 631 (veneers, plywood boards). Thus, the AAS response seems to have been limited to an expansion of its traditional exports to the EEC. Furthermore, as shown in Table 7, the EEC tariffs for the four commodities are very low (0.9% for sub-group 431, 1.5% for sub-group 551), or moderate (11.9% for sub-group 631, 13.8% for sub-group 632).

6. Evaluation of AAS response with respect to individual commodities at the 5-digit level of the CST classification

As stated earlier, the evaluation of the AAS response to tariff preferences should be undertaken preferably with respect to highly disaggregated commodities (e.g., commodities at the 5-digit or 7-digit level). This section presents an evaluation of the AAS response for 29 commodities at the 5-digit level of the CST classification. Due to lack of data, the evaluation methodology developed in chapter II could not be applied to these commodities. Consequently, it was necessary to develop a modified evaluation methodology applicable to the available data.

The commodities

The 29 commodities to be evaluated are shown in Table 8. Fifteen of the commodities belong to CST Group 0, and the remainder to CST Groups 1, 4, 5 and 6. Together, these commodities account for close to 80% of the total value of manufactured exports from the AAS.[1] The only major exports not included in Table 8 are those for which the common EEC external tariff on imports from "Other LDCs" is equal or close to zero (e.g., CST 013.30, CST 081.30, CST 243.31, CST 431.42).

[1]These commodities were selected on the basis of a tabulation of total AAS exports for each commodity exported by the AAS. The computer print-outs may be made available on request.

TABLE 8.--Major 5-digit level commodities exported by the AAS to the EEC

CST Code	Description	Common EEC tariff imposed on imports from "Other LDCs" 1964
011-10	Meat of bovine animals, fresh, chilled or frozen	20.0
013-80	Other prepared or preserved meat or meat offals	26.0
031-10	Fish, fresh, chilled or frozen	10.7
031-20	Fish, dried, salted or in brine; smoked fish	15.0
031-30	Crustaceans and molluscs, fresh, frozen, salted or dried	16.4
032-01	Fish, prepared or preserved, n.e.s.	24.6
042-20	Rice, semi-milled or wholly milled	15.5
053-50	Fruit juices, vegetable juices, unfermented	21.2
055-45	Tapioca	25.6
061-10	Sugars, beet and cane, raw, solid	80.0
061-50	Molasses, whether or not decolorized	57.2
072-31	Cocoa paste, whether or not defatted	25.4
072-32	Cocoa butter (fat or oil)	20.0
081-20	Bran, sharps and other similar residues	16.0
112.40	Spirits	107.0
421.40	Groundnut oil	7.0
422-20	Palm oil	7.0
422-40	Palm kernel oil	7.0
422-90	Fixed vegetable oils, n.e.s.	7.0

TABLE 8.--(Continued)

CST Code	Description	Common EEC tariff imposed on imports from "Other LDCs" 1964
561-29	Superphosphates, other phosphatic fertilizers	6.0
599-51	Starches, inulin	28.1
611-40	Leather of other bovine cattle, and equine leather	9.5
631-10	Wood sawn lengthwise, sliced or peeled, 5 mm or less	8.1
631-21	Plywood or blockboard	14.9
632-89	Other articles of wood, n.e.s.	13.2
655-61	Twine, cordage, ropes and cables	13.0
656-10	Sacks and bags, of textile materials, for packing	21.1
657-80	Plaiting materials bound together	10.2
684-10	Aluminium and aluminium alloys, unwrought	9.0

Source: Statistical Office of the European Communities (2).

Tariff duties for the 29 commodities range from 6.0% (CST 561.29) to 107.0% (CST 112.40). For the majority of the commodities, the tariff range is 10% - 30%. Thus, tariff preferences could be expected to have a moderate to high impact on AAS exports to the EEC.

Evaluation methodology

The evaluation of the AAS response to tariff preferences for 29 individual commodities will include two major parts: first, a description of the findings derived from an examination of EEC import data and AAS export data, and second, a presentation of the results of two regression analyses.

Regression analysis on EEC imports. The first regression analysis pertains to the relationship between the growth of EEC imports from the AAS and the price competitiveness afforded the AAS by tariff preferences. This analysis makes use of the "control" group "Other LDCs" as a proxy for AAS export performance in the absence of tariff preferences. It isolates the impact of tariff preferences from the impact of differential changes in the C.I.F. price competitiveness of the AAS and "Other LDCs" by using the multiple regression technique. This approach was adopted because lack of data prevented the use of the group "Other DMECs" in order to control for differential changes in price competitiveness.[1]

Under the usual assumptions of product homogeneity and perfect competition, it may be stated that, for a given commodity, the difference between the growth of EEC imports from the AAS and that of imports from "Other LDCs", $(G_1 - G_2)$, is a function of EEC tariff preferences and the difference in price competitiveness between the AAS and "Other LDCs".[2] The above statement may be expressed as follows:

$$(G_1 - G_2) = f(T, (G_{P_1} - G_{P_2}))$$

where:

T = tariff preferences (i.e., level of duties imposed on imports from non-beneficiary countries)

G_{P_1} = Growth rate of the C.I.F. price of EEC imports from the AAS

G_{P_2} = Growth rate of the C.I.F. price of EEC imports from "Other LDCs".

$(G_{P_1} - G_{P_2})$ measures the difference in basic price competiveness (not including tariff preferences) between the AAS

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[1]The evaluation methodology developed in chapter II is preferable because it controls for additional factors not taken into account by the methodology used in this section (e.g., factors such as bad weather which constrain the supply of agricultural products used as inputs to the food industry).

[2]Since changes in EEC supply and demand conditions apply equally to the AAS and "Other LDCs", they need not be taken into consideration when estimating $(G_1 - G_2)$. Similarly, changes in supply and demand conditions in "Other DMECs" need not be taken into consideration.

and "Other LDCs". Given the schedule of EEC cummulative tariff reductions in favor of the AAS (see Table 1), the EEC common external tariff imposed on imports from "Other LDCs" and $(G_{P_1} - G_{P_2})$, one may estimate the difference in <u>total</u> price competitiveness between the AAS and "Other LDCs" when tariff preferences are taken into consideration, $(G_{P_1} - G_{P_2})_D$.

The above relationship may then be rewritten as follows:

$$(G_1 - G_2) = f[[(G_{P_1} - G_{P_2})_D - (G_{P_1} - G_{P_2})],[G_{P_1} - G_{P_2}]]$$

The first term between brackets in the right-hand side of the above relationship is the <u>additional</u> price competitiveness afforded the AAS by EEC tariff preferences, while the second term between brackets is the difference in <u>basic</u> price competitiveness.

Let us define:

$$[(G_{P_1} - G_{P_2})_D - (G_{P_1} - G_{P_2})] = X_1$$
$$(G_{P_1} - G_{P_2}) = X_2$$
$$(G_1 - G_2) = Y$$

In order to determine whether Y (difference in growth of EEC imports from the AAS and "Other LDCs") is a function of <u>basic</u> price competitiveness (X_2) as well as <u>additional</u> price competitiveness due to tariffs preferences (X_1), the following multiple linear regression equation may be estimated:

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \varepsilon_i$$

where Y, X_1 and X_2 are defined as above, and i refers to the i^{th} commodity included in the sample. In the present analysis, the value of i ranges from 1 to 29. If the regression coefficient β_1 is found negative and significant, it would indicate that the AAS exports had increased in response to the EEC tariff preferences.[1]

Let us now show how X_1 may be estimated on the basis of the growth rate of the C.I.F. price of EEC imports from the AAS, the EEC tariff imposed on non-beneficiary countries, and the schedule of EEC tariff reductions on EEC imports from the AAS.

The reduction of tariff duties imposed on imports by the EEC from the AAS reached 100% of the duty rate on 1 August 1968. This is also the same date at which the internal tariff reduction of the EEC reached the 100% target agreed on. Table 1 provides the schedule of individual reductions, the cummulative reductions and the percentages of duty rates which applied to manufactured imports from the AAS during the 1959-1968 period.

Table 1 shows that the average cummulative reduction in 1962 - the base year for this study - is 45%. The cummulative reduction for the year 1969 is 100%. Therefore, the percentage of the duty imposed on imports from the AAS decreased from 55% in 1962 to 0% in 1969.

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[1]It would be logical, in this case, for β_2 also to be negative and significant.

It will now be shown how, on the basis of the above data, to estimate the growth rate of the price of imports from the AAS when tariff preferences are taken into consideration.

Let us define:

P_0, P_7 = C.I.F. prices of imports from the AAS at year 0 (1962), and year 7 (1969).

T = the EEC common external tariff on imports from "Other LDCs". T is the average external tariff for the 1962-1969 period.

d_0, d_7 = fraction of the EEC common external tariff which is imposed on imports from the AAS at years 0 and 7 (i.e., .55 and 0).

r_1 = growth rate of the price of imports from the AAS when tariff preferences are not taken into consideration (i.e., growth rate of the C.I.F. import price).

r_1' = growth rate of the price of imports from the AAS when tariff preferences are taken into consideration.

The price at year 7, including tariff duties, is given by the following relationship:

$$P_7(1 + d_7.T) = P_0(1 + d_0.T)(1 + r_1')^7$$

Taking the logarithm of the above relationship gives:

$$\text{Log } P_7 + \text{Log}(1 + d_7.T) = \text{Log } P_0 + \text{Log}(1 + d_0.T) + 7\text{Log}(1 + r_1')$$

Rewriting gives:

$$\frac{\text{Log}P_7 - \text{Log}P_0}{7} + \frac{\text{Log}(1 + d_7.T) - \text{Log}(1 + d_0.T)}{7} = \text{Log}(1 + r_1') \quad ..(1)$$

The first term of the left-hand part of the above expression is equal to $\text{Log}(1 + r_1)$ since we have:

$$P_7 = P_0(1 + r_1)^7$$

$$\text{Log } P_7 = \text{Log } P_0 + 7\text{Log}(1 + r_1)$$

and therefore:

$$\text{Log}(1 + r_1) = \frac{\text{Log } P_7 - \text{Log } P_0}{7}$$

Equation (1) may then be rewritten:

$$\text{Log}(1 + r_1) + \frac{\text{Log}(1 + d_7.T) - \text{Log}(1 + d_0.T)}{7} = \text{Log}(1 + r_1')$$

Since $d_7 = 0$ and $d_0 = .55$, then:

$$\text{Log}(1 + r_1) - \frac{\text{Log}(1 + .55T)}{7} = \text{Log}(1 + r_1')$$

An estimate of r_1' may be obtained once r_1 and T are known.

When using an average tariff[1] for the whole period of analysis (i.e., T constant over the whole period), the growth rate of the C.I.F. price of imports from "Other LDCs", r_2, is the same as the growth rate of import prices when

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[1]Tariff duties did not vary much over the period of analysis. Thus, the use of an average tariff in place of individual tariffs for each year should not affect the findings of the analysis.

tariffs are taken into consideration, r_2'.[1]

Given r_1, r_1' and r_2, we can obtain X_1 from the following relationship:

$$X_1 = [(G_{P_1} - G_{P_2})_D - (G_{P_1} - G_{P_2})] = r_1' - r_2 - r_1 + r_2 = r_1' - r_1$$

If T was not assumed to be constant over the period of analysis, the functional relationship for X_1 would be much more complicated, and would include r_2 as well as r_1 and T.

Regression analysis on AAS exports. A second regression analysis pertains to the relationship between the growth of AAS exports to the EEC and the level of EEC tariffs imposed on non-beneficiary countries. Since tariff preferences should make the AAS relatively more competitive on the EEC market than on "Other DMECs" markets, the difference between the growth rate of AAS exports to the EEC and that of AAS exports to "Other DMECs", $(G_3 - G_4)$, should be a function of the level of the EEC tariff imposed on non-beneficiary countries. In addition, $(G_3 - G_4)$ should be a function of the change in supply and demand conditions in

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[1]This may be shown as follows:

$$P_7(1 + T) = P_0(1 + T)(1 + r_2')^7$$

$$\text{Log } P_7 + \text{Log}(1 + T) = \text{Log } P_0 + \text{Log}(1 + T) + 7\text{Log}(1 + r_2')$$

$$\frac{\text{Log } P_7 - \text{Log } P_0}{7} = \text{Log}(1 + r_2) = \text{Log}(1 + r_2')$$

Thus $\qquad r_2' = r_2$

the EEC and "Other DMECs" over the period of analysis.[1] The above considerations lead to the definition of the following functional relationship:

$$(G_3 - G_4) = f[T, (\delta SD)_{EEC}, (\delta SD)_{\text{"Other DMECs"}}]$$

where:

T = EEC tariff imposed on imports from non-beneficiary countries

$(\delta SD)_{EEC}$, $(\delta SD)_{\text{"Other DMECs"}}$ = change in demand and supply conditions in, respectively, the EEC and "Other DMECs".

If it is assumed that $(\delta SD)_{EEC}$ and $(\delta SD)_{\text{"Other DMECs"}}$ are equal in terms of their impact on AAS exports to each group of countries,[2] $(G_3 - G_4)$ becomes a function of T only. Thus, in order to determine whether tariff preferences had an impact on AAS exports to the EEC, the following regression equation may be estimated:

$$(G_3 - G_4) = a + \beta T_i + \varepsilon_i$$

A significant and positive β will indicate that tariff preferences had a positive impact on AAS exports to the EEC.

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[1] Changes in supply conditions in the AAS need not be taken into consideration since they apply equally to the EEC and "Other DMECs".

[2] The growth rates of EEC imports from LDCs of groups of manufactured commodities which include the 29 commodities analysed in this section are generally close to those of imports by the 21 major DMECs (including the EEC countries) over the 1962-1969 period (see UNCTAD (4), Tables 4 and 8). Thus, the above assumption may not be unrealistic.

Findings for individual commodities

The findings for individual commodities are derived from a descriptive analysis of EEC imports (from the AAS and "Other LDCs") and of AAS exports (to the EEC and the rest of the world).

The analysis of EEC imports is based on data in Tables 9 and 10. Table 9 provides the growth rate of the value of EEC imports from the AAS and "Other LDCs" (column 2), and the growth rate of the market share of imports from the above two groups of countries (column 4). It also provides the growth rate of the C.I.F. price of imports from the AAS and "Other LDCs" (column 6), and the growth rate of the price of imports including the tariff duty (column 7). The growth of value, market share, and prices of imports from two other groups of countries - the EEC, "Other DMECs + socialist countries" - are also included for information purposes.

Table 10 summarizes the findings from Table 9. Column (1) provides the difference between the growth rate of the value of imports from the AAS and that of imports from "Other LDCs", $(G_1 - G_2)$. In 18 cases out of 29 (62% of all cases), the difference in growth rates is negative.

Columns (2) and (3) provide the difference between the growth rate of the C.I.F. price of imports from the AAS and that of imports from "Other LDCs", $(G_{P_1} - G_{P_2})$, and the difference in the growth of import prices including tariff preferences, $(G_{P_1} - G_{P_2})_D$. In 17 out of 29 cases (59%), the

TABLE 9.-- EEC imports of 29 major commodities from the AAS, "Other LDCs", EEC, and "Other DMECs + soc. countries" (1962 - 1969)

1 = AAS
2 = "Other LDCs"
3 = EEC
4 = "Other DMECs + soc. countries"

CST code		Import value		Market share		C.I.F. price		Growth rate of (CIF price+ duty)
		Mean ($ 1,000) (1)	Growth rate (%) (2)	Mean (%) (3)	Growth rate (%) (4)	Mean ($/t) (5)	Growth rate (%) (6)	(7)
011.10	1	1,426	2.39	.38	-12.16	928	.07	- 1.41
	2	90,694	7.40	24.40	- 7.94	589	5.41	5.41
	3	150,475	22.01	40.49	3.81	983	6.77	5.19
	4	129,072	16.82	34.73	.72	856	2.04	2.04
013.80	1	1,881	9.83	3.29	- 8.74	902	.12	- 1.77
	2	5,886	13.26	10.30	- 5.87	597	3.39	3.39
	3	25,743	26.12	45.06	4.81	1,127	5.53	3.53
	4	23,625	15.74	41.35	- 3.82	597	.13	.13
031.10	1	1,408	- 1.14	.86	-10.23	442	.53	- .29
	2	6,918	17.60	4.21	6.74	502	5.12	5.12
	3	49,130	15.98	29.91	5.26	445	5.72	4.86
	4	106,787	7.20	65.02	- 2.71	363	6.48	6.48
031.20	1	37	-18.88	.07	-20.32	1,762	29.11	27.66
	2	705	10.53	1.37	8.00	496	10.53	10.53
	3	14,771	3.94	28.81	1.68	379	7.73	6.53
	4	35,764	1.67	69.75	- .78	528	- .33	- .33
031.30	1	1,368	53.81	3.37	35.54	1,736	5.03	3.74
	2	5,037	7.42	12.42	- 5.36	1,195	8.68	8.68
	3	12,598	9.60	31.06	- 3.44	171	8.54	6.10
	4	21,556	15.50	53.15	1.76	557	6.65	6.65
032.01	1	6,605	4.93	7.51	2.77	930	- 4.16	- 5.88
	2	18,158	- 6.21	20.66	- 8.15	726	1.56	1.56
	3	4,686	18.48	5.33	21.18	534	7.28	5.35
	4	58,449	3.28	66.50	.99	749	5.99	5.99

TABLE 9.-- (Continued)

CST code		Import value: Mean ($ 1,000) (1)	Import value: Growth rate (%) (2)	Market share: Mean (%) (3)	Market share: Growth rate (%) (4)	C.I.F. price: Mean ($/t) (5)	C.I.F. price: Growth rate (%) (6)	Growth rate of (CIF price+ duty) (7)
042.20	1	3,817	- 8.30	16.27	-10.80	278	- .30	- 1.49
	2	10,150	-15.07	43.25	-17.37	120	3.02	3.02
	3	5,340	36.98	22.76	33.09	181	7.28	6.00
	4	4,159	39.27	17.72	35.38	171	8.56	8.56
053.50	1	1,732	2.52	3.34	-10.02	255	- 7.12	- 8.59
	2	13,927	16.81	26.83	2.52	236	3.04	3.04
	3	18,511	20.61	35.67	5.86	210	7.86	6.15
	4	17,728	7.29	34.16	- 5.83	300	- 1.85	- 1.85
055.45	1	1,184	- 1.87	79.09	- 3.99	194	2.33	.42
	2	183	- .66	12.22	- 2.82	138	- 1.27	- 1.27
	3	120	38.82	8.02	35.82	293	-10.48	-12.15
	4	10	78.12	.67	118.85	233	-20.32	-20.32
061.10	1	3,374	-10.37	4.01	- 3.39	117	-13.37	-17.77
	2	73,963	- 6.89	81.25	.38	164	- .64	- .64
	3	3,039	1.38	3.61	9.25	106	1.23	- 3.91
	4	3,816	-17.60	4.53	-11.16	76	-14.81	-14.81
061.50	1	384	32.42	1.99	30.28	30	- 1.22	- 4.65
	2	10,035	.39	51.91	- 1.21	30	- 2.13	- 2.13
	3	3,326	- 2.06	17.20	- 3.62	41	- 2.69	- 6.07
	4	5,588	3.49	28.90	1.84	32	- 2.94	- 2.94
072.31	1	861	109.39	55.84	28.25	319	19.00	16.80
	2	85	- 2.70	5.51	-40.38	173	8.92	8.92
	3	544	39.20	35.28	-14.75	313	20.69	18.46
	4	52	37.52	3.37	-15.53	205	2.19	2.19
072.32	1	7,690	28.85	24.14	1.00	1,264	7.17	5.58
	2	6,683	37.59	20.98	7.85	1,168	6.90	6.90
	3	15,509	24.01	48.69	- 2.79	1,260	6.15	4.58
	4	1,972	12.16	6.19	-12.06	1,192	6.90	6.90
081.20	1	805	26.75	1.60	17.21	54	.62	- .59
	2	32,975	10.44	65.46	2.21	56	.45	.45
	3	7,710	14.60	15.31	6.07	64	1.93	.71
	4	8,881	- 6.29	17.63	-13.27	66	- 2.28	- 2.28

TABLE 9.-- (Continued)

CST code		Import value: Mean ($ 1,000) (1)	Import value: Growth rate (%) (2)	Market share: Mean (%) (3)	Market share: Growth rate (%) (4)	C.I.F. price: Mean ($/t) (5)	C.I.F. price: Growth rate (%) (6)	Growth rate of (CIF price+ duty) (7)
112.40	1	361	2.24	.50	- 7.61	476	1.20	- 5.23
	2	12,938	2.53	17.94	- 7.33	523	.48	.48
	3	21,187	12.70	29.37	1.86	1,275	.46	- 5.97
	4	37,641	12.47	52.19	1.65	1,035	- 3.05	- 3.05
421.40	1	30,315	15.64	60.08	3.88	351	- 5.07	- 5.58
	2	12,422	4.19	24.61	- 6.41	279	.44	.44
	3	4,224	24.11	8.37	11.48	327	- 1.08	- 1.61
	4	3,500	15.52	6.94	3.80	290	- .22	- .22
422.20	1	4,930	- 3.71	8.69	- 3.56	226	- 3.77	- 4.29
	2	48,734	3.98	85.85	4.15	215	- 3.53	- 3.53
	3	2,767	2.96	4.88	3.13	262	- 1.45	- 1.98
	4	327	-58.42	.58	-55.59	164	-12.52	-12.52
422.40	1	1,067	66.41	12.24	46.06	287	1.43	.88
	2	4,934	6.96	56.63	- 6.15	277	3.42	3.42
	3	2,549	13.32	29.25	- .63	281	3.82	3.26
	4	164	-12.76	1.88	-22.90	328	.45	.45
422.90	1	3,657	-41.81	24.57	-35.52	338	- 4.98	- 5.49
	2	4,141	- 3.68	27.82	6.75	384	-11.20	-11.20
	3	4,359	26.57	29.28	40.27	310	- .74	- 1.27
	4	2,729	14.25	18.33	26.62	341	- .56	- .56
561.29	1	632	19.82	3.23	15.35	24	2.03	1.56
	2	2,365	- 5.43	12.10	- 8.95	54	1.23	1.23
	3	12,929	1.51	66.14	- 2.27	40	3.66	3.18
	4	3,622	15.82	18.53	11.50	45	1.29	1.29
599.51	1	366	- 9.50	3.09	-15.27	123	- .15	- 2.18
	2	317	- 8.08	2.67	-14.23	110	6.83	6.83
	3	9,841	9.65	83.01	2,34	126	- .52	- 2.54
	4	1,331	- 3.56	11.23	-10.00	110	3.33	3.53
611.40	1	345	- 2.90	.76	-14.33	1,102	7.71	6.92
	2	4,222	43.81	9.32	26.81	926	- 5.67	- 5.67
	3	33,188	12.93	73.23	- .42	3,124	3.42	2.66
	4	7,564	.81	16.69	-11.14	2,137	.93	.93

TABLE 9.-- (Continued)

CST code		Import value		Market share		C.I.F. price		Growth rate of (CIF price+ duty) (7)
		Mean ($ 1,000) (1)	Growth rate (%) (2)	Mean (%) (3)	Growth rate (%) (4)	Mean ($/t) (5)	Growth rate (%) (6)	
631.10	1	2,519	39.00	5.30	24.93	220	.72	.10
	2	2,179	49.75	4.59	34.64	593	16.18	16.18
	3	28,724	7.93	60.48	- 2.94	1,089	1.17	.55
	4	14,073	5.92	29.63	- 4.88	480	- 3.74	- 3.74
631.21	1	3,198	13.32	8.89	- 8.66	341	- 1.90	- 2.99
	2	1,512	15.13	4.20	- 7.20	261	1.71	1.71
	3	15,589	29.46	43.32	4.35	336	- .12	- 1.23
	4	15,687	22.29	43.59	- 1.43	226	2.34	2.34
632.89	1	66	9.10	.58	- 3.34	122	- 4.32	- 5.28
	2	176	-14.10	1.55	-23.67	540	- 9.96	- 9.96
	3	6,614	15.49	58.32	2.59	422	- 1.30	- 2.29
	4	4,485	9.72	39.55	- 2.53	397	- .25	- .25
655.61	1	72	-21.08	.55	-22.18	389	- 6.55	- 7.47
	2	368	9.45	2.81	3.77	340	- 8.69	- 8.69
	3	10,080	4.58	76.86	- .90	416	- 4.91	- 5.84
	4	2,594	10.49	19.78	4.70	700	- 1.60	- 1.60
656.10	1	451	9.18	1.54	3.75	130	- .68	- 2.23
	2	11,619	4.31	39.77	- .84	337	.84	.84
	3	10,821	3.83	37.03	- 1.30	398	2.00	.41
	4	6,330	9.65	21.66	4.23	307	.36	.36
657.80	1	439	- .99	11.34	- 9.15	2,090	- .30	- 1.07
	2	450	28.79	11.62	18.17	1,275	11.51	11.51
	3	553	8.01	14.29	- .92	147	2.53	1.73
	4	2,429	7.67	62.75	- 1.21	275	4.35	4.35
684.10	1	19,346	.74	8.29	-14.33	479	2.45	1.75
	2	3,988	92.25	1.71	63.32	485	3.06	3.06
	3	71,391	21.72	30.58	3.51	511	2.09	1.39
	4	138,718	16.04	59.42	- 1.32	502	1.20	1.20

Source: Growth rates estimated on the basis of statistics provided in Tables A-4a and A-4b of the Appendix

TABLE 10.-- Summary table of the evaluation of AAS response to tariff preferences for 29 major commodities

CST Code	$Y = (G_1-G_2)$ (1)	$X_1 = (G_{P_1}-G_{P_2})$ (2)	$(G_{P_1}-G_{P_2})_D$ (3)	$X_2 = (3)-(2)$ (4)	(G_3-G_4) (5)
011.10	- 5.01	- 5.34	- 6.82	- 1.48	+ 64.21
013.80	- 3.43	- 3.27	- 5.16	- 1.89	- 21.59
031.10	- 18.74	- 4.59	- 5.41	- .82	- 29.65
031.20	- 29.41	+ 18.58	+ 17.13	- 1.45	- 48.99
031.30	+ 46.39	- 3.65	- 4.94	- 1.29	- 61.45
032.01	+ 11.14	- 5.72	- 7.44	- 1.72	- 20.71
042.20	+ 6.77	- 3.32	- 4.51	- 1.19	+ 5.39
053.50	- 14.29	- 10.16	- 11.63	- 1.47	- 4.72
055.45	- 1.21	+ 3.60	+ 1.69	- 1.91	+ 22.98
061.10	- 3.48	- 12.73	- 17.13	- 4.40	- 69.15
061.50	+ 32.03	+ .91	- 2.52	- 3.43	- 96.83
072.31	+112.09	+ 10.08	+ 7.88	- 2.20	+ 94.37
072.32	- 8.64	+ .27	- 1.32	- 1.59	- 10.87
081.20	+ 16.31	+ .17	- 1.04	- 1.21	+ 21.44
112.40	- .29	+ .72	- 5.71	- 6.43	-128.61
421.40	+ 11.45	- 5.51	- 6.02	- .51	+ 17.69
422.20	- 7.69	- .24	- .76	- .52	+ 4.84
422.40	+ 59.45	- 1.99	- 2.54	- .55	-191.16
422.90	- 38.13	+ 6.22	+ 5.71	- .51	- 22.77
561.29	+ 25.25	+ .80	+ .33	- .47	+ 59.20

TABLE 10.-- (Continued)

CST Code	$Y = (G_1-G_2)$ (1)	$X_1 = (G_{P_1}-G_{P_2})$ (2)	$(G_{p_1}-G_{p_2})_D$ (3)	$X_2 = (3)-(2)$ (4)	(G_3-G_4) (5)
599.51	- 1.42	- 6.98	- 9.01	- 2.03	- 20.64
611.40	- 46.71	+ 13.38	+ 12.59	- .79	- 97.80
631.10	- 10.75	- 15.46	- 16.08	- .62	- 1.66
631.21	- 1.81	- 3.61	- 4.70	- 1.09	+ 17.45
632.89	+ 23.20	+ 5.64	+ 4.68	- .96	+ 14.53
655.61	- 30.53	+ 2.14	+ 1.22	- .92	- 28.67
656.10	+ 4.87	- 1.52	- 3.07	- 1.55	- 17.01
657.80	- 29.78	- 11.81	- 12.58	- .77	+ .08
684.10	- 91.51	- .61	- 1.31	- .70	- 48.46

AAS is more price competitive than "Other LDCs" when tariff preferences are not taken into consideration (basic competitiveness). It becomes more competitive than "Other LDCs" in 21 cases (72%) when tariff preferences are taken into consideration (total competitiveness). The data suggest that the AAS performance is to a large extent independent of its relative competitiveness vis-à-vis "Other LDCs". In 13 of the 18 cases (72%) where $(G_1 - G_2)$ is negative, the total competitiveness of the AAS is superior to that of "Other LDCs". A similar percentage (73%) is obtained in the 11 cases where $(G_1 - G_2)$ is positive.

The above analysis of EEC imports from the AAS and "Other LDCs" is summarized in the following table:

$(G_1 - G_2)$ Sign	Cases	$(G_{P_1} - G_{P_2}) < 0$	$(G_{P_1} - G_{P_2})_D < 0$
-	18 cases	11 cases (61%)	13 cases (72%)
+	11 cases	6 cases (54%)	8 cases (73%)
TOTAL	29 cases	17 cases (59%)	21 cases (72%)

The examination of EEC imports tends to indicate that the AAS did not respond to the EEC tariff preferences: in the majority of cases, the growth rate of imports from "Other LDCs" is higher than that of imports from the AAS, and AAS export performance does not seem to be a function of its relative price competitiveness vis-à-vis "Other LDCs".

An analysis of AAS exports yields similar conclusions.

Table 11 provides the rate of growth of the value of AAS exports to the EEC and the rest of the world (ROW). The group "ROW" includes DMECs other than the EEC countries, socialist countries, and non-African LDCs. Since the fraction of exports to the last two sub-groups is very small (less than 1% - see section 4), the growth rate of exports to "ROW" should be almost equal to that of exports to "Other DMECs".[1]

Column 5 in Table 10 indicates the difference between the growth rate of AAS exports to the EEC and that of AAS exports to "ROW", ($G_3 - G_4$). In 18 out of 29 cases, ($G_3 - G_4$) is negative, implying that the market share of AAS exports to the EEC has declined over the period of analysis in favor of "ROW". As indicated in Table 11, only in 8 cases was the growth of the share of AAS exports to the EEC positive, and only in 5 cases was this growth rate higher than the growth rate of the share of exports to "ROW" and "Africa". It can also be seen in Table 11 that exports to "Africa" grew at a higher rate than exports to "ROW" and "EEC" in 11 cases out of 29 and that, in 16 cases, the average share of exports to "Africa" ranks first or second as compared to the shares of exports to the EEC or "ROW" (see column 3).

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[1]Given the fact that the growth rate for "ROW" should closely approximate that for "Other DMECs", it was not deemed necessary to undertake the substantial additional data collection which would have been needed to obtain "Other DMECs" rather than "ROW" statistics.

TABLE 11.-- Growth rate of AAS exports of 29 major commodities to the EEC, ROW, and Africa (1962 - 1969)

CST Code	Destination	Export value		Market share	
		Mean ($ 1,000) (1)	Growth rate (%) (2)	Mean (%) (3)	Growth rate (%) (4)
011.10	EEC	963	25.19	27.82	12.83
	ROW	192	- 39.02	5.54	- 44.60
	AFR.	2,307	29.27	66.64	16.50
013.80	EEC	1,782	10.91	76.12	- 1.98
	ROW	304	32.50	12.99	17.08
	AFR.	255	10.25	10.89	- 2.56
031.10	EEC	353	13.67	51.16	- 3.96
	ROW	129	43.32	18.70	11.15
	AFR.	208	14.06	30.14	- 2.61
031.20	EEC	11	- 18.91	.27	- 16.09
	ROW	30	30.08	.75	32.23
	AFR.	3,964	- 3.49	98.98	- .25
031.30	EEC	751	37.97	76.40	- 4.80
	ROW	100	99.42	10.17	26.48
	AFR.	132	23.22	13.43	- 14.44
032.01	EEC	6,468	4.36	99.37	- .04
	ROW	14	25.07	.22	18.62
	AFR.	27	- 7.38	.41	- 11.30
042.20	EEC	3,666	- 4.51	63.32	- 10.61
	ROW	129	- 9.90	2.22	- 14.61
	AFR.	1,995	24.52	34.46	16.56
053.50	EEC	1,329	5.85	93.39	- .60
	ROW	12	10.57	.85	6.22
	AFR.	82	21.13	5.76	13.74
055.45	EEC	1,028	- 1.05	98.66	.47
	ROW	10	- 24.03	.96	- 22.73
	AFR.	4	- 21.68	.38	- 20.62

TABLE 11.-- (Continued)

CST Code	Destination	Export value: Mean ($ 1,000) (1)	Export value: Growth rate (%) (2)	Market share: Mean (%) (3)	Market share: Growth rate (%) (4)
061.10	EEC	2,443	- 20.22	73.41	- 17.79
	ROW	683	48.93	20.52	192.71
	AFR.	202	46.84	6.07	41.36
061.50	EEC	241	5.53	97.18	- 13.75
	ROW	0	102.36	2.82	513.09
	AFR.	7	.00	.00	.00
072.31	EEC	619	110.05	66.50	22.22
	ROW	298	15.68	31.50	- 32.69
	AFR.	18	2.61	2.00	- 55.60
072.32	EEC	7,159	31.97	73.00	- 1.97
	ROW	2,648	42.84	27.00	6.11
	AFR.	0	.00	.00	.00
081.20	EEC	649	15.59	46.19	10.42
	ROW	669	- 5.85	47.62	- 10.07
	AFR.	87	.13	6.19	- 4.36
112.40	EEC	304	4.93	83.52	- 6.97
	ROW	1	133.54	.27	412.19
	AFR.	59	62.70	16.21	41.04
421.40	EEC	47,083	1.03	96.77	- .10
	ROW	72	- 16.66	.15	- 14.07
	AFR.	1,501	22.11	3.08	20.70
422.20	EEC	2,582	- 2.81	93.69	- 1.15
	ROW	11	- 7.65	.40	- 33.61
	AFR.	103	8.62	5.91	10.49
422.40	EEC	1,110	51.38	84.22	- 11.55
	ROW	175	242.54	13.28	282.84
	AFR.	33	10.41	2.50	- 35.75
422.90	EEC	577	- 1.90	71.23	- .34
	ROW	138	20.87	17.04	22.81
	AFR.	95	- 13.64	11.73	- 12.26

TABLE 11.-- (Continued)

CST Code	Destination	Export value: Mean ($ 1,000) (1)	Export value: Growth rate (%) (2)	Market share: Mean (%) (3)	Market share: Growth rate (%) (4)
561.29	EEC	377	14.90	91.06	4.47
	ROW	10	- 44.30	2.42	- 67.28
	AFR.	27	17.96	6.52	7.25
599.51	EEC	254	- 15.04	75.15	- 5.74
	ROW	67	5.60	19.82	17.15
	AFR.	17	7.52	5.03	19.26
611.40	EEC	290	4.53	84.80	- 9.00
	ROW	20	102.33	5.84	76.16
	AFR.	32	31.76	9.36	14.70
631.10	EEC	1,557	24.10	33.30	- .81
	ROW	3,070	25.76	65.67	.79
	AFR.	48	9.45	1.03	- 12.72
631.21	EEC	2,503	15.28	35.04	10.91
	ROW	3,559	- 2.17	49.83	- 5.88
	AFR.	1,081	- .31	15.13	- 4.10
632.89	EEC	15	19.91	41.67	4.71
	ROW	7	5.38	19.44	- 12.52
	AFR.	14	17.82	38.89	2.88
655.61	EEC	49	- 30.36	25.93	- 30.50
	ROW	4	- 1.69	2.11	3.73
	AFR.	136	11.22	71.96	10.99
656.10	EEC	241	- 18.66	44.63	- 21.22
	ROW	83	- 1.65	15.37	- 4.74
	AFR.	216	45.36	40.00	40.79
657.80	EEC	434	.76	78.06	- .42
	ROW	47	.68	8.45	- .50
	AFR.	75	2.14	13.49	.94

TABLE 11.-- (Continued)

CST Code	Desti- nation	Export value		Market share	
		Mean ($ 1,000) (1)	Growth rate (%) (2)	Mean (%) (3)	Growth rate (%) (4)
684.10	EEC	14,787	- 6.03	96.80	.28
	ROW	472	42.43	3.09	72.75
	AFR.	17	- 13.55	.11	- 14.04

Source: Growth rates estimated on the basis of data provided in Table A-4c of the Appendix.

In summary: the descriptive analyses of EEC imports and AAS exports tend to indicate that, for the 29 selected commodities, the AAS failed to respond significantly to the EEC tariff preferences.

Findings from regression analyses

In the first regression analysis, based on the values of Y_i, X_{i1} and X_{i2} in Table 10, the following estimates of the regression coefficients were obtained:

$$Y = 6.44971 - 4.55611X_1 + 0.23616X_2$$
$$(t = -.84566)(t = +.24995)$$

Multiple R = 0.16832

Both regression coefficients are non-significant. Thus, neither basic price competitiveness nor additional competitiveness afforded by EEC tariff preferences explain the AAS export performance vis-à-vis the EEC over the 1962-1969 period. It may therefore be concluded that, with respect to the 29 major manufactured commodities selected for this analysis, there is no evidence of a positive AAS response to tariff preferences.

The second regression analysis provides further support for the above conclusion. Using the values for T from Table 8 and the values of $(G_3 - G_4)$ from Table 10, the following estimates of the regression coefficients were obtained:

$$(G_3 - G_4) = .427 - .953T$$
$$(t = -2.0575, p < .05)$$

Thus, the difference between the growth rate of AAS exports to the EEC and that of AAS exports to "ROW" is, contrary to expectations, negatively correlated with T. Since the above regression equation does not control for differential changes in demand and supply conditions in the EEC and in "ROW", the result of this analysis should be considered as an additional, yet not fully conclusive, indication that EEC tariff preferences did not have a positive impact on AAS exports.

7. Manufactured commodities exported to groups of countries other than the EEC

The commodities described in the previous section represent the main AAS manufactured exports to the EEC. Other manufactured commodities were exported to the EEC in very low amounts, with frequent interuptions occuring during the 1962-1969 period. In other words, these exports are to some extent incidental, with the EEC playing a minor role as an importer. The AAS does, on the other hand, export a large number of manufactured commodities to various groups of countries other than the EEC, especially Africa. Although the over-all value of these exports is lower than that of the exports described in section 6, these exports cannot be considered as incidental since they took place each year during the 1962-1969 period, and have tended to grow at a fairly high rate.

Table 12 provides a non-exhaustive list of manufactured commodities exported mostly to Africa, and the EEC

TABLE 12.--Manufactured commodities mostly exported to Africa (1962 - 1969)

CST Code	Description	EEC tariff duty imposed on imports from "Other LDCs"
011-60	Edible offals of the animals, chilled or frozen	17.9
022-10	Milk and cream, preserved, concentrated, sweetened	23.8
046-01	Flour of wheat or of meslin	30.0
061-20	Refined sugar, of beet or cane	80.0
061-90	Sugar syrups, artificial honey, caramel	22.2
062-01	Sugar confectionery, not containing cocoa	27.3
111-01	Soda waters	7.1
111-02	Lemonades	16.7
122-30	Beer	30.0
122-20	Cigarettes	180.2
276-30	Common salt	68.9
513-11	Oxygen	7.7
533-32	Varnishes and lacquers	15.4
541-63	Vaccines and serums	11.9
541-70	Medicaments	12.7
553-00	Perfumery, cosmetics and toilet preparations	15.4
599-20	Disinfectants, insecticides, fungicides	12.8
631-83	Hoopwood, piles, pickets and stacks of wood	8.1
651-42	Cotton yarn, for retail	16.4

TABLE 12.--(Continued)

CST Code	Description	EEC tariff duty imposed on imports from "Other LDCs"
652-13	Woven cotton fabrics, non-finished	15.9
652-29	Woven cotton fabrics, finished	15.9
656-61	Wool blankets	19.0
656-91	Bed linen, table linen, curtains	22.0
674-92	Sheets or plates of iron or steel	5.9
677-11	Iron or steel wire	10.0
694-11	Nails, tacks, staples	12.5
733-11	Cycles	17.0
821-09	Furnitures	16.9
831-00	Travel goods	15.3
841-11	Outer garments, men's and boys'	18.5
841-12	Outer garments, women's and girls'	19.2
841-13	Shirts, men's and boys'	20.0
851-01	Footwear, of rubber	20.0
851-02	Footwear, of leather	19.7
899-32	Matches	14.0

Source: Statistical Office of the European Communities (2), and source provided in Table 2 for AAS exports.

tariff duties applying to these commodities. This list includes 6 commodities in Group 0 (tariff duties ranging from 18% to 80%), 4 in Group 1 (tariff duties ranging from 7% to 180%), 1 in Group 2 (tariff duty equal to 68.9%), 6 in Group 5 (tariff duties ranging from 7% to 15%), 9 in Group 6 (tariff duties ranging from 8% to 22%), 1 in Group 7 (tariff duty equal to 17%), and 8 in Group 8 (tariff duties ranging from 14% to 20%). Thus, EEC tariff duties on these commodities tend to be moderate to high, and the AAS could have taken good advantage of tariff preferences in order to expand their exports to the EEC.

Manufactures in Groups 1, 7 and 8 constitute good examples of commodities which are exported primarily toward Africa. As shown in Table 6, Africa accounts for 83%, 60% and 91% of Group 1, 7 and 8 exports, respectively. High shares of exports to Africa are also found for commodities in Groups 0, 5 and 6. The commodities in these six groups have in common a certain number of characteristics, summarized below:

(i) Most of them are classified by Lary (3, p.186-210) as labor-intensive commodities, the only exceptions being refined sugar (CST 061-20), cigarettes (CST 122-20), oxygen (CST 513-11) and iron or steel wire (CST 677-11). Thus, it appears that the AAS did not make use of its potential comparative advantage by producing and exporting these commodities to the EEC.

(ii) They are often new commodities, first produced in the most developed AAS countries during the late fifties or

early sixties. The main exporters are Senegal, Cameroon, Ivory Coast and Malagasy Republic.

(iii) The value added in the manufacturing of these commodities is, in general, higher than that of traditional commodities. In other words, these new commodities are less natural-resource intensive than are traditional commodities.

(iv) For exports of these new commodities, product differentiation may be as important, or even more important than price differentiation. It is possible that the quality of AAS exports is such that they could not penetrate and expand in the EEC market, while in African countries, demand for these exports is particularly high. The quality variable may be particularly important for goods in CST Groups 0, 1, 5, 6, 7 and 8. Examples include sugar confectionery (CST 062-01), beer (CST 112-30), cigarettes (CST 122-20), perfumery and cosmetics (CST 553-00), varnishes and lacquers (CST 533-32), cotton fabrics (CST 652-13 and 652-29), bed and table linen (CST 656-91), cycles (CST 733-11), furnitures (CST 821-09), clothing (CST 841-00) and shoes (CST 851-00).

(v) AAS exports of new commodities grew, in general, at a higher rate than exports of traditional commodities. The growth rates of exports in Groups 8, 5, 7 and 1, which include large numbers of new commodities, are 32.33%, 17.50%, 16.76% and 14.02%, respectively, while the growth rates of Groups 2 and 4, which include mostly traditional exports, are 4.42% and 3.55%, respectively.

A number of conclusions may be derived from the information presented in this section. First, the AAS did not take advantage of tariff preferences in order to expand exports to the EEC of a large number of highly promising commodities characterised by moderate to very high tariff duties. Second, the export potential of new commodities seems to be much greater than that of traditional commodities, as shown through a comparison of their growth rates. Third, the quality variable may have constrained expansion of new exports towards the EEC. This could explain the fact that the majority of these commodities are exported to Africa rather than to the EEC.

8. AAS response to EEC tariff preferences: Summary of findings and concluding remarks

It was attempted in this chapter to determine whether the AAS responded to EEC tariff preferences by expanding its exports to the EEC at a relatively higher rate than it would have done in the absence of preferences. Given the complexity of the problem, and the lack of several types of data, a number of evaluation methodologies were developed and applied to AAS manufactured exports at various levels of commodity aggregation. Although each analysis has certain weaknesses, the findings from the various analyses are mutually supportive, and it is possible to reach a fairly conclusive assessment of the AAS response.

It was shown in section 2 that, with respect to total exports, the AAS did not respond to EEC tariff preferences.

Indeed, for some unknown reasons, the AAS performed better in the markets of "Other DMECs" than in those of the EEC countries. The analysis in section 3 indicated a lack of response for over-all manufactured exports, although the findings in this case are less pronounced than in the case of total exports.

In section 4, AAS exports of various groups of manufactures were analyzed, and their growth rates to various groups of countries were compared. It was shown that three groups of countries, the EEC, "Other DMECs", and Africa accounted for close to 99% of total AAS exports. It was also found that the growth rate of the share of AAS exports to the EEC was marginally higher (.35%) than that of exports to the other two groups of countries <u>only</u> in the case of Group 0 commodities. For finished manufactures, the growth rate of exports to Africa was higher than that of exports to the EEC and "Other DMECs". For semi-manufactures, the growth rate of exports to "Other DMECs" was the highest. Thus, the analysis of the various groups of manufactured exports tends to indicate that the AAS failed to respond significantly to EEC preferences.

Section 5 presented analyses of AAS exports of 13 manufactured commodities at the 3-digit level SITC classification. When the evaluation methodology developed in chapter II was applied to these commodities, it was found that the AAS failed to respond for 9 out of the 13 commodities. Furthermore, it was found that the difference between the growth rate of EEC imports from the AAS and that of imports from "Other LDCs" was negatively correlated with the level of EEC tariff imposed on imports from non-beneficiary countries.

In section 6, the regression analyses applied to EEC imports and AAS exports of 29 major commodities at the 5-digit level of the CST classification further indicated that tariff preferences did not play their expected role. First, it was found that the additional price competitiveness afforded the AAS by EEC tariff preferences was not a determinant of the difference between the growth of EEC imports from the AAS and that of imports from "Other LDCs". Second, it was shown that the difference between the growth rate of AAS exports to the EEC and that of exports to "ROW" was negatively correlated with the level of EEC tariffs imposed on imports from non-beneficiary countries.

Finally, it was shown in section 7 that a large number of manufactured commodities in CST Groups 0, 1, 5, 6, 7 and 8 were exported almost exclusively to African countries. Most of these commodities are relatively labour-intensive, and are subjected to relatively high tariff duties by the EEC (15% to 30% on average). An expansion of AAS exports of these commodities to the EEC could be expected for two reasons. First, the AAS has a comparative advantage in the production and export of labor-intensive commodities. Second, the relatively high EEC tariffs provide the AAS with a substantial preferential margin on "Other LDCs" in the EEC market. Yet, despite these two potential advantages, the AAS failed to respond to EEC preferences in the case of the above commodities.

All the above findings tend to yield the same conclusion: the AAS failed to respond, in any significant way, to the EEC tariff preferences. This chapter does not provide an explanation for this lack of response. However, on the basis of available data, three potential explanations may be rejected. First, the lack of AAS response cannot be attributed to a low level of EEC tariffs imposed on imports from non-beneficiary countries. As shown in Table 8, the EEC tariff range for the 29 major commodities exported by the AAS is 10% - 30%. Second, it cannot be argued that the growth rate of the price of EEC imports from the AAS was higher than that of imports from "Other LDCs", thus offsetting the price competitiveness afforded the AAS by tariff preferences. As shown in section 6, the granting of tariff preferences made the AAS more price competititve than "Other LDCs" for 20 out of the 29 analyzed commodities (72%). Moreover, it was shown in the same section that the AAS response was not a function of either <u>basic</u> competitiveness or <u>additional</u> competitiveness afforded the AAS by tariff preferences.

Finally, it could be argued that the lack of AAS response was due to an incapacity to expand exports so as to meet the growth of EEC demand. Although the absence of production statistics for the AAS and "Other LDCs" prevents verification of this argument, available AAS export data tend to raise doubts as to its validity. As shown in Table 10, AAS exports to "ROW" grew at a higher rate than exports to the EEC in 18 out of 29 cases. Thus, the lack of AAS response is associated, in part, with a shift of AAS exports from the EEC to "ROW" over the period of analysis. This finding tends to indicate that the lack of AAS response cannot be attributed to an incapacity to expand exports to meet the growth of EEC demand.

The above three reasons are the first that come to mind when attempting to explain the lack of AAS response to EEC tariff preferences. Since available data do not support these explanations, one must look for less obvious explanations for this lack of AAS response. Several may be proposed. First, the manufactured commodities exported by the AAS may face a low EEC demand because they are not of the type or quality sought by EEC consumers and producers. In other words, price differentiation may be less important than product differentiation in explaining the lack of AAS response to tariff preferences. This explanation would apply, in particular, to finished manufactures described in section 7.

Another explanation is that the AAS may have neither the technological level nor the technical and managerial skills needed to produce and successfully market manufactured products in the EEC. The small number of foreign investors engaged in manufacturing in AAS countries would not compensate for this lack of technical and managerial skills. This explanation would apply both to finished and to semi-finished manufactures.

Finally, the Linder similarity of preferences theory, exposed in chapter II, could offer an explanation of the lack of AAS response. A test of a trade model based on this theory will be undertaken in the following chapter.

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CHAPTER IV

DETERMINANTS OF THE GEOGRAPHICAL INTENSITY OF AAS EXPORTS

It was shown in chapter III that the AAS response to EEC tariff preferences must be considered, at best, as weak. This weak response applies to all types of manufactured exports, and is especially pronounced for export of finished commodities, such as labor-intensive commodities in CST Group 8.

These findings are at odds with those implied by comparative advantage theories. The AAS, like any other group of countries, should enjoy a comparative advantage in the production and export of a number of manufactured commodities (e.g., labor-intensive commodities, low-skill intensive commodities, etc.). Thus, the AAS should respond positively to tariff preferences by increasing its share of EEC imports for at least those goods for which it enjoys a comparative advantage, however this may be defined. Factors which could conceivably offset the potential impact of tariff preferences - i.e., low AAS competitiveness on the EEC market despite tariff preferences (and, more importantly, despite comparative advantage in production), and/or an incapacity to expand exports to the EEC - were shown, in chapter III, to be largely absent. Thus, the weak AAS response to tariff preferences must be explained by other factors.

In this chapter, a trade model will be described and tested, and it will be shown that the geographical intensity of AAS exports is a function of a number of variables other than those proposed by the H-O theory or recent neo-technology theories. This model is based on the Linder similarity of preferences theory described in chapter II. One main implication of this trade theory is that the AAS exports to the EEC should not be significantly affected by EEC tariff preferences. Thus, if under testing, the model is shown to be valid, the weak AAS response to tariff preferences will be, at least in part, explained.

The first section of this chapter will describe the model. Section 2 will describe the data used in testing the model. Section 3 will present and analyze test results for the AAS as a whole. Section 4 will present a similar analysis, but in summary form, for individual countries within the AAS. Finally, section 5 will provide comments and concluding remarks on the performance of the model in explaining the geographical intensity of AAS exports.

1. The model

According to Linder, trade intensity between two countries, as measured by the average propensity to import (API), is primarily a function of the absolute difference in per capita income ($|\Delta PCI|$) between the two countries, with other variables playing a lesser role. Thus, a formal functional statement of the basic Linder model may be expressed as follows:

$$(API)_{ij} = f(\ |\Delta PCI|_{ij})$$

where:

i = exporting country

j = importing country

Given the particular characteristics of the countries within the AAS, the addition of a number of variables to the basic Linder model should enhance significantly the explanatory power of the model. These variables are:

(i) Distance (D) between the exporting and importing countries, in miles.

(ii) Language (L) of the importing and exporting country. L is a binary variable with a value of 1 if the official languages of the 2 countries are the same, and a value of 0 if they are different.

(iii) Special trade agreements (P) between the exporting and importing countries. P is a binary variable with a value of 1 if a special trade agreement exists between the 2 countries, and a value of 0 if no such agreement exists.

The variable D is used primarily as a proxy for transport costs. Transport costs constitute a trade-breaking force, and should therefore be negatively correlated with API. It would have been preferable to use actual transport costs instead of distance. Unfortunately, such data are not easily obtained since shipping companies do not usually divulge their shipping rates. Furthermore, data on inland transport costs in Africa, Latin America and Asia do not exist in a readily available form.

The variable D can also be considered as a composite proxy variable for both transport costs and the trade horizon of AAS exporters. The term "trade horizon" refers to the level of awareness by AAS exporters of market opportunities outside the home country. It is explicitly assumed by Linder that as distance to a potential market increases, awareness of export possibilities, and therefore the level of actual exports to a market, decreases.

Variable L may be considered as a proxy for special political and/or cultural relationships which exist between the importing and the exporting country. This variable is included in the model because trade flows are greatly influenced by the existence of such relationships. A common language facilitates negociations between importers and exporters. Close political links favor the establishment of measures to encourage trade expansion between countries. In the context of this study, it is probable that the long-established political ties between France and individual countries whithin the AAS have favored trade between these countries. Of particular importance are the existing bilateral monetary arrangements between France and its former colonies,[1]

[1]For details on these arrangements, see International Monetary Fund (1).

arrangements which introduce a bias in favor of an expansion of trade between the former and the latter countries. A similar bias probably exists in favor of trade expansion among countries within the AAS since they use a common official language (French), belong to a common political entity (the French Community), and, during the 1962-1969 period, adopted the same monetary unit (the CFA Franc). Finally, the use of the same language may have also favored trade between the AAS and North African countries, as well as Belgium and Switzerland.

In the Linder perspective, special trade agreements may accentuate the trade intensity between countries with similar soci-economic structures and levels of development, but should not have a significant impact on the trade intensity between countries which are highly dissimilar in the above two respects. The variable P is included in the model in order to find out whether in fact it constitutes a significant explanatory variable of trade intensity. If it does not, this would tend to confirm the implication of the Linder theory that special trade agreements play a minor role in expanding trade between highly dissimilar countries.

It would have been preferable to use actual tariff rates rather than a binary variable. Unfortunately, tariff schedules for a large number of importing countries are not readily available. Furthermore, since the model is tested for groups of commodities, the estimation of an average tariff for each group of commodities and for each country would have constituted a formidable task, well outside the scope of this study. It may be further noted that it is only intended to find out whether the variable P is significantly and positively correlated with the dependent variable (API), rather than to obtain an accurate estimate of the correlation coefficient in order to predict the impact of trade preferences. For this purpose, the use of a binary variable should be adequate.

$|\Delta PCI|$, D, L, and P constitute the independent variables of the model. Two other variables could have been included in the model if data had been available. These are "Income distribution" (I), and "Border" (B).

The variable I was already discussed in chapter II in relation to the Linder theory. It would have been of interest to include this variable since, according to Linder, median rather than average income better reflects the demand structure for imports. Unfortunately, data on income distribution (e.g., Ginni coefficients) were not readily available for the majority of the countries importing from the AAS. Thus, it was not possible to include this variable in the model.

The variable "Border" is of great interest and should, if included in the model, increase significantly its explanatory power. The importance of this variable rests on a particular characteristic of geographical borders in Africa. These borders very often divide homogeneous tribal groups. Thus, consumer goods on both sides of the borders are often identical in terms of type and quality. This identity of consumption patterns could, and usually does, give rise to an important exchange of simply manufactured goods, of the cottage industry type, between populations on both sides of the border. It is important to distinguish the variable "Distance" from the variable "Border". The former is a proxy for shipping costs while the latter would be used as a proxy for an identity of consumption patterns of populations on both sides of a border.

It would be relatively easy to include "Border" as a binary variable in the model. There is, however, a good reason for not doing so. It is well known, and even documented, that border trade in Africa is very largely an illicit type of trade which is not included in export and import statistics. Since trade intensity - as reflected by the API - does not take into consideration actual trade across borders, it was decided to exclude the variable B from the model.

Given the independent variables $|\Delta PCI|$, D, L, and P, and the dependent variable (API), it is proposed to test the following model of the determinants of the geographical intensity of AAS exports:

$$(API)_{ij} = e^{a}(|\Delta PCI|_{ij})^{b}(D_{ij})^{c}e^{dL_{ij}}e^{fP_{ij}}$$

The ordinary least square method is used to estimate the model parameters on the basis of the following regression equation:

$$\text{Log}\ (\text{API})_{ij} = a + b \cdot \text{Log}(\ |\Delta \text{PCI}|_{ij}) + C \cdot \text{Log} D_{ij} + dL_{ij} + fP_{ij}$$

where:

i = importing country, $i = 1,2,\ldots\ldots 140$

j = exporting AAS country, $j = 1,2,\ldots\ldots 14$

$(\text{API})_{ij}$ = average propensity to import of country i from country j

$|\Delta \text{PCI}|_{ij}$ = absolute value of the difference in per capita income between country i and country j, in \$

D_{ij} = Distance, in miles, between country i and country j

L_{ij} = binary variable (values of 0 or 1). If the official language of country i is the same as that of country j, $L_{ij} = 1$. If it is not the same, $L_{ij} = 0$.

P_{ij} = binary variable (values of 0 or 1). If a special trading agreement exists between country i and j, $P_{ij} = 1$. If it does not, $P_{ij} = 0$.

a, b, c, d, and f are the regression coefficients.

In the above relationship, API is obtained from the following relationship:

$$(\text{API})_{ij} = \frac{\text{Exports from j to i (in \$1,000)}}{\text{GNP of i (in million \$)}} \cdot 10^4$$

Export values are used instead of import values for the estimation of API because import values may be assessed in different ways by different countries. Since API values are usually very small, these values are multiplied by 10^4 in order to avoid a large number of cumbersome zeros. Thus, API is given in terms of dollars per 10 million dollars of GNP.

A logarithmic form is used for the regression equation because, theoretically, API should decrease exponentially as D and/or $|\Delta PCI|$ increase.

In the above regression equation, Log (API) is expressed as a function of Log($|\Delta PCI|$) rather than of Log (ΔPCI). The absolute value of the difference in PCI's is used in order to express the argument in the Linder theory that everything else being equal, the API's of two countries from a third country will be equal if their PCI's are either higher or lower than that of the third country by the same amount.

The sign of the regression coefficients b and c is expected to be negative, while that of coefficient d is expected to be positive. The sign of the regression coefficient f would be positive if special trade agreements have a significant impact on the geographic intensity of AAS trade. If, on the other hand, such agreements have no impact on trade intensity, the sign of f may be either positive or negative, but statistically non-significant.

The estimation of the model parameters in section 3 is not undertaken to predict future values of API's, but to verify empirically the validity of the model. Thus, the goal is to obtain unbiased estimates of the parameters by including all theoretically specified variables for which data are available in the regression equation rather than to obtain a regression equation with the least residual variance by excluding those variables which decrease the value of $\bar{R}^2$. The prediction of future values of API is outside the scope of this study.

2. The data

Grouping of exports

The Linder theory should apply best to manufactured consumer goods, and should have little relevance for raw materials. Its relevance for intermediate manufactures would depend on the nature of the goods. In general, the closer a traded commodity is to a consumer good, the better the Linder theory would apply.

In order to verify the above propositions, AAS manufactured exports are divided into intermediate goods and consumer goods. The regression equation is estimated for each of the following 13 groups of exports:

- Total intermediate goods.
- Total consumer goods.
- Intermediate goods in each of the CST Groups 0, 2, 4, 5 and 6.
- Consumer goods in each of the CST Groups 0, 1, 5, 6, 7 and 8.

Groups 2 and 4 contain only intermediate goods, Groups 1, 7 and 8 contain only consumer goods, and Groups 0, 5 and 6 contain both. The classification of commodities into intermediate and consumer goods is provided in Table A-1 of the Appendix. Export statistics,[1] at the 5-digit level of the CST classification, were used in order to estimate the value of each group of exports from each AAS country.

API's are estimated on the basis of the average value of exports for the 1962-1969 period, i.e.:

$$(API)_{ij} = \left[\frac{1}{8} \cdot \sum_{t=1}^{8} x_t\right]_{ij}$$

where:

x_t = value of exports for year t.

The average value of exports is used instead of yearly values for two reasons. First, the goal of the analysis is to verify empirically the Linder theory, and not to predict the future geographic intensity of AAS exports. Second, given this goal, it is important to use an average value in order to minimize export fluctuations of an incidental nature which may distort the findings of the test.

If, for a given group of exports, the value of exports to a country is equal to zero, the country is not included in the test. Obviously, given the economic size of the AAS countries, it cannot be expected that they will export all commodities to all countries of the world. For most

[1]Export statistics were obtained from the Statistical Office of the European Communities (2). These statistics are available in the form of computer print-outs. Although they have not been included as an appendix, they can be made available on request.

groups of commodities, the number of countries which do not import from the AAS is in fact larger than the number of countries which do. The inclusion of a large number of zero APIs in the analyses would "hide" the relationship which may exist between the dependent variable, API, and the explanatory variables. By excluding zero APIs, the analysis aims at identifying the factors which determine the existing distribution of given amounts of exports among the trading partners of the AAS.

GNP and PCI statistics for each importing and exporting country are provided in Table A-5 of the Appendix. The values of GNP and PCI used in the analysis are those of 1967. It would have been preferable to use average values for the 1962-1969 period. Unfortunately, GNP and PCI data were not available for all years and all countries. The 1967 values should, however, closely approximate the average values for the period under study.

Distances between importing and exporting countries were obtained from a publication of the U.S. Navy (3) for coastal countries, and from rail and road maps for land-locked countries. In each case, the shortest distance was selected. Whenever a rail line exists between a port and the capital of a land-locked country, inland distance was measured on the basis of the rail line. Distances are reported in Table A-6 of the Appendix.

The value of the variable P (special trade agreements) is equal to 1 for each pair of countries composed of one AAS country and one EEC country. Variable P is also equal to 1 for various pairs of AAS countries. Twelve out of 14 AAS countries are grouped within two customs unions: (i) Union Douanière des Etats de l'Afrique de l'Ouest, and (ii) Union Douanière et Economique de l'Afrique Centrale. The first customs union includes Mauretania, Mali, Senegal, Upper Volta, Niger, Ivory Coast, and Dahomey. The second customs union includes Gabon, Central African Republic, Congo-Brazzaville, Tchad and Cameroon. A number of countries have left these unions since 1969. In general, tariff preferences offered to members of these customs unions are similar to those granted by the EEC to the AAS.

3. Test of the model for the AAS as a whole

Test findings

The purpose of this section is to test the model described in section 1 for the AAS as a whole. Thus, j - the exporting country - covers a range of 1-14, while i - the importing country - covers a range of 1-140 (140 being the total number of countries importing AAS manufactures, including the 14 AAS members).

Table 13 provides the results of the test for the 13 export groups described in the previous section.[1] For ease of presentation, intermediate goods in Groups 0, 5 and 6

[1] The ordinary least square method is used to estimate the regression equation.

TABLE 13.--Results of the test of the LINDER model for the AAS as a whole

CST Group	Regression Coefficients					Over-all Regression		Degr. of Free-dom
	Desig-nation	Value	Beta Weight	t	p	R^2	p	
Consumer Goods	Const.	13.956						
	|ΔPCI|	- .473	- .216	-5.285	.0005			
	D	-1.161	- .352	-8.879	.0005	.4311	.0005	499
	L	2.374	.313	8.447	.0005			
	P	- .234	- .025	- .686	.5000			
Inter-mediate Goods	Const.	7.208						
	|ΔPCI|	- .100	- .063	-1.250	.2090			
	D	- .420	- .185	-3.690	.0005	.2019	.0005	493
	L	1.413	.270	5.948	.0005			
	P	.654	.104	2.366	.0170			
Inter-mediate Goods in Group 0 (0-I)	Const.	5.029						
	|ΔPCI|	- .208	- .135	-1.165	.2460			
	D	- .096	- .043	- .390	.6970	.0647	.0350	154
	L	.716	.125	1.337	.1830			
	P	- .722	- .123	-1.360	.1760			
Consumer Goods in Group 0 (0-C)	Const.	11.023						
	|ΔPCI|	- .444	- .219	-3.969	.0005			
	D	- .767	- .271	-5.109	.0005	.3425	.0005	322
	L	2.279	.327	6.604	.0005			
	P	- .693	- .086	-1.685	.0890			
Consumer Goods in Group 1	Const.	8.409						
	|ΔPCI|	- .667	- .292	-2.401	.0190			
	D	- .740	- .259	-2.215	.0300	.4852	.0005	68
	L	3.934	.436	4.689	.0005			
	P	.104	.013	.137	.8920			
Inter-mediate Goods in Group 2 (2-I)	Const.	6.402						
	|ΔPCI|	- .195	- .125	-2.108	.0340			
	D	- .356	- .160	-2.735	.0060	.1784	.0005	377
	L	1.045	.199	3.695	.0005			
	P	.773	.132	2.538	.0110			

TABLE 13.--(Continued)

CST Group	Regression Coefficients					Over-all Regression		Degr. of Free-dom
	Desig-nation	Value	Beta Weight	t	p	R^2	p	
Inter-mediate Goods in Group 4 (4-I)	Const.	6.308						
	|ΔPCI|	- .094	- .056	- .561	.5750			
	D	- .565	- .259	-2.876	.0050	.3244	.0005	156
	L	2.466	.422	5.543	.0005			
	P	- .299	- .050	- .668	.5050			
Inter-mediate Goods in Group 5 (5-I)	Const.	5.873						
	|ΔPCI|	- .382	- .239	-1.288	.2040			
	D	- .248	- .121	- .628	.5330	.2536	.0090	45
	L	1.556	.305	1.920	.0610			
	P	- .596	- .117	- .751	.4570			
Consumer Goods in Group 5 (5-C)	Const.	8.407						
	|ΔPCI|	- .627	- .292	-3.335	.0010			
	D	- .626	- .235	-2.831	.0050	.4243	.0005	134
	L	2.789	.371	5.134	.0005			
	P	- .151	- .020	- .271	.7870			
Inter-mediate Goods in Group 6 (6-I)	Const.	6.173						
	|ΔPCI|	- .473	- .254	-3.117	.0020			
	D	- .133	- .054	- .687	.4930	.2001	.0005	216
	L	1.529	.255	3.680	.0005			
	P	- .092	- .014	- .199	.8430			
Consumer Goods in Group 6 (6-C)	Const.	11.796						
	|ΔPCI|	- .529	- .258	-5.021	.0005			
	D	-1.041	- .363	-7.297	.0005	.5093	.0005	332
	L	2.066	.290	6.782	.0005			
	P	.205	.026	.615	.5470			
Consumer Goods in Group 7	Const.	12.705						
	|ΔPCI|	- .453	- .235	-4.228	.0005			
	D	-1.232	- .457	-8.565	.0005	.5490	.0005	201
	L	2.097	.320	6.105	.0005			
	P	- .423	- .059	-1.105	.2700			

TABLE 13.--(Continued)

CST Group	Regression Coefficients					Over-all Regression		Degr. of Free-dom
	Desig-nation	Value	Beta Weight	t	p	R^2	p	
Consumer Goods in Group 8	Const.	9.967				.4972	.0005	221
	|ΔPCI|	- .602	- .280	-4.443	.0005			
	D	- .854	- .298	-4.897	.0005			
	L	2.679	.357	6.820	.0005			
	P	- .422	- .053	-1.009	.3140			

are designated as (O-I), (5-I) and (6-I), while consumer goods in these same groups are designated as (O-C), (5-C) and (6-C). Test results are summarized below.

The regression coefficient for the difference in per capita income is, as postulated by Linder, negative for all groups of exports. Difference in per capita income is a significant variable at the .005 level[1] for over-all consumer goods and for five of the six consumer goods groups (O-C, 5-C, 6-C, 7 and 8). It is significant at the .03 level for Group 1. With respect to intermediate goods, the difference in per capita income is a significant variable at the .005 level for one group (6-I), and at the .03 level for a second group (2). Thus, $|\Delta PCI|$ is significant at the .03 level for all groups of consumer goods, and 2 out of 6 groups of intermediate goods.

The regression coefficient for the distance variable is, as postulated by Linder, negative for all groups of exports. The distance variable is significant at the .005 level for over-all consumer goods and for five consumer goods groups (O-C, 5-C, 6-C, 7 and 8), and at the .03 level for Group 1. This variable is significant at the .005 level for over-all intermediate goods and for Group 4, and at the .03 level for Group 2. Thus, the distance variable is significant at the .03 level in all cases relating to consumer goods, and

[1]In this section, two levels of significance are used to discribe the results: .005 level and .03 level.

in 3 out of 6 cases relating to intermediate goods.

The regression coefficient for the variable language is, as implied by the Linder theory, positive for all groups of exports. The language variable is significant at the .005 level in all cases relating to consumer goods. It is significant at the .005 level for over-all intermediate goods, and for intermediate goods Groups 2, 4 and 6. Thus, the language variable is significant at the .005 level in all cases relating to consumer goods, and 4 out of 6 cases relating to intermediate goods.

The regression coefficient for the variable "Special trade agreement", P, is both positive and significant at the .03 level for over-all intermediate goods and for Group 2. In the remaining 12 cases, P is non-significant (with a positive sign in 2 cases and a negative sign in 9 cases).

The value of R^2 is relatively high for over-all consumer goods (.4311), and for most consumer goods groups, ranging from a value of .3425 for Group 0-C to a value of .5490 for Group 7. The values of R^2 for most groups of intermediate exports are much lower than those for consumer goods (.4311 versus .2019 for over-all exports, .3425 versus .0647 for exports in Group 0, .4243 versus .2536 for exports in Group 5, and .5093 versus .2001 for exports in Group 6). The only moderately high R^2 for intermediate exports is that relating to Group 4 (.3244).

Given the above findings, it may be concluded that the three Linder type variables (|ΔPCI| , D, and L) provide a significant "explanation" of the geographical intensity of AAS exports for all groups of consumer goods. Furthermore, as postulated, the Linder model does not apply as well for intermediate goods as for consumer goods. R^2 values for consumer goods are approximately the double of those for intermediate goods. In the particular case of Group 0, the R^2 value for consumer goods is approximately five times the R^2 value for intermediate goods within this group.

An additional finding of the test is that the independent variable P is non-significant for all groups of consumer goods, and for 4 out of 6 groups of intermediate exports. This finding should be considered with some caution, P being a binary variable rather than the actual tariff level. However, it is interesting to note that P is not a significant determinant of the geographical intensity of AAS export of intermediate goods in Groups 0, 5, and 6 despite the high duties which are usually imposed on a large number of commodities within these groups. Thus, tariffs do not seem to have consituted an important trade-breaking force. This finding is implicitly postulated by the Linder theory.

Examples of API values predicted by the regression equation for the AAS as a whole

The regression equation can be used to predict the verage trade intensity between the AAS as a whole and any importing country.[1] The predicted estimate is obtained by first calculating the average $|\Delta PCI|$ and average distance (D) between the importing country and the AAS as a whole, and then calculating the average API on the basis of the average values of $|\Delta PCI|$ and D, and the values of P and L which apply. The regression equation may, for example, be used to estimate the trade intensity between the AAS and France on the basis of an average $|\Delta PCI|$ of 2,338 dollars, an average distance of 3,529 miles, and a value of 1 for both the variables P and L.

API values were estimated for the following three hypothetical cases:

Case I : $|\Delta PCI|$ = \$100 ; D = 500 miles; L = 0; P = 0

Case II : $|\Delta PCI|$ = \$2,000; D = 3,500 miles; L = 0; P = 0

Case III : $|\Delta PCI|$ = \$2,000; D = 3,500 miles; L = 1; P = 1

Case I may be considered as being a typical case of trade between the AAS and a non-French speaking African country. Case II may be considered as being a typical case of trade between the AAS and a non-French speaking European country outside the EEC. Case III may be considered as being a typical case of trade between the AAS and a French speaking country (France or Belgium) within the EEC.

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[1]The estimated regression equation cannot, however, e used to estimate the average trade intensity between the S and individual AAS countries which belong to a customs ion since the value of the variable P is not, in this case, ique.

Table 14 shows that API values for consumer goods are higher for Case I than for Cases II and III by a very large margin. API values are approximately 5 to 40 times higher for Case III than for Case II, the difference being attributed primarily to the variable language. The difference in APIs between Case I and Case II is so large that predicted total exports in Case I generally exceeds predicted total exports in Case II. To illustrate this point, let us assume that the importing country in Case I has a GNP of 1,500 million dollars - a typical GNP value for an English speaking African country. Let us also use, for our example, API values for consumer goods in Group 0 (i.e., 67.5 and 4.0). What would the GNP of a country in Case II have to be in order for its imports from the AAS to equal those of the English speaking African country? This GNP may be obtained from the following equation:

$$\text{GNP} = \frac{67.5}{4.0}(1{,}500) = 25{,}312 \text{ million dollars}$$

Among non-EEC countries within Europe, only the U.K. had, in 1967, a GNP higher than 25,312 million dollars, the GNPs for other non-EEC countries ranging from 546 million dollars for Iceland to 24,143 million dollars for Sweden. Thus, AAS exports of consumer goods in Group 0 are predicted to be higher for a typical English-speaking African country than for non-EEC countries in Europe, with the exception of the U.K. Similar calculations would show that AAS exports of consumer goods to the above typical African country are

TABLE 14.--Examples of API values predicted by the regression equation for the AAS as a whole

CST Group	API		
	Case I	Case II	Case III
Consumer Goods in:			
Group 0	67.5	4.0	19.6
Group 1	2.1	.1	3.8
Group 5	5.1	.2	3.2
Group 6	27.1	.5	4.7
Group 7	19.3	.5	2.4
Group 8	6.6	.2	2.0
Intermediate Goods in:			
Group 0	32.1	14.4	14.3
Group 2	26.9	7.5	46.2
Group 4	10.6	2.7	17.7
Group 5	13.1	2.6	6.7
Group 6	23.8	4.4	18.7

generally predicted to be lower than AAS exports to EEC countries.

APIs for intermediate exports are also higher for Case I than for Case II and Case III. The difference is not, however, as large as the difference for consumer goods. It may be shown that, in general, predicted AAS exports of intermediate goods to European countries are higher than predicted exports to a typical African country outside the AAS.

4. Test of the Linder model for individual AAS countries

The proposed model of the geographical intensity of AAS exports is tested, in this section, for each individual AAS country and each of the 13 groups of commodities described in Section 2 of this chapter. The estimated regression equations permit more accurate predictions of the geographical intensity of exports from an individual AAS country than that permitted by the over-all regression equation estimated in the previous section. The number of data points for individual AAS countries is not, however, always large enough for testing purposes. Furthermore, for a number of commodity groups, non-zero APIs relate primarily or exclusively to AAS exports to African countries. This latter circumstance tends to distort the test findings for the following reason. When non-zero APIs relate primarily to AAS exports to African countries, the $|\Delta PCI|$ values associated with these API values tend to be clustered within a narrow range. Under these circumstances, the distance and language variables may overshadow the importance of the variable $|\Delta PCI|$ as a determinant of trade intensity (i.e., API values may become mainly a function of D and L).

The variable $|\Delta PCI|$ postulated by Linder may not be tested properly unless the range of values associated with this variable is fairly wide. In order to avoid the problems raised above, the Linder model was tested only in cases where the number of data points was large enough to insure a wide range of $|\Delta PCI|$ values. By observation of the data, it could be seen that 20 constitutes an adequate number of data points. Consequently, the test results are provided only in cases where the number of degrees of freedom is equal to or larger than 15.

Table 15 provides a list of the commodity groups selected for testing, and a list of the AAS countries associated with each commodity group.

Test findings

Detailed test results for each AAS country are provided in Table A-7 of the Appendix. These results are summarized in Table 16. For each commodity group, the table provides the number of regression equations which are tested, the number of regression coefficients which are non-significant (defined here as $p \geq .10$), as well as the number of coefficients which are significant at levels in the following ranges: .05 to .10, .01 to .05, and .01 or less. The table

TABLE 15.--Commodity groups and AAS countries selected for testing

Selected commodity groups	Selected countries	Number of selected countries
Intermediate Goods:		
Total	Togo, Cameroon, Central African Republic, Congo, Chad, Dahomey, Gabon, Ivory Coast, Madagascar, Mali, Niger, Senegal, Upper Volta	13
In Group 0	Senegal, Cameroon, Ivory Coast	3
In Group 2	Cameroon, Ivory Coast, Senegal, Madagascar, Upper Volta, Central African Republic, Congo, Chad, Dahomey, Gabon, Mali, Niger	12
In Group 4	Ivory Coast, Senegal	2
In Group 6	Cameroon, Ivory Coast, Senegal, Gabon	4
Consumer Goods:		
Total	Togo, Cameroon, Senegal, Ivory Coast, Madagascar, Congo, Chad, Dahomey, Gabon, Mali, Mauretania, Upper Volta	12
In Group 0	Ivory Coast, Senegal, Madagascar, Mauretania	4
In Group 5	Ivory Coast, Senegal	2
In Group 6	Senegal, Ivory Coast, Cameroon, Madagascar, Togo, Congo, Upper Volta	7
In Group 7	Ivory Coast, Senegal, Cameroon, Madagascar	4
In Group 8	Ivory Coast, Senegal, Cameroon, Madagascar	4

TABLE 16.-- Summary of results of the test of the Linder model (individual AAS countries)

(Number)

Commodity Groups	Number of regressions	Regression coefficients: significance (P)																Over-all regression results					
		|ΔPCI|				Distance (D)				Language (L)				Preferences (P)				R^2		Over-all signific.(P)			
		>.1	.05 to .1	.01 to .05	≤.01	>.1	.05 to .1	.01 to .05	≤.01	>.1	.05 to .1	.01 to .05	≤.01	>.1	.05 to .1	.01 to .05	≤.01	<.4	>.4	>.1	.05 to .1	.01 to .05	≤.01
Interm. goods:																							
Total	13	12	1	0	0	8	3	1	1	10	0	0	3	11	0	0	2	10	3	4	2	0	7
Group 0	3	2	0	1	0	2	0	0	1	3	0	0	0	2	0	0	1	2	1	2	0	0	1
Group 2	12	10	2	0	0	9	1	2	0	9	1	2	0	11	0	0	1	11	1	7	0	4	1
Group 4	2	2	0	0	0	0	0	1	1	1	0	0	1	1	0	0	1	0	2	0	0	0	2
Group 6	4	2	1	1	0	4	0	0	0	1	1	1	1	2	0	1	1	1	3	0	0	0	4
Consumer goods:																							
Total	12	7	2	1	2	1	0	2	9	4	1	3	4	10	1	1	0	1	11	1	0	1	10
Group 0	4	3	1	0	0	0	0	2	2	0	0	1	3	3	0	1	0	2	2	0	0	1	3
Group 5	2	1	0	0	1	0	0	1	1	0	0	0	2	2	0	0	0	0	2	0	0	0	2
Group 6	7	3	1	2	1	0	0	1	6	2	0	2	3	5	1	0	1	0	7	0	0	0	7
Group 7	4	1	1	1	1	0	0	0	4	0	0	0	4	3	0	0	1	0	4	0	0	0	4
Group 8	4	2	0	1	1	0	1	1	2	1	1	0	2	4	0	0	0	0	4	0	0	0	4
TOTAL INT. G.	34	28	4	2	0	23	4	4	3	24	2	3	5	27	0	1	6	24	10	13	2	4	15
TOTAL CONS. G.	33	17	5	5	6	1	1	7	24	7	2	6	18	27	2	2	2	3	30	1	0	2	30
GRAND TOTAL	67	45	9	7	6	24	5	11	27	31	4	9	23	54	2	3	8	27	40	14	2	6	45

Source: Table A-7 of the Appendix.

also provides the number of R^2 values which are in the ranges $<.4$ and $>.4$, as well as the number of regression equations with over-all significance levels in the same ranges as those specified for the regression coefficients. Results from Table 16 are summarized below.

The total number of regression equations is equal to 34 for intermediate goods and to 33 for consumer goods. Due to an insufficient number of observations, intermediate goods in Group 5 as well as consumer goods in Group 1 are not included in Table 16.

The regression coefficient for the variable $|\Delta PCI|$ is significant at the .10 level or less in 6 out of 34 regressions performed on intermediate goods (i.e., 17% of the cases), and in 16 out of 33 regressions performed on consumer goods (i.e., approximately 50% of the cases). Six of the coefficients associated with these latter goods are significant at the .01 level. Thus, as already shown in the previous section, the variable $|\Delta PCI|$ is a more powerful determinant of trade intensity for consumer goods than for intermediate goods. Results for individual AAS countries are, however, less conclusive than those for the AAS as a whole. This is not unexpected since the sample size for individual AAS countries is much smaller than that for the AAS as a whole.

The regression coefficient for the variable distance (D) is significant at the .10 level or less in 11 out of 34 regressions performed on intermediate goods (i.e., 33% of the cases), and in 32 out of 33 regressions performed on consumer goods (i.e., 97% of the cases). 24 of the coefficients associated with these latter goods are significant at the .01 level while only 3 coefficients associated with intermediate goods are significant at this level. Thus, test results for individual AAS countries confirm those of the AAS as a whole, the variable distance constituting a more powerful determinant of trade intensity for consumer goods than for intermediate goods.

The regression coefficient for the variable language (L) is significant at the .10 level or less in 10 out of 34 regressions performed on intermediate goods (i.e., 29% of the cases), and in 26 out of 33 regressions performed on consumer goods (i.e., 79% of the cases). 18 of the coefficients associated with these latter goods are significant at the .01 level while only 5 coefficients associated with intermediate goods are significant at this level. These findings confirm those of the AAS as a whole.

The regression coefficient for the variable P (Special trade agreement) is significant at the .10 level or less in 7 out of 34 regressions performed on intermediate goods (i.e., 20% of the cases), and in 6 regressions out of 33 performed on consumer goods (i.e., 21% of the cases). Two of the coefficients associated with these latter goods are significant at the .01 level while 6 coefficients associated with intermediate goods are significant at this level. Thus, as shown in the previous section, special trade agreements do not seem to constitute a significant determinant of the geographical intensity of AAS exports. Results for intermediate goods are slightly better than those for consumer goods. Differences in the findings are, however, of minor importance, and do not suggest any particular trend.

The value of R^2 is, in general, higher when the Linder model is tested for individual AAS countries than when it is tested for the AAS as a whole. As shown in Table A-7 of the Appendix, R^2 values of .7 and .8 are fairly common, while R^2 values for the AAS as a whole do not exceed .5. It can be seen from Table 16 that R^2 values for intermediate goods are higher than .4 in 10 regressions out of 34 (i.e., 29% of the cases), while those for consumer goods are higher than .4 for 30 regressions out of 33 (i.e., 91% of the cases). Thus, as shown in the previous section, the tested regression equation explains a higher percentage of the total variation of the dependent variable, API, when applied to consumer goods than when applied to intermediate goods.

The number of regression equations having an over-all significance level of .10 or less is equal to 21 (out of 34) for intermediate goods, and to 32 (out of 33) for consumer goods. 30 of these 32 regressions are significant at the .01 level, while 15 regressions are significant at this level in

the case of intermediate goods.

In summary: the findings reported in this section with respect to individual AAS countries confirm and reinforce those pertaining to the AAS as a whole.

5. Concluding remarks on the test of the Linder model

Results of the test, both for the AAS as a whole and for individual AAS countries, are in concordance with the Linder theory predictions regarding the geographical intensity of manufactured exports. The regression model applies best to exports of consumer goods. For these goods, the regression coefficients are generally significant for all three Linder type variables: absolute difference in per capita income, distance, and language. The model is less successful in predicting trade intensity for intermediate goods. For these goods, the variables language and distance are generally significant, but the main Linder variable, $|\Delta PCI|$, is often non-significant.

The test results also indicate that the variable P (Special trade agreement) does not constitute a significant determinant of the geographical intensity of AAS exports. These results, which are based on a cross-sectional analysis of AAS exports, are consistent with the results of the time-series analysis undertaken in the previous chapter. This finding concurs with the implication of the Linder theory that special trade agreements will, at best, reinforce the trade intensity between countries of similar economic levels,

and should only marginally affect the trade intensity between countries of dissimilar economic levels.

It must be emphasized that the test results apply strictly to the AAS and cannot be generalized to any other group of developing countries. A number of the AAS countries are classified by the United Nations among the least developed of the developing countries. Obviously, this characteristic of the AAS countries may have had an impact on the test results. In other words, if the test were to be performed on a group of LDCs at a higher level of development than that of the AAS (e.g., Latin American countries), different results might be found.

It is, however, suspected that the Linder-based model would yield positive results if tested for other countries than the AAS. One form of preliminary evidence to support this position can be derived from an analysis of world exports and imports of manufactures, on an inter-regional and intra-regional basis. A partial analysis of such trade is undertaken below for illustrative purposes.

Let us first redefine trade intensity. In the previous sections of this chapter, trade intensity was defined as <u>average</u> propensity to import, taking into consideration the size of the GNP of the importing country. This definition of trade intensity is valid as long as the analysis is limited to a single exporting country, or to a group of exporting countries (such as the AAS) which have quite similar GNPs.

When the analysis is to include exporters which differ greatly in size, the GNP of the exporting country must also be taken into consideration. Obviously, the exports of a very large country A (e.g., the U.S.A.) to a given country C (e.g., France) will be much larger than those of a small country B (e.g., Finland). When comparing exports from A to C to exports from B to C, the size of the exporting country should be taken into consideration by dividing API by the GNP of the exporting country. The new measure of trade intensity, (WAPI), may be defined as follows:

$$(\mathrm{WAPI})_{ij} = \frac{\text{exports of } j \text{ to } i}{(\mathrm{GNP})_j \cdot (\mathrm{GNP})_i}$$

where:

i = importing country

j = exporting country

(WAPI) = the trade intensity between i and j weighted by the GNPs of countries i and j

Estimates of trade intensities between various regions of the world are provided in Table 17 for manufactured goods in SITC Groups 6 and 8 (excluding SITC 67 and 68), for the year 1969. The WAPI values in the Table are multiplied by 10^{15} in order to avoid a cumbersome number of zeros.

First, it may be seen from a vertical comparison of WAPI values that the highest values are, in all cases, those associated with intra-regional trade (e.g., 50.56 for intra-African trade). Thus, geographical trade intensities for imports are higher for intra-regional trade than for

TABLE 17.--Inter-regional and intra-regional trade intensities SITC groups 6 + 8 - (67 + 68), 1969

(WAPI values) x $(10)^{15}$

	Western Europe	Socialist countries	Latin America	Africa	Western Asia	South-East Asia
Western Europe	34.09	2.29	5.84	4.90	44.74	7.30
Socialist Countries	1.70	7.47	1.46	5.55	11.50	4.44
Latin America	.88	.08	9.69	.04	0.00	0.00
Africa	6.69	3.40	.77	50.56	23.02	.74
Western Asia	11.54	.53	1.10	23.00	136.95	14.92
South-East Asia	8.85	2.11	2.73	27.97	40.94	38.83

Source: Trade flow statistics from:

United Nations, Handbook of International Trade and Development Statistics, New York: United Nations, 1972

United Nations, Handbook of International Trade and Development Statistics - Supplement 1973, New York: United Nations, 1973.

GNP statistics for each region: same source as above.

inter-regional trade. Second, it can also be seen that geographical trade intensities for exports are, in most cases, higher for intra-regional trade than for inter-regional trade (horizontal comparison of WAPI values). The only exceptions are those for exports from Western Europe, Socialist countries and South-East Asia to Western Asia.

Obviously, the above analysis is too limited in scope to permit firm conclusions regarding the general validity of the Linder theory. Nevertheless, the fact that intra-regional trade (among countries having fairly similar socio-economic structures) is much more intense than inter-regional trade (involving countries that differ widely in socio-economic structures) is generally in conformity with the Linder theory.

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CHAPTER V

DETERMINANTS OF THE AAS EXPORT PATTERN AND EVALUATION OF TRADE STRATEGIES FOR THE AFRICAN ASSOCIATED STATES

The evaluation of AAS export performance undertaken in chapter III provided no evidence of an expansion of AAS exports in response to the tariff preferences granted by EEC. The lack of AAS response could not be attributed to low EEC tariff duties or to an over-all lack of price competitiveness on the part of the AAS. Moreover, it was shown in chapter IV that trade intensity between the AAS and other LDCs - especially African countries - is much higher than that between the AAS and developed countries. The geographical intensity of AAS exports was found to be a function of three Linder type variables: $|\Delta PCI|$, D, and L. The variable "Special trade agreement", P, did not seem to constitute an explanatory variable for trade intensity. Thus, the findings from the cross-sectional analysis confirm those of the time series analysis in the particular case of variable P.

This chapter has two main purposes. First, in the following two sections, several possible explanations for the lack of AAS response and the findings from the test of the Linder-based model will be presented. Second, two main trade strategies for the African Associated States will be examined in the light of the findings from chapters III and IV.

1. Possible explanations for the lack of AAS response to EEC tariff preferences

In the absence of relevant data, one can only hypothesize about the factors that explain the lack of AAS response. The explantions provided in this section are associated with certain major characteristics of AAS countries.

With respect to finished manufactures, the lack of AAS response could be explained by the small size of the AAS countries.[1] The Bela Balassa hypothesis (presented in chapter II) is that small countries have a comparative advantage for semi-manufactures and a disadvantage for finished manufactures. In the case of the AAS, a comparative disadvantage in the production and export of finished manufactures could partly offset the potential impact of tariff preferences, and thus contribute to the lack of response for such manufactures.

The Balassa argument about the size of countries is valid as long as a country attracts little foreign investment. Foreign investors bring in not only financial assets but also technical skills, advanced technologies, and an extensive marketing network. Thus, small countries, such as Hong Kong, could become successful exporters of finished commodities. Foreign investment may be undertaken for four reasons. First,

[1]The population of the AAS countries ranges from approximately 500,000 people in Gabon to approximately 6 million people in Madagascar, with an average of 2-3 million (1967 data).

investors may wish to minimize transport costs by establishing themselves close to sources of raw materials. The distance factor also applies whenever a foreign investor exports to many countries within the same world region. In this case, the investor will choose the country within the region associated with minimum transport costs. A second reason for investing in a foreign country is to take advantge of the cheapness of some factor of production (e.g., low wages) or special fiscal benefit. A third reason is to circumvent existing trade barriers (e.g., tariffs, quotas), while being protected by these barriers against outside competitors. Finally, by investing in a preference-receiving country, it is possible to export the output to the preference-granting country and thus avoid the tariffs that would have been imposed if the goods were produced elsewhere.

The above reasons are not, however, sufficient to induce foreign investment in a given country. If the main reason for investment is to take advantage of low wages, the foreign investor will also need an adequate infrastructure and a reliable, trained labor force. Otherwise, benefits derived by low wages could be offset by the costs of improving the infrastructure and training the local labor force. In the case of large projects (e.g., large mining projects), these additional costs may be economically justified. For small to medium size projects - which encompass many of the consumer goods industries - foreign investors will not generally be willing to finance such costs.

If the reason for investment is to decrease shipping costs to a given region, the regional market must be large and the transport facilities within the region must be adequate. If these circumstances are not present, foreign investment may not take place.

Finally, if the reason for foreign investment in a given country is to circumvent existing tariff barriers, it is necessary that the size of the country - in terms of population - be large and/or the purchasing power of the people high. If these conditions are not present, diseconomies of scale or unused production capacity will greatly diminish investment profitability.

Most of the AAS countries lack the characteristics needed to attract foreign investment. The major exceptions pertain to the production of raw materials (e.g., Gabon, Congo), or agricultural materials (e.g., Ivory Coast). The small size of the AAS countries, the inadequacy of transport facilities within and between these countries, the inadequate infrastructure (in terms of service industry, power and telecommunication networks, etc.) and the low skill level of the labor force are probably responsible for the low number of foreign investments in the manufacturing sector. Lack of foreign investment may constrain expansion of this sector, and therefore contribute to the lack of AAS response to tariff preferences.

Lacking foreign investment, a country must rely on indigenous resources. Technical, managerial, and marketing skills are essential for a successful trade strategy based on the expansion of manufactured exports to developed countries. The AAS countries may lack the managerial and technical skills needed to produce manufactured goods of the quality standard required by industrialized countries. They may also lack the skills needed for the development of adequate marketing channels in these countries. Without these skills, it is not possible to produce the "research intensive" commodities - i.e., commodities requiring a high imput of research and development as well as highly skilled labor and management - which are highly demanded in industrialized countries. Thus, the lack of AAS response could be explained by lack of required skills to produce and market those manufactures with the greatest demand in the EEC.

With respect to finished goods, it has been hypothesized that <u>product differentiation</u> is more important than <u>price differentiation</u> as a determinant of trade (see chapter II). This hypothesis implies that tariff preferences - which lead to price differentiation - would have a minimal impact on the export of finished manufactures from the AAS. Thus, the low expansion of AAS manufactured exports to the EEC could be explained either by a lack of specialization in production, or by a specialization yielding manufactured goods which do not cater to the tastes of EEC consumers.

Finally, the large distances between EEC countries and AAS countries could also explain the weak AAS response. The test of the Linder-based model of chapter IV provides empirical backing for the above explanation. Distance, and therefore transport costs, may constitute a particularly severe trade barrier for trade between land-locked AAS countries and EEC countries.

2. Possible explanations for the high trade intensity within the AAS and between AAS countries and non-AAS African countries

The Linder-based model tested in the previous chapter predicts that trade intensity within the AAS and between the AAS countries and non-AAS African countries should be relatively high since differences in per capita income between these countries are generally low, distances are short to moderate, and, in the case of trade among AAS countries, a common language exists. Examination of API values confirms the predictions of the model. API values associated with AAS exports to Africa are generally much higher than API values associated with AAS exports to countries outside Africa.

Several factors hypothesized by Linder could explain the relatively high intra-African trade intensity. These factors, already presented in chapter II, may be summarized as follows: similarity of the consumption patterns of the trading partners, similarity between imports and exports,

entrepreneurial risk-minimizing behavior.

Second, with the exception of land-locked countries, transport costs between African ports are relatively low and could favor trade between these countries.

Third, with a very few exceptions, political relations among AAS countries, and between these countries and non-AAS African countries are good. Such relations have favored the establishment of a large number of bilateral or regional trade agreements. Although these agreements have not generally led to the creation of customs unions or free trade areas, they have probably encouraged trade expansion between African countries. Regional organisations, such as the Organisation of African Unity, the Economic Commission For Africa, and the African Development Bank may have also contributed to the development of trade relations among African countries.

Fourth, the high trade intensity between the AAS and African countries may be the result of explicit or implicit regional planning. In some cases, the size of African countries may not be large enough to justify investments in large industrial projects. In other cases, these countries may not have the financial means to undertake such projects even if they were economically feasible. In order to circumvent the size and/or financial constraints, African countries have agreed, in a number of instances, to plan jointly large industrial projects. These agreements include provisions

about the location of the project, the way the output is to be divided among the participating countries, and the way the project is to be financed. They constitute explicit attempts toward intra-regional planning of industrial activities, and, as such, would tend to favor an expansion of intra-regional trade in a number of manufactured commodities.

There are other cases where countries undertake industrial investments without prior consultation with neighboring countries. However, once these investments have been implemented, they are implicitly taken into account by neighboring countries when formulating their own investment plans. In order to avoid uneconomical duplication of existing industrial projects, a country may decide to import manufactured goods from countries which are already producing them. This type of situation constitutes implicit intra-regional planning which would favor trade expansion among neighboring countries.

3. Trade strategies for the AAS

In the previous three chapters, an attempt was made to explain AAS trade patterns from the perspective of trade theories. Findings from these chapters may help to clarify the determinants of geographical trade intensity, but are most probably of limited interest to policy makers in the AAS countries. Policy makers would probably be primarily interested in obtaining answers to the following four questions:

(i) What are the export strategies which could be adopted? (ii) How should each strategy be implemented (i.e., what are the policy measures needed to implement a strategy)? (iii) What are the chances for each strategy to succeed? and (iv) What would the impact of each strategy be with respect to economic growth, balance of payments, employment and income distribution?

While the above questions are legitimate and highly relevant, it is outside the scope of this study to provide complete and accurate answers. This section will, however, make use of limited empirical evidence, conventional economic analyses and various assumptions about economic relationships, in order to offer a preliminary evaluation of two contrasting trade strategies.

Two distinct trade strategies could be adopted by the AAS. The first is a strategy geared to increasing manufactured exports to industrialized countries and, in particular, to the EEC countries where the AAS enjoys special tariff preferences. This strategy is backed by some implications of comparative advantage theories. The second strategy is to emphasize intra-regional trade in the way implied by the Linder theory. The purpose of this section is to examine the two strategies without making any specific recommendation as to which should be adopted. Moreover, it should be borne in mind that the optimum approach may be one which mixes, in varying proportions, the above two strategies.

Evaluation of an export strategy based on an expansion of manufactured exports to industrialized countries

The AAS could attempt to increase manufactured exports to industrialized countries by expanding the production of manufactured goods for which they enjoy one type or another of comparative advantage. Such goods would include, depending on the comparative advantage theory being considered, labor-intensive commodities, resource-intensive commodities, low-skill intensive commodities, standardized commodities, etc. In order to promote this strategy, the AAS would need to implement policy measures of the type described below. Some of these measures have already been partially implemented by a few AAS countries (e.g., Ivory Coast).

The AAS could expand investment in export industries by allocating less funds to infrastructural and social investment projects which are not essential to the export strategy. Scarce foreign exchange could be used in priority for the import of equipment, technical services, and material inputs required by the export industries. Investment in training programmes could be carried out in order to create skilled labor needed for the production of manufactured commodities of the quality required for markets in industrialized countries. Finally, the AAS countries could improve marketing channels in industrialized countries by developing an efficient network of trade information centers, and by organizing national trade fairs in order to promote the sale of their manufactured goods.

In the case of consumer goods produced for export, the AAS countries could specialize in a restricted number of commodities (e.g., tropical food products, particular types of textiles and clothing items, etc.). They could thus use their limited means - financial, technical - in order to exploit to the fullest extent possible the comparative advantage which they may enjoy in the production of certain commodities.

If the AAS countries were unable to implement the above measures, they would need to attract foreign investors through the granting of various fiscal incentives, guarantees against business risks (e.g., expropriation), and, most importantly, through the maintenance of a stable political regime.

Chances for such a strategy to succeed in expanding manufactured exports to industrialized countries do not appear to be very good for the following reasons. The development of an indigeneous export industry faces serious obstacles. In order to expand manufactured exports of the quality required by industrialized countries, the AAS countries would need to increase the capital-intensity of the manufacturing sector, absorb new technologies, and create the managerial and technical skills for designing, producing, and marketing products demanded in the markets of industrialized countries. The development of the technological and managerial basis needed to produce and market such products cannot be created overnight. Indeed, a main characteristic of underdevelopment is the existence of various constraints which impede the creation of the needed managerial and technical basis. To promote manufactured exports of the above type, a country needs to have already reached a relatively advanced state of development which does not yet exist in most of the AAS countries.

It is also doubtful that foreign companies will make substantial investments in the AAS countries in the foreseeable future. In the case of finished manufactures, the main advantage in establishing manufacturing plants in the AAS countries is the relatively low level of wages. This advantage is, however, offset by several disadvantages: inadequate infrastructure, lack of trained labor, and high shipping costs to Europe. Foreign investors are likely to prefer investment in North African countries which have a well developed infrastructure, trained labor force, and are much more closer to European markets. It can, in fact, be shown that foreign investments in Tunisia and Morocco have grown recently at a much higher rate than foreign investments in AAS countries. Thus far, investments in the AAS have been concentrated in the processing of raw and agricultural materials. It is therefore doubtful that the AAS could expand manufactured exports to industrialized countries by relying on foreign investors.

Few developing countries have succeeded in substantially expanding manufactured exports to industrialized countries. Table 18 provides a list of major LDC exporters of manufactures to the main developed countries for the years 1962 and 1972. As shown in the table, 19 countries account for over 80% of total LDC manufactured exports to developed countries. Furthermore, 14 of these LDCs are listed in both years, meaning that only 5 new countries were able, between 1962 and 1972, to expand their exports sufficiently to be included in the list. Similar findings characterize exports of major groups of manufactures. Table 19 shows that a small number of countries (3 to 13) account for a major proportion of exports of individual groups of commodities (53.85% for drink and tobacco products to 90.27% for clothing). The only AAS countries included in this table are Ivory Coast (food products and wood products) and Cameroon (worked non-ferrous metals).

The above data suggest that successful examples such as Hong-Kong or South Korea may not be easily duplicated. Given the limited capacity of industrialized countries to absorb labor-intensive, low-skill intensive commodities produced by LDCs, only a small number of countries will be able to succeed in <u>substantially</u> expanding their exports of manufactures to developed nations. The AAS countries are unlikely, in the foreseeable future, to be included among the successful exporters.

TABLE 18.-- Major exporters of manufactures to 21 DMECs, 1962 and 1972

1962			1972			Annual average percentage increase 1962-1972
Exporting country or territory	($ m.)	% of total	Exporting country or territory	($ m.)	% of total	
Venezuela	539.6	10.20	Hong Kong	2,433.1	15.60	19.40
Neth. Antilles	460.7	8.71	Rep. of Korea	1,105.1	7.00	63.70
Hong Kong	414.1	8.15	Yugoslavia	1,068.2	6.90	18.20
India	368.4	6.96	Mexico	904.5	5.80	16.90
Chile	359.7	6.80	Venezuela	818.6	5.20	4.30
Zambia	309.3	5.85	Brazil	685.4	4.40	23.00
Algeria	291.3	5.51	India	678.7	4.30	6.30
Zaire	213.1	4.04	Zambia	575.0	3.70	6.40
Malaysia	209.6	3.96	Malaysia	536.1	3.40	9.90
Yugoslavia	200.6	3.79	Singapore	525.1	3.40	26.80
Mexico	189.5	3.58	Chile	490.5	3.10	3.20
Trinidad + Tobago	161.0	3.04	Neth. Antilles	475.0	3.00	0.30
Peru	121.2	2.29	Zaire	429.8	2.70	7.30
Bahrain	112.3	2.12	Saudi Arabia	330.5	2.10	20.60
Iran	110.9	2.09	Trinidad + Tobago	307.1	2.00	6.70
Argentina	102.5	1.93	Iran	305.7	2.00	10.70

TABLE 18.-- (Continued)

1962			1972			Annual average percentage increase 1962-1972
Exporting country or territory	($ m.)	% of total	Exporting country or territory	($ m.)	% of total	
Brazil	86.7	1.64	Argentina	301.4	1.90	11.40
Philippines	70.1	1.32	Israel	301.4	1.90	18.50
Morocco	65.6	1.24	Bahamas	261.1	1.70	76.30
Total 19 LDCs	4,400.3	83.22	Total 19 LDCs	12,532.3	80.10	12.50
Rest of LDCs	887.3	16.78	Rest of LDCs	3,094.7	19.90	8.50
Total LDCs	5,287.6	100.00	Total LDCs	15,627.0	100.00	11.40

Source: UNCTAD, Trade in Manufactures of Developing Countries and Territories - 1973 review, New York: United Nations, 1975.

TABLE 19.--Major trade flows between developing countries and 21 DMECs in 1972

Export group	Major exporting countries			Remaining countries
	Name	No.	% of total	% of total
Clothing	Hong Kong, Korea, Yugoslavia, Israel, Singapore, Philippines, India	7	90.87	9.13
Engineering products (excl. road vehicles)	Hong Kong, Mexico, Singapore, Yugoslavia, Korea	5	85.35	14.65
Textiles	India, Hong Kong, Iran, Pakistan, Korea, Brazil, Yugoslavia	7	85.43	14.57
Food products	Brazil, Argentina, Israel, Yugoslavia, Morocco, Ivory Coast, Mexico, Philippines, Korea, Ghana, Malaysia, Paraguay	12	77.30	22.70
Misc. light manufactures	Hong Kong, Korea, Mexico, Israel, Singapore, Yugoslavia, India, Lebanon	8	89.90	10.10
Wood products and furniture	Malaysia, Korea, Yugoslavia, Brazil, Philippines, Singapore, Mexico, Ivory Coast	8	78.48	21.52
Leather and footwear	India, Brazil, Argentina, Hong Kong, Korea, Yugoslavia, Pakistan	7	82.42	17.58

TABLE 19.--(Continued)

Export group	Major exporting countries			Remaining countries
	Name	No.	% of total	% of total
Chemicals	Mexico, Yugoslavia, Brazil, Israel, Bahamas, Argentina, Trinidad and Tobago, Tunisia, India, Korea, Indonesia, Bermuda, Neth. Antilles	13	72.93	27.07
Iron and steel	New Caledonia, Yugoslavia, Korea, Mexico, Brazil, Dominican Republic	6	87.93	12.07
Worked non-ferrous metals	Ghana, Yugoslavia, Cameroon, Surinam, Bahrain	5	90.91	9.09
Drink and tobacco products	Jamaica, Algeria, Mexico, Yugoslavia, Cuba, Bahamas	6	53.85	46.15
Non-metallic mineral products	Mexico, Yugoslavia, Bahamas, Hong Kong	4	74.23	25.77
Pulp, paper and board	Brazil, Yugoslavia, Mexico, Morocco, Hong Kong	5	87.95	22.05
Road motor vehicles	Mexico, Yugoslavia, Brazil	3	89.10	10.90
Rubber products	Israel, Yugoslavia, Korea, Malaysia	4	81.58	18.42

Source: Same as for Table 18.

Even if this trade strategy could be successfully implemented, its impact on employment and consumption may not be socially acceptable to some governments in the AAS. To produce manufactures of the quality level demanded in industrialized countries, it would be necessary to use technologies that are more capital-intensive than they ought to be given the relative factor endowments of the AAS countries.

The technologies needed to produce manufactures for the European market are likely to be more capital-intensive than the technologies needed to produce similar goods of a lower quality for local consumption or intra-regional trade. A trade strategy based on export expansion to industrialized countries would generate relatively little employment, and thus be ill-suited to development plans which place particular emphasis on employment creation.[1] Furthermore, policies designed to implement this trade strategy may constrain the production of consumer goods of the price and quality which suit the economic level and tastes of the local population. Thus, while this trade strategy might be favorable to economic growth, it would not favor employment generation and an adequate production of consumer goods for the local population.

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[1]Concerning the relationship between choice of technology, product quality and employment, see A.S. Bhalla, Ed. (1).

Evaluation of a trade strategy based on intra-African trade

A second trade strategy for AAS countries would be to expand intra-regional trade within Africa. Policy measures required for the promotion of this strategy are described below.[1]

African countries tend to levy high duties on imports, particularly imports of consumer goods, from neighboring countries. Exceptions exist only among the few countries which are associated in customs unions. Indeed, as a result of the reverse preferences granted by AAS countries to the EEC, duties and/or quotas imposed on EEC imports are often much lower than those imposed on imports from the majority of African countries. Expansion of intra-regional trade requires that these barriers be removed or lowered. This could be done through the creation of free trade areas and/or customs unions. If such measures were not politically feasible, bilateral and multilateral agreements could be established to lower tariffs on imports from African countries while maintaining higher tariffs on imports from non-African countries.

The lack of convertibility of many African currencies may impose a severe constraint on the expansion of their mutual trade. If countries must pay convertible currencies

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[1]For a detailed description of measures which may be adopted by AAS countries in order to promote regional trade, see UNCTAD (2).

for their imports from one another, the volume of trade will be constrained by their over-all foreign exchange earnings. To avoid this restriction on trade, governments could enter into bilateral clearing agreements and/or agree to create a payment union. Bilateral clearing agreements have been used in the past by a number of developing countries, and have been partially successful in promoting mutual trade. However, for trade expansion to take place among all African countries, a very large number of such agreements would be needed. It is therefore doubtful that this approach would be successful in the long run. An alternative approach would be the creation of a payment union among African countries. A union would present fewer problems and be more manageable administratively. The problems raised by possible trade surpluses and deficits could be solved by establishing rules which set limits on these deficits and surpluses.

Two additional factors which may hamper the expansion of trade among African countries are the lack of efficient marketing channels and adequate transport facilities. The expansion of marketing channels cannot be achieved overnight, and, in the short run, trade among African countries may be constrained by the lack of such channels. Thus, an urgent task for African governments would be to set up marketing organizations to seek outlets in African countries, organize trade fairs, establish contacts between producers and importers, and facilitate administrative matters. Creation of intra-African marketing channels is especially urgent in African countries where existing channels are dominated by foreign firms concerned solely with the expansion of trade with their home countries.

Lack of transport facilities constitutes a severe contraint to intra-regional trade expansion for landlocked countries. Expansion of these facilities would become a profitable investment once the volume of trade among African countries has reached a sufficiently high level. In the meantime, African governments would need to take an active role in the development of transport facilities for intra-regional trade (e.g., creation of new shipping companies, expansion of the rail and road networks). Agreements would need to be reached among African countries for the allocation of the costs of transport facilities, with preferential treatment extended to small landlocked countries which may not be able to finance large transport infrastructure projects.

The chances for an intra-African trade strategy to succeed are probably better than those associated with the previous trade strategy. First, the technological basis needed for an intra-African strategy already exists to a large extent. African countries usually have the capacity to produce low-quality, low-priced consumer goods. Large numbers of small, cottage-type industries already produce for local consumption and for export to neighboring countries. Governments need only to re-organize the small-scale industry sector, improve the technical efficiency of small producers, and provide financial help to small investors. Second, this trade strategy does not require large amounts of foreign exchange. For many small-scale industries, little equipment needs to be imported, or simple types of equipment could be produced locally. Another alternative would be to import low-priced second-hand equipment from industrialized countries, and thereby minimize foreign exchange costs.[1] Third, a number of trade agreements already exist among African countries and, in general, there should be no major obstacle to expanding them. The only opposition would probably come from very small and poor countries which fear that a process of economic "polarization" would take place, favoring producers in the large African countries, and slowing down their own industrial expansion. The establishment of a payment union and the development of adequate marketing channels and transport facilities may, on the other hand, encounter major difficulties. Political will may be lacking, and financial constraints could limit investment in transport projects.

Despite the above shortcomings, chances for a substantial expansion of intra-African trade should be fairly good. As shown in previous chapters, trade in consumer goods is already relatively intense among African countries. In particular, AAS exports of Group 1, 5, 7 and 8 commodities

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[1]For example, see C. Cooper and R. Kaplinski (3).

tend to be directed primarily toward African countries (see chapter III). Moreover, trade within Africa does not constitute an isolated example of high intra-regional trade intensity. As shown in the last section of chapter IV, trade within the various developing regions tends to be much more intense than inter-regional trade. An outstanding example of successful economic integration among developing countries is provided by the Central American Common Market.[1] African countries could learn from this example in order to achieve a similar level of success.

A final argument for the expansion of intra-African trade is that the tariff preferences granted to the AAS have lost some of their value since the EEC established its GSP scheme. It is suspected that a small number of the countries included in the GSP scheme (in particular those listed in Tables 18 and 19) will become or remain the major LDC exporters to the EEC.

An intra-African trade strategy may appeal to AAS governments concerned about employment and the consumption needs of their populations. The technologies needed for the production of low-price, low-quality manufactures are, in general, relatively labor-intensive. They should thus favor employment generation and lead to an improvement of the current income distribution. Furthermore, the price and the type of commodities produced should be well suited to the consumption needs of the local population and the

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[1]See W.T. Wilford (4)

populations in neighboring countries.

One potential drawback of this strategy is that its over-all impact on economic growth might be lower than that of the first trade strategy. The choice between the two strategies involves, in part, a choice between two different development patterns: a development pattern focussed on employment generation and the satisfaction of the basic needs of low-income groups, or a development pattern focussed on maximization of over-all economic growth with less concern for employment generation and improvement of income distribution.

In choosing between these two strategies, AAS governments would need to consider their respective chances of success and their socio-economic impacts. Some relatively developped AAS countries, such as Cameroon, Ivory Coast, and Senegal, may opt for a mixed strategy since their manufacturing sectors are fairly dynamic and they may be able to specialize successfully in the production of certain commodities (e.g., tropical food products, wood manufactures) for export to industrialized countries. On the other hand, small and relatively poor AAS countries may find it more advantageous to adopt a strategy emphasizing intra-regional trade.

Detailed investigation of a country's economy would be needed in order to make meaningful recommendations regarding the trade strategy, or mix of trade strategies, which should be adopted. Although the analyses undertaken in the present study do not permit specific recommendations regarding individual AAS countries, they do suggest that, for the vast majority of these countries, it would be inappropriate to place major reliance on tariff preferences granted by the EEC and other industrialized countries as a basis for the planning of industrial growth and economic development.

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CHAPTER VI

SUMMARY AND CONCLUSIONS

1. Summary of findings

This study was designed to meet two main objectives. The first objective was to determine whether the AAS responded positively to EEC tariff preferences during the 1962-1969 period. The second objective was to identify the main variables which determine the geographical intensity of AAS manufactured exports.

A number of time series analyses were undertaken in order to evaluate the AAS response to EEC tariff preferences. These analyses were conducted at various degrees of commodity aggregation, from total manufactured exports to commodities at the 5-digit level of the CST Commodity Classification. In general, the analyses indicated a failure of the AAS to respond to EEC preferences by expanding manufactured exports to EEC countries at a higher rate than would have prevailed in the absence of such preferences.

The lack of AAS response applied to over-all exports as well as to manufactured exports. With respect to individual manufactured commodities, the analyses indicated a positive AAS response for only a small fraction of the total number of commodities investigated. Most cases of positive response involved raw materials-intensive semi-manufactures rather than consumer goods. Moreover, newly produced consumer goods (i.e., goods first produced after the granting of EEC preferences) were exported primarily to developing countries in Africa.

The analyses showed that the lack of AAS response could not be attributed to a low growth rate of AAS exports, or to a lack of price competitiveness on EEC markets. It was also shown that, for most manufactured commodities, the AAS held a substantial preferential margin, and the lack of response could not therefore be attributed to low EEC tariffs. Indeed, the lack of response was more pronounced for heavily protected consumer goods than for semi-manufactures which are subject to a lower level of protection.

Although it was outside the scope of this study to evaluate the factors responsible for the lack of AAS response, three hypotheses were considered. First, the AAS may lack the technological level and managerial skills needed to produce and successfully market manufactured goods of the type and quality demanded in EEC markets. Second, the AAS may have failed to attract foreign investors who could have provided advanced technology, managerial skills and extensive marketing channels. Third, product differentiation may be more important than price differentiation as an explanation of export competitiveness. Thus, the additional competitiveness afforded by tariff preferences would fail to have the expected positive impact.

A further explanation for the lack of AAS response can be derived from the Linder similarity of preferences theory. This theory implies that tariff preferences should have a limited impact on the expansion of exports between countries with highly dissimilar structures. In order to test the validity of this proposition, a trade model based on the Linder theory was developed and applied to AAS exports to 140 countries. This analysis showed that the geographical intensity of AAS exports - as expressed by average propensity to import (API) - was negatively correlated with the absolute difference of per capita income ($|\Delta PCI|$) and the distance (in miles) between the exporting and importing countries. It was also shown that API was positively correlated with the independent variable "language" (L). As implied by Linder, the model applied better to consumer goods than to semi-manufactures. Furthermore, as already demonstrated in the evaluation of the AAS response, the independent variable "tariff preferences" (P) was shown to be non-significant. Thus, findings from the cross-sectional analysis supported those of the longitudinal analyses.

On the basis of the above findings, two contrasting trade strategies for the AAS were examined: a trade strategy based on an expansion of manufactured exports to industrialized countries, and a strategy based on an expansion of intra-regional trade. It was argued that, given the characteristics of the AAS, the latter strategy would have more chance to succeed than would the former strategy.

2. Potential impact of current General System of Preferences (GSP) schemes on manufactured exports from developing countries

It is difficult to draw general conclusions on the basis of the findings of this study with respect to the potential impact of current General System of Preferences (GSP) schemes on the exports of manufactures from developing countries.

Conditions characterizing the AAS-EEC trade arrangement differ from those prevailing under the GSP schemes in two contrasting ways. The majority of the countries included in the GSP schemes are at a much higher level of development than the AAS countries (most of which are included in the U.N. list of least developed countries). More developed LDCs, in contrast to the AAS, may possess a technological level and managerial skills which will enable them to expand their manufactured exports so as to take advantage of the GSP schemes. On the other hand, two aspects of these schemes make them less favorable than the EEC-AAS trade arrangement. First, tariff preferences granted by the EEC to the AAS are less restrictive than the GSP schemes with respect to commodity coverage. Second, AAS exports to the EEC are not subject to various quotas as are beneficiary LDCs' exports under the GSP schemes. Furthermore, during the 1962-1969 period, the AAS was the only group of developing countries to enjoy tariff preferences from the EEC. Thus, these preferences should have given rise to greater trade diversion from other developing countries, in favor of the AAS, than would be the case under current GSP schemes which apply to nearly all developing countries.

No general prediction can be made regarding the impact of the GSP schemes on the basis of the findings of this study. It may only be suggested that these schemes are not likely to benefit countries at the same general level of development as the AAS (e.g., Latin American countries such as Guatemala, or Asian countries such as Bangla Desh). It also seems probable that the approximately 20 developing countries which are major exporters of manufactures to industrialized countries (see chapter V) will be the main beneficiaries of the GSP schemes.

It should be noted, however, that even these countries should not be overly dependent on the GSP schemes as a basis for expanding their industrial sector. It is possible that these schemes will be maintained in their present form only as long as the economic growth of the preference-granting countries is not on the decline. Otherwise, protectionist forces may lead governments to introduce more restrictive schemes than is currently the case. These forces are already having an effect in a number of industrialized countries. France, for example, has decided to set curbs on imports of textile products in order to protect its textile industry. On June 20, 1977, the French Foreign Trade Minister invoked article 19 of the General Agreement on Tariffs and Trade (GATT) in order to limit certain imports, and thereby maintain the current employment level in the textile industry. Import limitations would apply mainly to products such as men's shirts, women's blouses, T-shirts, and cotton thread which are imported largely from developing countries. It was stated that France would have recourse to special provisions in the preferential agreements granted to countries associated with the EEC in order to limit imports from these countries.[1] If similar measures were to be applied by other industrialized countries, the potential effectiveness of the existing GSP schemes could be greatly reduced. It therefore seems important for developing countries to follow a cautious trade strategy which gives as much importance to regional trade as to trade with industrialized countries.

[1] The above measures were reported in the June 21, 1977 issue of the International Herald Tribune.

APPENDIX

TABLE A-1.-- Manufactured commodities exported by each AAS country, 1962 - 1969

Year at which exports started

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
011.10	2	Bovine meat	62	62	62	62			62	62	62	62		62	62	62
011.20	2	Frozen meat of sheeps + goats			62	62					62					
011.40	2	Frozen poultry		62	62	62						62		62	62	
011.50	2	Frozen horse meat			62						62					
011.60	2	Edible offals, other than poultry			62	62					62	62		67		
012.10	2	Salted, smoked porc	67	62	62	62				62		62		62	62	62
012.90	2	Other dried meat, n.e.s.	67	62	62	62	62			62	62	62		62		62
013.30	2	Extract of meat juices				62										
013.40	2	Meat sausage	62		62	62						62				
013.80	2	Other meat preparations	62	62	62	62	67		62	67		62				62
022.10	2	Concentrated milk	62	62	62	62	62		67			62		62	62	
022.30	2	Milk and milk cream, fresh	62	62	62											
023.00	2	Butter	62	62	62	62			62		62	62		62	62	62
024.00	2	Cheese	62	62	62	62			62			62		62		
031.10	2	Frozen fish	62	62	62	62	62			62	62	62	62	62	62	62
031.20	2	Salted, dried fish	62	62	62	62	62	62		62	62	62	62	62	62	62
031.30	2	Simply prepared crustaceans	62	62	62	62	62	67		62		62	62			
032.01	2	Canned fish	62	62	62	62	62	67		62	62	62	62			
032.02	2	Canned crustaceans		62	67	62						62				
042.20	2	Milled rice	62	62	62	62	62		67	62	62			62	62	62
046.01	2	Wheat flour	62	62	62	62	62		67	62		62			62	62
047.01	1	Cereal flours (other th.w.)	62	62	62											
047.02	2	Semolina		62												

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
048.30	2	Noodles, spaghetti	62	62	62	67	62			67		62				62
048.41	2	Bakery goods, bread	62	62	62	67						62				
048.42	2	Pastry	62	62	62	62				62		62			62	
048.82	2	Dietary prep. of flour	62	62	62	62										
052.01	2	Dried bananas, dattes	62	62											62	
052.03	2	Raisins (dried)	62	62												
053.31	2	Marmelades, with sugar	62		62	62						62			62	
053.32	2	Marmelades, without sugar	67													
053.50	2	Veg. and fruit juices	62	62	62	67						62		62	62	
053.62	2	Frozen fruits with sugar	67									62				
053.90	2	Prepared + preserved fruits,n.e.s	62	62		62						62				
054.20	2	Dried vegetables		62	62	62	62			62	62			62	62	62
054.44	2	Flour of manioc	62													
054.61	2	Frozen vegetables		62	62											
055.42	2	Flour of fruits	62				62									
055.44	2	Flour, semolina of manioc	62	62	62	62	62		62	62						62
055.45	2	Tapioca			67	62	62									
055.51	2	Vegetables prep. with vinegar		62	67	62				62		62				
055.52	2	Vegetables prep. without vin.	62	62	62	62	62			62	62	62		67	62	62
061.10	2	Raw sugar, of beets and cane				62	62					62				
061.20	2	Other sugars, of beets + cane	62	62		62						62		62	62	
061.50	2	Molasses, even decolorized				62						67				
061.90	2	Other sugars, sirups	62	62	67									62	62	
062.01	2	Sugar confect., without cocoa	62	62	67	62				62	67	62		67	62	62
062.02	2	Aromatic sugars, sirups		62	67	67			67	62		62				

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
071.19	2	Other coffees + coffee subst.	62	62	62	62		62	62	62	62	62				
071.30	2	Coffee extracts	62	62		62										
072.20	1	Cocoa powder without sugar	62					62								
072.31	1	Cocoa paste	62		62											
072.32	1	Cocoa butter, oil, fat	62	62	62											
073.00	2	Chocolate and cocoa prep.	62	62	67	62					62	62				
081.20	1	Bran + other similar residues	62	62	67	62						62				
081.30	1	Oil-cake and similar residues	62	62	62	62			62	62	62	62		62	62	62
081.40	1	Meat and fish powder		62		62			67							
081.99	1	Prep. food for animals, n.e.s.	62			62										
099.04	2	Sauces, seasoning	62	62		67								62	62	62
099.05	2	Soups, meat-stock	67		67							62				
099.06	2	Natural and artificial yeast.	67	62	62	62						62			67	
099.07	2	Vinegar	62	62	62											
099.09	2	Culinary prep. n.e.s.	67	62	67	62				62		62				
111.01	2	Mineral water	62	62	62	62			67	62		62			62	
111.02	2	Lemonades, soft drinks	62	62	62	62			67	62		67			62	62
112.12	2	Wine	62	62	62	62	62			62		62			62	
112.13	2	Vermouth		62						67						
112.30	2	Beer	62	62	62	62	62		67	62		62			62	62
112.40	2	Spirits	62	62	62	62	62			62					62	62
122.10	2	Cigars	67							67				67		
122.20	2	Cigarettes	62	62	62	62				62	62	67		62	62	62
122.30	2	Other manufactured tobacco	62	62	67	62						62		62	62	
211.10	1	Bovine skins	62	62	62	62	67		62	62	62	62		62	62	62

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
211.20	1	Raw calf skins							62		62			62		
211.40	1	Goat skins	62	62	62				62	67	62			62	62	62
211.70	1	Sheep skins without wool	62	62	62	62			62	62	62			62	62	62
211.90	1	Raw skins of other animals			62			62				62				
221.12	1	Groundnuts, shelled	62	62		62	62	62	62	62	62	62		62	62	62
221.60	1	Cotton seeds	62	62	62	62	62		62	62				62	62	62
221.90	1	Flour of seeds or oleag.fruit	62	62			62			62	62			62	62	
231.30	1	Regenerated rubber	67													
241.20	2	Charcoal	62		62		67							62		
242.32	1	Non-coniferous wood, r.squar.	62	67	62	62		62				62			62	
243.10	1	Railway-sleepers	62		62	62		62								
243.31	1	Non-coniferous wood, sawn	62	62	62	62	67	62	62	62		62			62	
243.32	1	Non-coniferous wood, planned	62	62	62	62				62					62	
262.10	1	Sheep's wool, fleece-washed				62				67				62		
263.10	1	Not carded cotton	62	62	62	62	62		62	62	62	62		62	62	62
263.20	1	Cotton linters				62	62		62		62	62				
263.40	1	Combed cotton	62	62												
273.40	2	Gravel	62	62		67	62			62						
276.30	2	Common salt	62	62												
291.11	1	Bones and horncores	62	62	62										62	
291.12	1	Hornes, antlers, hooves	62	62	62	62					62					
291.94	1	Fish waste											62			
411.10	1	Fish fat and oil	62	62												
421.20	1	Soya-bean oil	62													
421.30	1	Cotton seed oil	62		62									62	62	

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
421.40	1	Peanut oil	62	62	67	62	62					62		62	62	62
421.50	1	Olive oil	62													
422.10	1	Linseed oil	62	62	62											
422.20	1	Palm oil	62		62		62	62		62		62				62
422.30	1	Coconut oil	62	62		62				62						
422.40	1	Palmetto oil	62		62					62		62				
422.90	1	Fixed vegetable oils, n.e.s.	62	62	62	62								62	62	62
431.10	2	Modified veg. or animals oils		62												
431.31	2	Industrial oil	62													
431.42	2	Bee wax	62	62		62								67	62	
512.26	1	Glycerin	62													
513.11	2	Oxygen	62	62		67				62						
513.33	2	Sulfuric acid		62												
513.61	2	Ammonia	62	62		62										
513.62	2	Caustic soda		62												
514.33	2	Silicates		62												
514.91	2	Liquid air		62												
533.10	2	Other coloring materials	62	62												
533.31	2	Pigments, for ceramic, glass		62												
533.32	2	Varnishes, paints	62	62	62	62			67			62			62	
541.63	2	Vaccins, animal serums	62	62		62									62	
541.70	2	Medecines for men + animals	62	62		62	62					62			62	
541.91	2	Wadding, gauze, bandages	62	62					62			62				
541.99	2	Other pharmaceutical prep.	67	62		67										
551.10	1	Essential oils	62	62	67	62				62				67		

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
551.23	1	Fragrant mixtures	67		67					62		62			62	
551.24	2	Aromatic distilled water		62												
553.00	2	Perfumes and cosmetics	62	62	62	62	62			62	62	62			62	67
554.10	2	Soap	62	62	62	62	62		67	62		67		62	62	
554.20	2	Detergents	62	62		62						62				
554.30	2	Polishes + creams for shoes	62			62										
561.10	1	Nitrogenous fertilizers		62		67										
561.21	1	Basic slag.		62												
561.29	1	Other phosphatic fertilizers				67										
561.90	1	Fertilizers, n.e.s.		62												
599.20	2	Insecticides, disinfectants	62	62	62	62	62									
599.51	2	Starch				62	62					62				
599.59	2	Glue	62	62	62	62		62				62				
599.78	2	Prep. for fire extinguishers		62												
611.30	1	Calf-leather		62							62			62		
611.40	1	Leather of other bovines		62	62	62					62			62	62	67
611.91	1	Prepared sheep skin		62		62					62				62	62
611.92	1	Prepared goat skin			62						62				62	62
611.99	1	Prepared skins of oth.animals		62	62	62			62		62			62	62	62
612.20	2	Harnessing articles	67													
612.30	2	Parts of shoes	67	62	62	67				67					67	62
612.90	2	Other leather articles	67		62	62									67	62
621.01	1	Rubber sheets, non vulcanised	62		62											
621.02	1	Other rubber shapes	62		67											
621.04	1	Rubber sheets, non-hardened	62		62											

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
621.06	1	Hardened rubber	62													
629.10	2	Pneumatic tyre, inner tube	62		62									67	62	
629.40	2	Fan belt	62		62											
629.98	2	Oth.rubber art., vulc.,hard.			62											
631.10	1	Veneer, 5mm or less	62		62			62				62			62	
631.21	1	Plywood	62	62	62			62				62				
631.22	1	Wood pannels	62		67							62				
631.42	1	Artificial wood	62	62	62											
631.82	1	Wood for cooperage	62		62											
631.83	1	Hop-pole, pegs, stake posts	62		62											
631.84	1	Wooden sticks for tool handles	62													
631.85	1	Wood prep. for matches	62													
631.86	1	Wood wool and wood flour	62													
632.10	2	Wooden boxes, crates	62	62	62	67	62		62	67		62		62	62	
632.20	2	Cooper's articles, of wood	62	62	62											
632.40	2	Builders' carpentry and joinery	62	62	62	62		67		67	62	67		62	62	62
632.71	2	Wooden picture frames	62			67										
632.73	2	Articles of furniture, wood	62	62	62	62	62	67	62	62		62		62	62	62
632.89	2	Other articles of wood,n.e.s.	62	62	62	62	62	62	67	62		62		62	62	62
641.21	2	Machine-made printing paper		62												
641.30	2	Kraft paper and paperboard		62												
641.60	2	Fibre building board		62		62										
641.70	2	Hand-made paper + paperboard		62		62										
641.91	2	Parchment or grease proof pap.		62		67										
641.94	2	Paper + paperboard,ruled,lined		62		62										

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
641.95	2	Paper, impregnated, coated		62		62										
642.11	2	Boxes,bags, of paper + paperb.	62	62		62	62					62				
642.20	2	Stationery articles	62	62		62						62				
642.30	2	Registers,note books,blocks	62	62			62					62				
642.92	2	Carbon + other copying papers	62	62		62										
642.93	2	Other cut papers, for sp.usage	62	62		62						62				
642.99	2	Other articles of paper	62	62		62										
651.14	1	Silk yarn, for retail	62	62												
651.21	2	Yarn of carded wool, for ret.	62													
651.25	2	Yarn of wool, hair for retail	62	62	62									62		
651.41	2	Cotton yarn, not for retail	62	62	67				67	62		67		67	62	62
651.42	2	Cotton yarn, for retail	62	62	67	62			67	62	62				62	62
651.51	1	Flax or ramie yarn, not f.ret.		62												
651.52	1	Flax or ramie yarn, for retail		62												
651.63	1	Yarn of synthetic contin.fib.	67	62	67											
651.93	2	Yarn of other vegetable fibers	62	62												
652.13	2	Other cotton fabrics,unbleach.	62	62	62	67	67		62	62				62	62	62
652.21	2	Cotton gauze, bleached	62											62		62
652.23	2	Cotton pile and chenille fab.	62	62		67				62		67				
652.29	2	Cotton fabrics, unbleached,n.e.s	62	62	62	62	62		62	62	62	62		62	62	62
653.21	2	Wool or fine hair fabrics		62												
653.40	2	Jute fabrics, other th.velvet		62								62		62	62	
653.51	2	Fabrics of synthetic cont.fib.		62			62		67	62						
653.52	2	Fabrics of synthetic disc.fib.		62			62			67						
653.61	1	Fabrics of contin.art.fibers		62											62	

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
653.62	2	Fabrics of disc.art.fibers		62					67	67						
653.70	2	Knitted fabr.,not elastic		62		67									62	
653.93	2	Fabrics, of horse hair												62		
653.94	2	Fabrics from oth.veg.fibers		62		67										
654.01	2	Narrow woven fabrics (bolduc)	62	62												
654.02	2	Woven labels, badges	67	62												
654.03	2	Chenille yarn, ornamental	67													
654.05	2	Tulle and other net fabrics	67	62			67			67		67				
654.06	2	Embroidery, in the piece	67	62						67						
655.10	2	Articles of felt	67	62												
655.43	2	Textile fabrics, impreg.,lam.	62	62		62	62			67						
655.46	2	Coated,impr. fabrics, n.e.s.	67			62				67						
655.50	2	Elastic fabrics + trimmings	67	62		67										
655.61	2	Twine, cordage, ropes	62	62	62	62			62			62		62	62	
655.62	2	Nets made of twine	62	62	62							62		62	62	
655.81	2	Articles of wadding	67	62												
655.82	2	Wicks of woven textile mat.	62	62												
655.83	2	Text.fabrics for machinery		62		62										
656.10	2	Text. sacks and bags	62	62	62	62	62	62	62	67	62	62	62	67	62	67
656.20	2	Sails, awnings, tents of text.	62	62	62	62	62				62			62	62	
656.61	2	Woolen blankets	62	62	62	67				62				62	62	
656.62	2	Cotton blankets	62	62	62	62						67		62	62	
656.91	2	Bed, table linen	62	62	62				67	62	62	62		62	62	
656.92	2	Made-up text. art., n.e.s.	62	62	62	62			62	67				62	62	
657.41	2	Floor coverings, paper base		62		62										

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
657.51	2	Woolen, knotted carpets		62		62										
657.60	2	Other carpets, kelim mat.	62	62		62						62		62		
657.70	2	Hand-made tapestry				62	67			62		62		67		
657.80	2	Plaiting materials	62	62		62					62			62	62	62
661.10	2	Lime	62	62	62											
661.20	2	Portland cement, even colored	62	62	62	62						67				
661.31	2	Road and paving setts	67													
661.32	2	Building + monumental stone	67	62		62										
661.83	2	Articles of asbestos-cement	62	62		62										
662.32	2	Refractory bricks	62	62			62									
662.41	2	Building bricks	62							62	67					
662.43	2	Ceramic piping	62		62											
662.44	2	Unglazed ceramic setts	62	62	62	62	62			62	67	67			62	
662.45	2	Other ceramic setts	62	62	62	62	62		67	62		62				
663.11	2	Millstones,grindstones		62		62										
663.62	2	Articles of cement, concrete		62	62											
663.40	2	Articles of mica				62										
665.11	2	Bottles, jars, of glass				67										
673.61	2	Iron and steel bars		67												
673.62	2	Iron or steel sections		67												
674.92	2	Iron and steel sheets		67		62						62				
676.31	2	Parts of railway tracks		67												
679.40	2	Castings of iron, steel	62	67		62			67			62				
682.12	1	Refined copper		62		62										
682.13	1	Master alloys, of copper		62												

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)] 1	2	3	4	5	6	7	8	9	10	11	12	13	14
682.21	1	Bars, sections, of copper		62		62										
682.22	1	Copper sheets, over .15mm				62										
682.25	1	Tubes, piping, of copper		62												
684.10	1	Aluminium unwrought			62											
684.22	1	Aluminium sheets (+ .15mm)		62												
684.23	1	Aluminium sheets (- .15mm)		62												
691.10	2	Structures of iron and steel	62	62	62	62		62	67	62		62		62	62	62
691.20	2	Structures of aluminium	62	62	62			62								
692.11	2	Containers, of iron or steel	62	62	62	62		67	62	62		62			62	
692.12	2	Containers, of copper (3001)	62		62	62										
692.13	2	Containers, of aluminium,(3001)	62		62											
692.21	2	Drums, of iron, steel	62	62	62	62		62		62		62		62	62	
692.22	2	Drums, cans of aluminium	62									62				
693.31	2	Netting,fencing, of iron,steel	62		62							62		62		
692.31	2	Containers for compr. gaz	62	62	62	62		62		62					62	
693.20	2	Barbed iron or steel wire	62													
693.41	2	One piece netting, of iron,st.	62													
694.11	2	Nails,tacks,staples,iron,steel	62	62				62		62						
694.12	2	Nails,tacks,staples,cooper	67		62											
695.10	2	Hand tools, for agr.,forestry	62	62												
695.22	2	Wrenches and spanners	62	62	62											
695.23	2	Other hand tools	62	62	62										67	
695.24	2	Interchangeable tools	62	62	62										67	
697.11	2	Non electr.stoves of iron	62													
697.21	2	Household art. of iron/steel,nes	62	62	62		62	67				62		62	62	62

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
697.22	2	Household articles, of copper	67												62	
697.23	2	Household articles, aluminium	62	62	62				67						62	62
698.11	2	Locks and padlocks	62		62											
698.92	2	Articles of copper, n.e.s.	62		62											
698.94	2	Articles of aluminium, n.e.s.	62		62											
698.96	2	Articles of lead, n.e.s.	62													
724.20	2	Radios	62		62	62				62	62			62		
731.61	2	Service railway vehicles	62	62												
731.62	2	Railway goods vans, wagons	62													
731.63	2	Containers	62	62	62	62		62	62			62		62		
731.70	2	Parts of locomotives,n.e.s.	62	62												
732.10	2	Private cars	62	62	62	62				66						
732.20	2	Public passenger vehicles	62		62											
732.30	2	Motor vehicles for transport	62	62	62											
732.40	2	Special vehicles	62	62												
732.70	2	Chassis for motor vehicles		62												
732.81	2	Vehicle bodies	62	62												
732.89	2	Parts of motor vehicles	62	62	62	62				66						
732.91	2	Motorcycles	62	62	62				67						62	
733.11	2	Cycles, not motorized	62		62									67	62	
733.12	2	Parts of cycles	62	62	62				67	68				62	62	
733.32	2	Other trailers	62	62												
735.30	2	Boats for inland navigation	62	62	62			62								
735.93	2	Floating structures	67	62				62								
812.20	2	Sinks, wash basins, etc.		67												

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
821.01	2	Chairs and other seats	62	62	62	62		62	67	62	62				62	
821.02	2	Medical furniture	62	62	62											
821.03	2	Articles of bedding, wood	62	62	62	62									62	
821.09	2	Other furnitures, n.e.s.	62	62	62	62	62	62	62	62	62	62		62	62	62
831.00	2	Travel goods	62	67	62	62	67		62	62	62	62		62	62	62
841.11	2	Outer garments,men's + boys'	62	62	62	62	62	62	62	62	62	62		62	62	62
841.12	2	Outer garments,women's + girls'	62	62	62	62	62	62		67	62	67		62		
841.13	2	Under garments, men's + boys'	62	62	62	62	62	62	67	62	62	62		62	62	67
841.14	2	Under garments, women's	62	62	62	62						67				
841.22	2	Shawls, scarves, veils	67	62	62	67	62			62		62			62	
841.25	2	Corsets, brassieres	67	67							62					
841.26	2	Gloves, stockings, socks										62		67		
841.29	2	Accessories for apparel,n.e.s.		62	62				67							
841.30	2	Leather clothing	62	62		62		62								
841.42	2	Stockings, not elastic		62	62	62	67									
841.43	2	Under garments, knitted,n.e.	62	62	62	62	62			62		62			62	67
841.44	2	Outer garments, knitted,n.e.	62	62	62	62	67	67		62	62	62			62	
841.52	2	Hats of plaited material		62		62								62		
841.53	2	Hats and other headgear	62	62	62	62				62				67	62	
841.59	2	Other headgear	62	62	62	62		62			62			67		
841.60	2	Rubber gloves	62	62	62											
851.01	2	Rubber shoes	62	62	62	62	62		67	62		62		67	62	
851.02	2	Shoes with rubber outer soles	62	62	62	62			62	62	62	62			62	62
851.04	2	Shoes with soles of other mat.	67	62		62										
892.11	2	Books, printed material	62													

TABLE A-1.-- (Continued)

CST Code	Class[a)]	Description	AAS countries[b)]													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
892.20	2	Newspapers and magazines	62													
893.00	2	Articles made of plastic,n.e.s	62	62	62	62	62		67			62				62
894.22	2	Dolls		62												
895.92	2	Slates and boards		62												
896.01	2	Paintings (Hand made)	62	62			62					62				
896.03	2	Statuary, sculptures	62				62	62		62	62	62		62	62	
897.11	2	Articles of jewellery,of prec.mat.									62				62	
897.12	2	Gold or silver jewellery	67			62	62									
897.20	2	Imitation jewellery	62	62		62	62					62				
899.13	2	Articles of ivory	62		62			62	62		62					
899.21	2	Plaits, Braids			67	62					62			62		
899.24	2	Other brooms and brushes	62	62	62							62				
899.27	2	Hand sieves	62	62												
899.31	2	Candles	62	62												
899.32	2	Matches	62	62			62			62		62			62	
899.41	2	Umbrellas and sunshades			67											
899.96	2	Fans and hand screens												62	62	

a) Class 1 refers to semi-finished commodities while
Class 2 refers to finished commodities.

TABLE A-1.-- (Continued)

b) Key for country designation:

1 = Ivory Coast	8 = Dahomey
2 = Senegal	9 = Tchad
3 = Cameroon	10 = Congo
4 = Madagascar	11 = Mauretania
5 = Togo	12 = Mali
6 = Gabon	13 = Upper Volta
7 = Central African Republic	14 = Niger

Source: Statistical Office of the European Communities, <u>Foreign Trade–Associates–Yearbook 1959 - 1966</u>, Brussels: Statistical Office of the European Communities, 1969 (one volume for each of the 14 AAS countries), and <u>Foreign Trade–Associates–Yearbook 1967 - 1969</u>, 1970, (Volume I and Volume II).

TABLE A-2a.-- Value of AAS export of individual groups of commodities to individual groups of countries, 1962 - 1969

($ 1,000)

Commodity Group	Destination[b]	1962	1963	1964	1965	1966	1967	1968	1969
TOTAL	1	296,835	301,130	332,906	351,081	413,833	397,132	490,918	517,355
	2	36,515	35,961	41,603	48,180	54,408	63,599	88,502	97,786
	3	1,823	1,750	3,449	3,269	3,637	3,481	4,533	4,432
	4	225,004	237,238	247,958	243,262	268,660	279,075	329,333	339,451
	5	29,414	25,993	35,455	55,385	86,455	49,287	64,025	66,647
	6	4,079	188	4,441	985	573	1,690	4,525	9,039
Class 1[a]	1	230,487	236,990	259,228	273,586	327,998	296,668	355,283	370,183
	2	9,238	10,023	13,126	17,640	20,715	18,314	20,210	20,886
	3	407	1,324	3,018	2,397	2,391	1,309	2,273	2,036
	4	196,431	204,980	211,352	208,151	227,607	234,180	277,167	288,035
	5	20,333	20,490	27,352	44,436	76,737	41,210	51,290	50,220
	6	4,078	173	4,380	962	548	1,655	4,343	9,006
Class 2[a]	1	66,348	64,140	73,678	77,495	85,835	100,464	135,635	147,172
	2	27,277	25,938	28,477	30,540	33,693	45,285	68,292	76,900
	3	1,416	426	431	872	1,346	2,172	2,260	2,396
	4	28,573	32,258	36,606	35,111	41,053	44,895	52,166	51,416
	5	9,081	5,503	8,103	10,949	9,718	8,077	12,735	16,427
	6	1	15	61	23	25	35	182	33

TABLE A-2a.-- (Continued)

Commodity Group	Destination[b)]	1962	1963	1964	1965	1966	1967	1968	1969
Group 0	1	100,175	104,994	108,921	113,020	122,165	155,546	189,731	223,544
	2	20,973	18,662	20,161	21,388	21,859	28,465	34,783	35,127
	3	1,391	1,240	519	1,146	2,011	1,641	1,618	1,458
	4	60,623	73,208	72,631	68,421	73,232	102,668	122,423	149,974
	5	17,009	11,771	15,496	21,935	25,016	22,284	26,970	28,557
	6	179	113	114	130	47	488	3,937	8,428
Group 1	1	1,669	1,732	1,997	1,665	2,406	2,016	3,649	4,471
	2	1,144	1,341	1,660	1,338	2,095	1,608	3,310	3,959
	3	0	20	20	0	0	22	48	61
	4	525	370	317	326	309	386	291	450
	5	0	1	0	1	2	0	0	1
	6	0	0	0	0	0	0	0	0
Group 2	1	102,034	103,816	116,681	118,828	146,510	120,999	138,308	133,446
	2	3,290	4,818	5,792	7,691	8,130	8,554	6,518	4,701
	3	158	108	2,189	391	417	326	1,401	1,225
	4	88,497	91,586	91,993	88,218	110,733	93,804	108,115	102,131
	5	6,222	7,283	12,416	21,676	26,797	17,141	21,711	24,921
	6	3,867	21	4,291	852	433	1,174	563	468

TABLE A-2a.-- (Continued)

Commodity Group	Destination[b)]	1962	1963	1964	1965	1966	1967	1968	1969
Group 4	1	49,115	43,902	55,150	64,209	84,456	67,992	68,066	48,009
	2	3,219	902	1,620	2,406	3,819	2,560	3,229	2,481
	3	27	24	13	75	84	12	9	12
	4	45,578	42,937	53,249	61,109	57,415	63,028	59,541	43,014
	5	291	39	268	619	23,059	2,392	5,287	2,502
	6	0	0	0	0	79	0	0	0
Group 5	1	3,643	3,503	4,406	4,810	5,405	5,490	8,927	11,573
	2	271	506	900	1,859	2,150	2,146	3,638	5,562
	3	21	21	33	55	37	43	39	31
	4	2,056	1,881	2,228	1,784	1,999	2,253	3,130	3,631
	5	1,295	1,095	1,245	1,112	1,219	1,048	2,120	2,349
	6	0	0	0	0	0	0	0	0
Group 6	1	35,006	38,138	40,659	43,131	46,412	31,949	59,347	71,274
	2	3,347	6,235	7,519	9,596	11,590	10,021	20,053	26,158
	3	171	297	608	1,498	1,178	918	1,369	1,425
	4	26,872	25,822	26,553	22,032	24,010	15,497	31,654	37,853
	5	4,583	5,738	5,974	10,004	9,620	5,488	6,251	5,702
	6	33	46	5	1	14	25	20	136

TABLE A-2a.-- (Continued)

Commodity Group	Destination[b)]	1962	1963	1964	1965	1966	1967	1968	1969
Group 7	1	1,443	3,208	2,122	2,745	2,783	3,053	4,977	5,779
	2	731	1,825	1,235	1,496	1,342	1,805	3,292	3,698
	3	2	40	45	93	7	6	15	8
	4	704	1,291	770	1,125	710	1,156	1,212	1,919
	5	6	44	41	29	724	83	457	147
	6	0	8	31	2	0	3	1	7
Group 8	1	1,088	1,783	2,947	2,645	3,635	2,847	8,068	10,351
	2	881	1,619	2,693	2,378	3,363	2,502	7,725	9,741
	3	53	0	22	11	3	5	34	96
	4	149	142	217	247	251	281	268	420
	5	5	22	15	9	18	59	37	94
	6	0	0	0	0	0	0	4	0

a) Class 1 refers to intermediate goods and semi-manufactures, and Class 2 refers to consumer goods.

b) Code for countries of destination is the following:
1 = World, 2 = Africa, 3 = "Other LDCs", 4 = EEC, 5 = "Other DMECs", and 6 = Socialist Countries.

Source: Statistical Office of the European Communities, Foreign Trade Statistics - Associates - 1959 - 1966, Brussels: EEC, 1967 and 1968 (14 volumes, one for each AAS country); and: Foreign Trade Statistics - Associates - 1967 - 1969 (Two separate volumes).

TABLE A-2b.-- AAS export of individual groups of commodities to individual groups of countries - market shares, 1962 - 1969

(Per Cent)

Commodity Group	Destination[b)]	1962	1963	1964	1965	1966	1967	1968	1969
TOTAL	2	12.30	11.94	12.50	13.72	13.15	16.01	18.03	18.90
	3	.61	.58	1.04	.93	.88	.88	.92	.86
	4	75.80	78.78	74.48	69.29	64.92	70.27	67.09	65.61
	5	9.91	8.63	10.65	15.78	20.89	12.41	13.04	12.88
	6	1.38	.07	1.33	.28	.16	.43	.92	1.75
Class 1[a)]	2	4.01	4.23	5.06	6.45	6.32	6.17	5.69	5.64
	3	.18	.56	1.16	.88	.73	.44	.64	.55
	4	85.22	86.49	81.53	76.08	69.39	78.94	78.01	77.81
	5	8.82	8.65	10.55	16.24	23.40	13.89	14.44	13.57
	6	1.77	.07	1.70	.35	.16	.56	1.22	2.43
Class 2[a)]	2	41.11	40.44	38.65	39.41	39.25	45.08	50.35	52.25
	3	2.13	.66	.58	1.13	1.57	2.16	1.67	1.63
	4	43.07	50.29	49.68	45.31	47.83	44.69	38.46	34.94
	5	13.69	8.58	11.00	14.13	11.32	8.04	9.39	11.16
	6	.00	.03	.09	.02	.03	.03	.13	.02
Group 0	2	20.94	17.77	18.51	18.92	17.89	18.30	18.33	15.71
	3	1.39	1.18	.48	1.01	1.65	1.05	.85	.65
	4	60.52	69.73	66.68	60.54	59.95	66.00	64.52	67.09
	5	16.98	11.21	14.23	19.41	20.48	14.33	14.21	12.77
	6	.17	.11	.10	.12	.03	.32	2.09	3.78

TABLE A-2b.-- (Continued)

Commodity Group	Destination[b)]	1962	1963	1964	1965	1966	1967	1968	1969
Group 1	2	68.54	77.42	83.12	80.36	87.07	79.76	90.71	88.55
	3	.00	1.15	1.00	.00	.00	1.09	1.32	1.36
	4	31.46	21.36	15.88	19.58	12.84	19.15	7.97	10.06
	5	.00	.07	.00	.06	.09	.00	.00	.03
	6	.00	.00	.00	.00	.00	.00	.00	.00
Group 2	2	3.22	4.64	4.96	6.47	5.55	7.07	4.71	3.52
	3	.15	.10	1.88	.33	.28	.27	1.01	.92
	4	86.73	88.22	78.84	74.24	75.58	77.52	78.17	76.53
	5	6.10	7.02	10.64	18.24	18.29	14.17	15.70	18.67
	6	3.80	.02	3.68	.72	.30	.97	.41	.36
Group 4	2	6.55	2.05	2.94	3.75	4.52	3.77	4.74	5.17
	3	.05	.05	.02	.12	.10	.02	.01	.02
	4	92.80	97.80	96.55	95.17	67.98	92.70	87.48	89.60
	5	.60	.10	.49	.96	27.30	3.51	7.77	5.21
	6	.00	.00	.00	.00	.10	.00	.00	.00
Group 5	2	7.44	14.44	20.43	38.65	39.78	39.09	40.75	48.06
	3	.58	.60	.75	1.14	.68	.78	.44	.27
	4	56.44	53.70	50.57	37.09	36.98	41.04	35.06	31.37
	5	35.54	31.26	28.25	23.12	22.56	19.09	23.75	20.30
	6	.00	.00	.00	.00	.00	.00	.00	.00

TABLE A-2b.-- (Continued)

Commodity Group	Destination[b)]	1962	1963	1964	1965	1966	1967	1968	1969
Group 6	2	9.56	16.35	18.49	22.25	24.97	31.37	33.79	36.70
	3	.49	.78	1.50	3.47	2.54	2.87	2.31	2.00
	4	76.76	67.71	65.31	51.08	51.73	48.51	53.34	53.11
	5	13.09	15.05	14.69	23.19	20.73	17.18	10.53	8.00
	6	.10	.11	.01	.01	.03	.07	.03	.19
Group 7	2	50.66	56.89	58.20	54.50	48.22	59.12	66.14	63.99
	3	.14	1.25	2.12	3.39	.25	.20	.30	.14
	4	48.79	40.24	36.29	40.98	25.51	37.86	24.35	33.21
	5	.41	1.37	1.93	1.06	26.02	2.72	9.18	2.54
	6	.00	.25	1.46	.07	.00	.10	.03	.12
Group 8	2	80.97	90.80	91.38	89.91	92.52	87.88	95.75	94.11
	3	4.87	.00	.75	.42	.08	.18	.42	.93
	4	13.69	7.96	7.36	9.34	6.91	9.87	3.32	4.06
	5	.47	1.24	.51	.33	.49	2.07	.46	.90
	6	.00	.00	.00	.00	.00	.00	.05	.00

a) Class 1 refers to intermediate goods and semi-manufactures, and Class 2 refers to consumer goods.

b) Code for countries of destination is the following:
2 = Africa, 3 = "Other LDCs", 4 = EEC, 5 = "Other DMECs", and 6 = Socialist Countries

Source: Estimates obtained from data provided in Table A-2a.

TABLE A-3.-- Import of manufactures and semi-manufactures by the EEC and "Other DMECs" from the AAS and "Other LDCs" (1962 - 1969)

($ 1,000)

SITC Code	Imports by: / Exports from:	1962		1963		1964		1965		1966		1967		1968		1969	
		EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"
053	AAS	3,494	0	5,122	0	6,211	38	6,927	12	8,018	110	10,155	247	9,999	243	10,127	163
	Oth.LDCs	34,385	65,624	34,704	79,703	41,147	97,716	44,301	105,958	47,344	121,515	46,182	119,514	48,348	130,655	57,292	156,244
055	AAS	1,271	19	1,412	26	1,235	21	1,192	14	1,024	25	1,289	18	1,260	16	1,281	197
	Oth.LDCs	37,760	21,907	42,068	29,596	39,012	27,985	41,691	35,536	57,341	38,906	63,275	49,458	64,112	53,323	64,390	58,407
072.3	AAS	3,980	430	4,536	1,362	4,946	965	6,553	3,830	7,209	5,354	12,773	4,591	29,616	4,179	31,065	9,486
	Oth.LDCs	3,355	28,525	3,323	29,394	4,465	28,426	3,142	24,163	5,865	35,162	14,522	38,867	16,093	50,708	23,718	50,313
243	AAS	4,183	1,795	6,046	2,240	7,031	5,533	8,027	9,480	8,736	9,701	10,438	9,327	13,124	9,416	11,877	11,370
	Oth.LDCs	52,979	102,526	62,036	110,631	71,198	126,517	70,277	127,459	72,931	131,046	70,278	125,253	88,886	151,871	119,038	165,254
431	AAS	383	25	337	29	366	11	352	20	409	8	543	47	439	1	506	17
	Oth.LDCs	4,375	12,551	4,038	13,654	3,969	13,432	4,567	12,863	3,961	12,503	3,988	12,216	4,541	12,281	5,001	12,771
512	AAS	56	0	54	11	91	17	80	7	89	16	101	47	56	47	129	3
	Oth.LDCs	12,626	16,003	17,279	25,528	16,050	35,493	15,619	39,162	18,721	53,969	22,324	63,635	26,641	63,530	36,294	66,008
551	AAS	984	2,244	1,026	2,025	1,086	2,032	1,337	2,404	1,292	2,105	1,606	2,808	1,918	4,211	2,245	3,989
	Oth.LDCs	17,460	25,252	17,661	28,208	16,139	23,013	20,015	29,745	18,059	29,218	15,678	28,777	18,244	31,063	17,591	28,673
599	AAS	509	54	596	34	564	201	464	61	135	1	202	38	560	177	380	70
	Oth.LDCs	8,437	20,707	7,709	25,462	6,436	23,804	4,509	25,503	4,866	21,554	7,320	25,788	5,338	28,649	7,063	24,111
611	AAS	395	17	257	3	378	20	482	6	689	2	435	7	188	1	409	17
	Oth.LDCs	19,935	45,423	23,161	49,951	27,563	56,858	31,610	64,819	57,953	79,087	49,222	63,018	70,670	75,942	101,304	89,700

TABLE A-3.-- (Continued)

SITC Code	Imports by: / Exports from:	1962		1963		1964		1965		1966		1967		1968		1969	
		EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"	EEC	"Other DMECs"
631	AAS	3,089	3,157	3,393	3,682	3,905	5,185	4,963	5,214	8,269	5,086	7,520	4,687	9,669	5,209	12,851	4,472
	Oth.LDCs	2,700	60,393	3,590	71,755	3,750	100,404	4,394	103,795	5,920	124,349	5,587	137,573	9,021	195,913	18,970	247,907
632	AAS	25	4	122	4	188	7	38	3	68	27	91	27	133	12	321	14
	Oth.LDCs	2,573	11,298	3,794	12,126	4,468	11,196	4,773	13,763	4,326	15,886	4,016	21,747	4,762	30,782	5,596	39,063
657	AAS	415	37	437	39	497	45	492	38	504	36	374	44	406	51	432	68
	Oth.LDCs	41,389	52,396	44,660	60,497	54,372	66,055	68,942	68,775	75,605	69,436	70,580	64,798	84,736	68,776	102,034	74,296
684	AAS	20,923	38	20,817	1,072	19,255	1,582	15,362	5,650	15,684	7,567	23,209	289	17,868	186	23,631	155
	Oth.LDCs	717	2,474	3,114	2,262	3,125	5,482	1,607	4,613	11,715	7,412	17,581	19,664	24,925	70,724	55,673	57,730

Source: UNCTAD, Imports of manufactures and semi-manufactures, Geneva: UNCTAD, Computer Print-outs, no date.

TABLE A-4a.-- EEC imports of 29 major commodities from various groups of countries - value and market share (1962 - 1969)

V = Value (in $ 1,000)
MS = Market share (in Per Cent)

CST Code	Origin[a)]	1962		1963		1964		1965		1966		1967		1968		1969	
		V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS
011.10	1	695	.47	1,272	.48	2,036	.48	2,767	.60	1,620	. .38	1,561	.32	1,086	.22	1,249	.22
	2	44,313	29,84	59,008	22.33	142,606	33.77	130,459	28.46	119,330	28.31	106,242	21.97	69,722	13.99	106,455	18.58
	3	68,295	45.99	95,726	36.22	132,205	31.31	140,794	30.72	141,129	33.48	182,422	30.69	276,901	55.56	302,998	52.88
	4	35,203	23.70	108,302	40.97	145,446	34.44	184,302	40.21	159,426	37.83	193,353	47.01	150,648	30.23	162,306	28,32
013.80	1	1,297	4.84	1,465	4.11	1,575	3,42	2,091	3,46	2,083	2.96	1,974	2.68	2,344	2.65	2,594	2.51
	2	3,465	12.92	4,547	12.74	4,402	9.56	7,103	11.76	7,326	10.40	5,583	7.58	7,047	7.98	10,153	9.81
	3	11,250	41.96	14,971	41.96	18,853	40.94	23,317	38.59	27,205	38.61	32,588	44.25	47,682	53.97	61,632	59.55
	4	10,802	40.28	14,696	41.19	21,221	46.08	27,910	46.19	33,840	48.04	33,493	35.49	31,273	35.40	29,121	28.13
031.10	1	841	.74	2,550	1.95	1,599	1.15	1,690	1.01	1,187	.66	1,265	.67	1,251	.60	1,417	.63
	2	4,683	4.14	4,878	3.74	4,305	3.09	5,650	3.37	7,426	4.13	8,873	4.67	11,265	5.37	12,718	5.69
	3	30,379	26.84	33,734	25.86	36,826	26.44	45,759	27.32	55,175	30.68	60,394	31.79	70,389	33.55	83,810	37.49
	4	77,279	68.28	89,306	68.45	96,539	69.32	114,371	68.30	116,025	64.53	119,465	62.87	126,907	60.48	126,122	56.39
031,20	1	0	.00	0	.00	156	.35	44	.09	29	.05	29	.06	37	.07	40	.08
	2	1,215	2.89	756	1.68	568	1.26	589	1.16	484	.87	604	1.16	698	1.34	989	1.87
	3	12,830	30.49	11,826	26.27	12,191	27.10	14,099	27.78	15,959	28.84	16,077	30.84	15,806	30.88	14,900	28.19
	4	28,028	66.62	32,437	72.05	32,065	71.29	36,020	70.97	38,888	70.24	35,418	67.95	35,638	67.71	36,930	69.86
031.30	1	255	1.03	390	1.34	757	2.05	1,657	3.99	1,985	4.55	2,558	5.20	3,825	6.93	5,061	8.06
	2	4,027	16.34	4,737	16.24	4,783	12.94	4,681	11.27	4,008	9.18	4,544	9.24	7,280	13.20	7,313	11.64
	3	9,746	39.55	8,748	30.00	11,355	30.72	12,591	30.32	13,409	30.71	14,294	29.05	15,645	28.37	17,361	27.64
	4	10,613	43.07	15,287	52.42	20,069	54.29	22,604	54.42	24,255	55.56	27,805	56.52	28,406	51.50	33,067	52.66
032.01	1	5,367	6.78	7,617	8.89	5,768	6.75	5,435	5.69	6,235	7.01	6,334	7.33	8,817	9.29	8,116	8.54
	2	22,238	28.10	22,517	26.28	19,368	22.66	18,854	19.73	18,328	20.60	14,908	17.25	16,031	16.89	14,750	15.53
	3	2,808	3.55	3,391	3.96	3,079	3.60	4,051	4.24	4,906	5.51	5,741	6.64	8,042	8.47	8,637	9.09
	4	48,721	61.57	52,151	60.87	57,248	66.99	67,251	70.35	59,500	67.11	59,416	65.77	62,037	65.35	63,489	66.84

TABLE A-4a.-- (Continued)

CST Code	Origin[a)]	1962		1963		1964		1965		1966		1967		1968		1969	
		V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS
042.20	1	5,927	18.87	4,532	19.71	4,849	17.57	3,048	13.35	3,363	13.58	3,223	11.84	3,630	10.30	2,886	8.99
	2	22,910	72.95	11,166	48.57	13,943	50.52	9,871	43.23	11,748	47.43	6,708	24.64	6,168	17.49	6,580	20.51
	3	2,300	7.32	2,165	9.42	2,380	8.62	6,998	30.65	4,065	16.41	7,893	28.99	15,945	45.23	15,585	48.57
	4	268	.86	5,057	21.99	6,428	23.29	2,918	12.77	5,594	22.58	9,400	34.53	9,514	26.98	7,037	21.93
053.50	1	1,243	3.53	1,759	4.54	1,872	4.48	1,925	4.32	1,831	3.32	1,909	2.88	1,740	2.16	1,687	2.12
	2	6,030	17.16	10,494	27.10	13,481	32.29	13,661	30.63	16,939	30.69	17,148	25.92	18,251	22.68	22,914	28.86
	3	10,940	31.13	11,377	29.38	12,668	30.34	14,526	32.57	20,167	36.53	25,665	38.79	36,789	45.71	31,610	39.81
	4	16,932	48.18	15,096	38.98	13,734	32.89	14,494	32.49	16,264	29.47	21,442	32.41	23,702	29.45	23,195	29.21
055.45	1	1,258	85.35	1,391	83.29	1,235	83.50	1,170	81.76	964	73.64	1,105	67.13	1,189	68.89	1,210	66.81
	2	173	11.74	211	12.63	178	12.04	160	11.18	183	13.98	243	14.76	173	10.02	158	8.72
	3	46	3.12	66	3.95	64	4.33	77	5.38	93	7.10	218	13.24	343	19.87	418	23.08
	4	0	.00	2	.12	0	.00	24	1.68	69	5.28	80	4.86	21	1.22	25	1.38
061.10	1	5,157	6.86	6,474	5.71	6,705	4.40	3,021	3.19	560	.68	4,018	5.66	2,665	3.91	4,141	6.65
	2	66,982	89.04	89,205	78.62	127,946	83.87	80,319	84.87	77,765	94.22	61,432	86.60	55,754	81.89	54,760	87.91
	3	975	1.30	8,307	7.32	4,925	3.23	3,566	3.77	1,997	2.42	1,548	2.18	7,502	11.02	2,206	3.54
	4	2,111	2.80	9,484	8.36	12,982	8.51	7,733	8.17	2,216	2.68	3,942	5.56	2,166	3.18	1,183	1.90
061.50	1	76	.57	246	.84	310	1.49	354	2.49	423	1.95	1,175	5.10	1,136	5.52	408	2.17
	2	7,506	55.94	16,296	55.94	9,625	46.14	7,880	55.50	9,497	43.82	11,216	48.70	10,853	52.75	9,586	50.92
	3	2,574	19.18	4,756	16.33	3,704	17.76	2,371	16.70	5,517	25.46	4,354	18.91	1,623	7.89	3,576	19.00
	4	3,262	24.31	7,832	26.88	7,221	34.61	3,593	25.31	6,235	28.77	6,285	27.29	6,962	33.84	5,256	27.91
072.31	1	106	14.44	188	31.39	97	20.04	765	55.31	821	54.41	2,109	60.81	10,299	88.92	11,415	84.69
	2	471	64.17	71	11.85	71	14.67	35	2.53	22	1.46	42	1.21	106	.92	341	2.53
	3	128	17.44	314	52.42	299	61.78	563	40.71	586	38.83	1,153	33.25	1,067	9.21	1,576	11.69
	4	29	3.95	26	4.34	17	3.51	20	1.44	80	6.69	164	4.73	110	.95	147	1.09

TABLE A-4a.-- (Continued)

CST Code	Origin[a)]	1962		1963		1964		1965		1966		1967		1968		1969	
		V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS
072.32	1	3,873	25.00	4,348	22.28	4,849	22.08	5,789	23.13	6,387	20.42	10,664	23.24	19,317	31.21	19,654	22.04
	2	2,870	18.53	3,252	16.66	4,394	20.01	3,107	12.42	5,844	18.68	14,361	31.30	15,929	25.74	23,352	26.19
	3	8,266	53.36	10,033	51.41	10,226	46.57	13,414	53.60	15,061	48.15	17,536	38.22	25,156	40.65	44,280	49.65
	4	483	3.11	1,884	9.65	2,490	11.34	2,715	10.85	3,986	12.75	3,326	7.24	1,488	2.40	1,894	2.13
081.20	1	512	1.09	532	1.25	346	.87	383	.90	848	1.73	1,931	3.17	2,115	3.09	1,404	2.01
	2	28,670	60.63	27,745	65.03	24,230	60.63	22,643	52.99	33,058	67.28	43,647	71.62	45,513	66.41	48,777	69.88
	3	5,452	11.53	3,900	9.14	7,149	17.89	8,095	18.94	8,688	17.68	9,191	15.08	10,038	14.65	12,664	18.14
	4	12,651	26.75	10,485	24.58	8,242	20.62	11,613	27.18	6,539	13.31	6,171	10.13	10,866	15.85	6,952	9.86
112.40	1	340	.67	351	.58	366	.62	370	.50	386	.53	301	.41	247	.27	616	.53
	2	11,120	21.98	13,995	23.15	12,217	20.58	12,926	17.56	13,293	18.20	11,754	15.74	13,446	15.06	15,631	13.37
	3	14,340	28.34	16,832	27.84	16,491	27.78	22,321	30.32	20,712	28.35	20,752	27.80	27,108	30.35	39,228	33.54
	4	24,795	49.01	29,277	48.43	30,286	51.02	37,996	51.62	38,658	52.92	41,851	56.05	48,507	54.32	61,475	52.57
421.40	1	40,762	77.51	8,797	31.35	10,384	37.99	44,665	65.47	51,517	64.48	54,093	69.97	41,102	65.96	37,441	55.49
	2	8,764	16.67	13,463	47.98	8,945	32.72	14,378	21.08	18,906	23.66	14,852	19.21	8,962	14.38	14,848	22.00
	3	2,209	4.61	2,011	7.17	4,654	17.03	3,304	4.84	3,345	4.19	5,024	6.50	9,112	14.62	9,683	14.35
	4	854	2.00	3,790	13.50	3,353	12.26	5,874	8.61	6,130	7.67	3,337	4.32	3,134	5.03	5,504	8.16
422.20	1	4,287	8.45	4,682	8.26	5,419	7.89	7,778	11.13	6,492	9.62	4,790	7.64	4,085	7.49	3,247	6.07
	2	32,610	64.24	38,258	67.47	60,801	88.48	59,168	84.67	58,096	86.06	54,886	87.59	47,638	87.29	46,667	87.25
	3	2,944	5.80	2,640	4.66	2,265	3.30	2,424	3.47	2,835	4.20	2,851	4.55	2,836	5.20	3,518	6.58
	4	10,921	21.51	11,125	19.61	235	.00	509	.73	82	.12	134	.21	15	.00	54	.10
422.40	1	137	2.09	142	1.98	338	4.86	3,266	30.40	3,757	36.72	2,329	25.85	2,945	20.39	3,037	17.72
	2	4,490	68.72	4,101	57.17	3,866	55.62	5.050	47.00	4,082	39.89	5,414	60.08	7,777	53.84	5,687	33.18
	3	1,738	26.80	2,450	34.16	2,379	34.23	2,339	21.77	2,323	22.70	1,089	12.09	3,586	24.83	8,304	48.44
	4	169	2.39	480	6.69	368	5.29	89	.83	70	.69	179	1.98	136	.94	114	.67

TABLE A-4a.-- (Continued)

CST Code	Origin[a)]	1962		1963		1964		1965		1966		1967		1968		1969	
		V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS
422.90	1	6,436	38.29	37,235	79.28	47,390	82.79	12,330	49.97	574	4.20	330	3.09	334	2.12	3,660	15.32
	2	7,335	43.63	4,885	10.40	2,859	4.99	3,878	15.72	3,836	28.04	2,067	19.33	5,658	35.99	4,847	20.28
	3	2,497	14.85	1,912	4.07	2,711	4.74	4,050	16.41	5,634	41.18	5,307	49.64	6,873	43.71	12,106	50.66
	4	543	3.23	2,934	6.25	4,283	7.48	4,417	17.90	3,637	26.59	2,988	27.94	2,858	18.18	3,282	13.74
561.29	1	447	2.56	303	1.71	478	2.06	604	2.95	626	3.87	847	4.03	831	3.69	1,482	5.92
	2	4,463	25.62	2,710	15.27	3,000	12.93	1,216	5.94	1,406	8.70	2,927	13.91	1,721	7.65	3,128	12.50
	3	10,186	58.46	12,309	69.36	14,909	64.27	15,198	74.28	12,750	78.86	12,897	61.30	13,183	58.59	12,674	50.66
	4	2,327	13.36	2,424	13.66	4,812	20.74	3,443	16.83	1,385	8.57	4,368	20.76	6,766	30.07	7,735	30.91
599.51	1	509	4.40	595	6.26	665	6.62	464	4.47	99	.79	184	1.36	514	3.62	369	2.16
	2	891	7.70	327	3.44	413	4.11	97	.94	268	2.15	363	2.68	256	1.80	353	2.07
	3	8,657	74.78	7,504	78.91	7,689	76.57	8,357	80.60	10,555	84.51	10,411	76.97	12,256	86.21	15,651	91.81
	4	1,519	13.13	1,084	11.39	1,275	12.70	1,451	13.99	1,567	12.55	2,568	18.99	1,190	8.37	674	3.95
611.40	1	380	1.26	247	.71	373	.96	448	1.11	637	1.15	372	.76	145	.24	372	.47
	2	1,134	3.77	1,761	5.10	2,454	6.32	3,057	7.58	7,048	12.69	6,894	14.07	8,311	13.70	16,691	21.21
	3	21,503	71.46	25,274	73.14	27,879	71.80	29,731	73.75	38,751	69.77	35,044	71.50	44,003	74.16	53,469	67.95
	4	7,075	23.51	7,273	21.05	8,120	20.92	7,075	17.56	9,108	16.39	6,705	13.68	7,274	11.91	8,159	10.37
631.10	1	950	2.79	930	2.68	1,057	2.56	2,158	4.08	5,050	9.10	4,319	8.71	5,427	8.79	6,790	9.12
	2	881	2.58	803	2.31	714	1.73	1,567	2.96	2,928	5.27	2,610	5.26	6,004	9.72	13,973	18.76
	3	21,001	61.23	22,237	64.08	26,534	64.35	31,120	58.84	32,360	58.29	29,678	59.84	34,310	55.53	36,475	48.98
	4	11,269	33.40	10,731	30.93	12,928	31.35	18,040	34.12	15,182	27.34	12,988	26.19	16,050	25.97	17,238	23.14
631.21	1	2,115	13.16	2,471	11.50	2,847	10.03	2,805	8.21	3,219	7.92	3,197	7.28	4,222	7.02	6,036	7.28
	2	565	3.52	1,141	5.31	1,804	6.36	1,872	5.48	1,937	4.76	1,703	3.88	1,422	2.37	2,670	3.22
	3	5,596	34.83	8,685	40.42	11,435	40.30	14,483	42.40	17,963	44.17	21,075	47.99	29,942	49.81	38,230	46.12
	4	7,792	48.49	9,190	42.77	12,292	43.31	14,999	43.91	17,547	43.15	17,941	40.85	24,530	40.80	35,960	43.38

TABLE A-4a.-- (Continued)

CST Code	Origin[a)]	1962		1963		1964		1965		1966		1967		1968		1969	
		V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS
632.89	1	25	.38	107	1.28	170	1.57	27	.22	55	.44	56	.47	52	.36	173	.95
	2	133	1.98	392	4.70	317	2.93	217	1.73	246	1.99	145	1.22	73	.51	98	.54
	3	3,599	53.68	4,481	53.67	5,881	54.39	7,222	57.71	7,259	58.59	7,439	62.39	8,665	60.64	11,427	62.93
	4	2,947	43.96	3,369	40.35	4,444	41.11	5,049	40.34	4,829	38.98	4,284	35.92	5,499	38.49	6,461	35.58
655.61	1	68	.73	112	.88	178	1.10	148	1.04	123	1.04	54	.60	37	.23	15	.08
	2	180	1.93	564	4.45	419	2.58	246	1.72	336	2.84	296	3.28	503	3.13	641	3.25
	3	7,862	84.46	9,760	77.09	12,025	74.15	10,163	71.18	9,186	77.58	6,896	76.37	12,013	74.69	14,937	75.64
	4	1,199	12.88	2,224	17.57	3,596	22.17	3,721	26.06	2,196	18.54	1,784	19.75	3,531	21.95	4,154	21.04
656.10	1	123	.56	517	1.92	793	3.04	594	1.79	506	1.60	510	1.62	498	1.52	448	1.37
	2	9,195	41.51	11,081	41.17	9,656	36.97	13,510	40.62	11,685	36.99	14,111	44.76	12,423	37.93	12,201	37.12
	3	9,155	41.33	10,523	39.10	9,740	37.29	11,120	33.43	11,544	36.54	9,936	31.52	12,604	38.48	12,461	37.92
	4	3,678	16.60	4,794	17.81	5,929	22.70	8,035	24.16	7,855	24.87	6,970	22.10	7,228	22.07	7,755	23.59
657.80	1	415	16.71	422	13.72	496	12.54	490	11.49	503	10.72	373	9.20	405	8.49	427	8.59
	2	240	9.67	172	5.59	266	6.73	390	9.14	685	14.60	648	15.98	969	20.30	916	18.43
	3	427	17.20	367	11.93	598	15.12	694	16.27	544	11.59	484	11.94	593	12.42	866	17.42
	4	1,401	56.42	2,115	68.76	2,594	65.61	2,692	63.10	2,961	63.10	2,549	62.87	2,806	58.79	2,761	55.56
684.10	1	20,918	14.64	20,816	12.94	19,233	9.62	15,362	7.42	15,683	6.25	23,210	8.63	17,867	5.22	23,455	4.70
	2	366	.26	1,876	1.17	1,507	.75	485	.23	10,436	4.16	15,615	5.80	17,381	5.08	45,052	9.03
	3	31,471	22.03	43,489	27.04	58,456	29.23	75,494	36.45	89,654	35.74	73,837	27.44	115,190	33.67	146,509	29.35
	4	90,074	63.07	94,624	58.85	120,771	60.40	115,770	55.90	135,089	53.85	156,431	58.13	191,640	56.03	284,097	56.92

a) The following code was used for the origin of imports:
1 = AAS, 2 = "Other LDCs", 3 = EEC, and 4 = "Other DMECs" + soc. countries.

Source: Statistical Office of the European Communities, Foreign trade - Analytical tables - CST imports, Brussels: Statistical Office of the European Communities, years 1962 to 1969.

TABLE A-4b.-- EEC imports of 29 major commodities from various groups of countries - quantity and price - (1962 - 1969)

Q = Quantity (in tons)
P = Price (in $/ton)

CST Code	Origin[a)]	1962		1963		1964		1965		1966		1967		1968		1969	
		Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
011.10	1	842	825	1,447	879	2,157	944	2,486	1,113	1,476	1,097	1,827	854	1,194	909	1,471	849
	2	101,682	436	138,739	425	236,921	602	172,811	755	169,116	706	165,309	643	113,012	617	172,525	617
	3	97,730	699	121,847	786	130,509	1,013	128,259	1,098	136,123	1,037	173,779	1,050	251,980	1,099	252,582	1,200
	4	47,669	738	140,876	769	157,620	923	197,890	931	180,011	886	224,012	863	176,095	855	179,779	903
013.80	1	1,439	901	1,597	917	1,612	977	2,238	934	3,081	676	2,064	956	2,469	949	2,750	943
	2	5,383	644	7,826	581	7,000	629	9,537	745	44,680	164	6,943	804	8,106	869	12,626	804
	3	12,185	923	16,135	928	18,450	1,022	19,838	1,175	21,595	1,260	26,374	1,236	38,234	1,247	47,354	1,302
	4	14,934	723	20,301	724	28,893	734	33,710	828	419,907	81	38,257	875	37,889	825	33,638	866
031.10	1	1,737	484	6,343	402	4,007	399	3,780	447	2,514	472	3,085	410	2,487	503	3,287	431
	2	10,903	430	11,543	422	9,230	466	12,038	469	13,798	538	14,732	602	20,605	547	22,227	572
	3	77,946	390	88,501	381	92,261	399	115,540	396	118,698	465	120,170	503	136,970	514	154,063	544
	4	269,929	286	303,874	294	286,809	337	303,629	377	290,079	400	301,820	396	318,960	398	278,470	453
031.20	1	0	-	0	-	366	426	8	4,889	14	2,071	14	2,071	17	2,176	9	4,444
	2	4,272	284	1,645	460	1,534	370	1,805	326	1,075	450	1,106	546	1,404	497	1,774	557
	3	46,146	278	43,102	274	40,605	300	40,073	352	42,133	379	40,828	394	39,172	404	32,216	463
	4	69,657	402	68,952	470	62,343	514	67,258	536	72,794	534	64,219	552	67,662	527	73,220	504
031.30	1	173	1,466	291	1,336	451	1,675	904	1,831	998	1,987	1,417	1,805	2,024	1,889	2,541	1,991
	2	5,468	736	4,290	1,104	4,549	1,051	3,553	1,317	3,054	1,312	3,497	1,299	5,126	1,420	4,789	1,527
	3	72,789	134	61,050	143	80,150	142	77,622	162	76,871	174	72,322	198	76,632	204	72,798	238
	4	25,540	416	31,575	484	37,653	533	39,718	569	41,365	586	47,639	584	46,302	613	45,476	727
032.01	1	4,056	1,323	7,748	983	6,345	909	6,516	834	7,352	848	7,339	863	9,884	892	9,328	870
	2	31,841	698	33,418	674	27,714	699	25,744	732	24,219	757	19,999	745	21,176	757	19,689	749
	3	6,811	412	7,244	468	6,651	463	8,165	496	8,290	592	9,830	584	12,407	648	12,892	670
	4	80,745	603	82,793	630	84,786	675	86,694	776	76,438	778	72,336	821	71,596	866	70,640	899

TABLE A-4b.-- (Continued)

CST Code	Origin[a)]	1962		1963		1964		1965		1966		1967		1968		1969	
		Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
042.20	1	22,536	263	16,480	275	16,271	298	10,262	291	12,548	268	10,779	299	13,544	268	11,015	262
	2	181,981	126	98,946	113	119,902	116	115,165	86	115,511	102	45,328	148	39,418	156	52,515	125
	3	14,720	156	14,091	154	15,779	151	41,056	170	23,870	170	39,677	199	70,513	226	63,723	245
	4	1,924	139	39,012	130	45,190	142	17,670	165	28,873	194	49,798	189	48,510	196	29,273	240
053.50	1	3,666	339	5,514	319	6,907	271	7,638	252	7,693	238	8,158	234	8,093	215	8,477	199
	2	32,518	185	45,540	230	51,692	261	52,772	259	80,017	212	75,060	228	71,236	256	85,419	268
	3	65,587	167	69,500	164	69,218	183	74,201	196	87,064	232	102,304	251	142,323	258	124,184	255
	4	60,187	281	44,237	341	44,724	307	46,714	310	48,711	334	72,931	294	86,708	273	87,327	266
055.45	1	6,912	182	7,727	180	6,604	187	6,157	190	4,994	193	5,312	208	5,556	214	5,990	202
	2	1,172	148	1,375	153	1,424	125	1,231	130	1,308	140	1,612	145	1,254	138	1,248	127
	3	144	319	162	408	156	410	219	352	240	388	1,074	203	1,731	198	2,214	189
	4	0	-	13	154	0	-	170	141	420	164	514	156	132	159	180	139
061.10	1	29,637	174	35,767	181	36,440	184	17,982	168	10,000	56	43,673	92	31,352	85	49,297	84
	2	394,710	170	547,641	163	675,999	189	537,618	149	508,708	153	392,660	156	350,471	159	316,547	173
	3	14,991	65	58,193	143	23,987	205	40,447	88	24,389	82	17,815	87	101,311	74	12,551	176
	4	27,898	76	76,563	124	66,510	195	89,742	86	38,156	58	83,276	47	40,612	53	23,475	50
061.50	1	3,040	25	6,307	39	8,857	35	12,206	29	15,666	27	34,558	34	36,645	31	15,692	26
	2	288,575	26	387,550	42	267,115	36	317,154	25	381,134	25	352,660	32	362,988	30	354,456	27
	3	71,219	36	84,894	56	74,365	50	71,434	33	134,984	41	102,101	43	43,660	37	98,672	36
	4	116,380	28	183,294	43	171,163	42	145,282	25	190,616	33	188,033	33	220,384	32	203,537	26
072.31	1	554	191	776	242	345	281	3,097	247	3,648	225	6,509	324	17,545	587	14,597	782
	2	4,062	116	721	98	313	227	208	168	82	268	255	165	487	218	1,730	197
	3	830	154	1,622	194	1,001	299	1,768	318	2,224	263	3,219	358	2,335	457	2,080	758
	4	31	936	208	125	261	65	205	98	359	223	820	200	539	204	313	470

TABLE A-4b.-- (Continued)

CST Code	Origin[a)]	1962		1963		1964		1965		1966		1967		1968		1969	
		Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
072.32	1	3,579	1,082	3,475	1,251	4,007	1,210	6,244	927	6,048	1,056	8,222	1,297	12,600	1,533	9,606	2,046
	2	2,658	1,080	2,879	1,130	4,030	1,090	3,673	846	6,381	916	11,734	1,224	10,928	1,458	12,391	1,885
	3	7,310	1,131	8,570	1,171	8,563	1,194	12,170	1,102	14,362	1,049	14,791	1,186	16,941	1,485	22,414	1,976
	4	460	1,050	1,546	1,219	2,265	1,099	2,963	916	4,331	920	2,834	1,174	984	1,512	973	1,947
081.20	1	9,309	55	10,640	50	7,061	49	6,839	56	14,133	60	32,183	60	37,105	55	28,653	49
	2	531,098	54	503,487	55	474,821	51	376,927	60	541,703	61	740,325	59	798,473	57	936,366	52
	3	85,261	64	69,733	56	125,653	57	120,116	67	124,467	70	134,094	69	152,252	66	192,607	66
	4	189,590	67	191,812	55	146,559	56	81,515	143	99,585	66	92,414	67	193,756	56	134,911	52
112.40	1	755	450	753	466	759	482	782	473	835	462	643	468	475	520	1,262	488
	2	22,165	502	26,677	525	23,865	512	24,023	538	24,449	544	22,059	533	25,215	533	30,346	515
	3	11,607	1,235	13,573	1,240	13,038	1,265	17,155	1,301	15,771	1,313	15,687	1,323	21,244	1,276	31,362	1,251
	4	21,627	1,147	26,695	1,097	28,514	1,062	35,121	1,082	36,988	1,045	40,281	1,039	51,858	935	68,434	898
421.40	1	105,056	388	21,774	404	25,326	410	117,539	380	150,634	342	161,955	334	160,554	256	117,369	319
	2	32,516	270	50,734	265	31,191	287	47,385	303	65,387	289	55,537	267	36,548	245	47,580	312
	3	6,791	325	6,352	317	13,138	354	8,936	370	10,203	328	16,032	313	32,326	282	29,127	332
	4	2,945	290	14,057	270	11,460	293	16,701	352	20,374	301	12,673	263	13,023	241	16,786	328
422.20	1	18,088	237	20,445	229	23,059	235	28,181	276	26,177	248	20,126	238	21,056	194	19,100	170
	2	148,866	219	178,351	215	263,607	231	225,402	262	248,665	234	238,211	230	263,136	181	285,253	164
	3	11,874	248	10,815	244	8,316	272	7,417	327	9,644	294	10,107	282	13,129	216	15,504	227
	4	49,829	219	52,912	210	884	266	2,694	189	345	238	1,646	81	166	90	418	129
422.40	1	550	249	510	278	1,181	286	10,018	326	12,565	299	8,788	265	8,713	338	11,289	269
	2	19,883	223	16,879	243	13,674	283	16,215	311	14,007	291	20,992	258	23,103	337	20,205	281
	3	7,633	228	10,034	244	8,625	276	7,292	321	8,086	287	3,782	288	10,775	333	29,108	285
	4	624	271	1,854	259	1,256	293	155	574	144	486	570	314	525	259	401	284

TABLE A-4b.-- (Continued)

CST Code	Origin[a)]	1962		1963		1964		1965		1966		1967		1968		1969	
		Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
422.90	1	16,009	402	100,094	372	127,392	372	33,505	368	1,607	357	1,182	279	1,210	276	11,960	306
	2	12,800	573	8,462	577	5,894	485	10,779	360	11,175	343	7,663	270	16,892	335	18,422	263
	3	7,137	350	6,363	300	9,789	277	12,703	319	16,823	335	18,095	293	23,333	295	38,502	314
	4	2,611	208	5,506	533	13,326	321	9,882	447	9,041	402	9,427	317	9,448	303	11,032	298
561.29	1	19,434	23	13,772	22	19,916	24	24,160	25	25,040	25	36,826	23	34,625	24	52,928	28
	2	82,857	54	56,297	48	55,692	54	22,506	54	24,520	57	53,031	55	30,810	56	56,833	55
	3	299,537	34	348,271	35	381,702	39	347,710	44	298,225	43	314,055	41	296,006	45	291,045	44
	4	56,672	41	61,281	40	95,047	51	60,412	57	37,143	37	97,016	45	138,581	49	167,807	46
599.51	1	4,313	118	4,440	134	5,406	123	3,866	120	838	118	1,448	127	4,047	127	3,100	119
	2	12,157	73	2,819	116	4,575	90	809	120	2,381	113	3,072	118	2,064	124	2,540	139
	3	69,304	125	58,563	128	61,028	126	66,409	126	82,963	127	79,450	131	94,965	129	136,405	115
	4	14,886	102	10,871	100	12,674	101	13,907	104	13,730	114	22,533	114	8,277	144	6,189	109
611.40	1	425	894	271	911	401	928	502	891	484	1,316	275	1,348	100	1,436	295	1,257
	2	837	1,355	1,481	1,189	2,867	856	4,134	739	6,800	1,036	10,105	682	12,317	675	15,786	1,057
	3	7,955	2,703	8,919	2,834	9,207	3,028	10,049	2,959	11,170	3,469	10,321	3,395	13,271	3,391	16,152	3,310
	4	3,310	2,138	3,841	1,894	3,838	2,116	3,231	2,190	3,666	2,485	3,278	2,046	3,655	1,990	3,551	2,298
631.10	1	4,185	227	4,744	196	4,893	216	9,548	226	21,308	237	20,864	207	24,445	222	29,650	229
	2	2,967	297	2,188	367	1,364	523	2,092	749	3,623	808	4,424	590	8,402	715	13,337	1,048
	3	20,828	1,008	21,582	1,030	25,836	1,027	26,832	1,160	26,952	1,201	25,912	1,145	30,852	1,112	34,977	1,043
	4	19,847	568	21,777	493	26,228	493	35,389	510	28,932	525	31,458	413	36,448	440	41,197	418
631.21	1	6,671	317	7,533	328	8,252	345	5,072	553	9,844	327	10,279	311	14,409	293	19,597	308
	2	2,352	240	4,156	275	6,466	279	9,498	197	6,628	292	6,444	264	5,605	254	8,853	302
	3	17,146	326	26,133	312	32,581	351	41,443	349	53,321	337	64,372	327	90,844	330	114,146	335
	4	36,596	213	44,189	208	56,649	217	65,983	227	78,083	225	77,446	232	105,386	233	142,269	253

TABLE A-4b.-- (Continued)

CST Code	Origin[a)]	1962		1963		1964		1965		1966		1967		1968		1969	
		Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
632.89	1	183	136	835	128	1,370	124	209	129	331	166	636	88	433	120	1,840	94
	2	209	636	690	568	388	817	283	767	471	522	298	487	176	415	328	299
	3	7,563	476	10,755	417	14,698	400	16,721	432	17,181	423	17,787	418	20,437	424	28,908	395
	4	7,042	419	8,540	395	12,686	350	12,443	409	11,099	435	10,011	428	15,037	366	16,585	390
655.61	1	191	356	240	466	309	576	310	477	294	418	145	370	138	268	52	288
	2	383	470	1,437	392	1,014	413	653	377	1,013	332	1,002	295	2,013	250	2,500	256
	3	19,045	413	19,091	511	22,279	540	21,702	468	24,670	372	19,230	359	34,962	344	40,467	369
	4	1,586	756	3,209	693	5,307	678	5,005	744	2,763	795	2,896	616	5,102	692	6,472	642
656.10	1	953	129	3,541	146	6,100	130	5,033	118	3,833	132	3,805	134	3,772	132	3,612	124
	2	26,696	344	33,632	329	32,600	296	40,463	334	31,813	367	40,501	348	38,591	322	34,259	356
	3	23,097	396	27,527	382	27,612	353	28,983	384	27,916	414	24,976	398	29,947	421	28,242	441
	4	12,182	302	15,883	302	19,602	303	25,098	320	23,944	328	25,393	275	24,306	297	23,437	341
657.80	1	190	2,184	260	2,044	236	2,093	232	2,112	242	2,070	185	2,016	203	1,995	195	2,179
	2	629	382	179	961	259	1,027	281	1,388	530	1,292	521	1,244	523	1,853	477	1,920
	3	2,987	143	2,355	156	4,494	133	5,036	138	4,093	133	3,659	132	3,437	173	4,838	179
	4	6,165	227	8,568	247	10,045	258	9,110	296	9,575	309	10,165	251	9,712	289	8,106	341
684.10	1	46,176	453	45,649	456	42,270	455	33,179	463	33,297	471	49,278	471	34,425	519	43,195	543
	2	808	453	4,333	433	3,312	455	1,047	463	20,007	522	30,281	516	33,621	517	84,378	534
	3	66,240	475	91,173	477	114,644	510	146,608	515	177,044	506	141,615	521	217,657	529	261,090	561
	4	183,717	490	198,096	478	245,386	492	230,917	501	269,377	502	304,398	514	382,418	501	528,824	537

a) The following code was used for the origin of imports:
1 = AAS, 2 = "Other LDCs", 3 = EEC, and 4 = "Other DMECs" + soc. countries

Source: Same as for Table A-4a.

TABLE A-4c.-- Value and market share of AAS exports of 29 major commodities to the EEC, Africa, and the rest of the world (1962 - 1969)

V = Value (in $ 1,000)
MS = Market share (in Per Cent)

CST Code	Desti-nation	1962		1963		1964		1965		1966		1967		1968		1969	
		V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS
011.10	EEC	50	1.22	1,082	43.61	1,919	55.28	2,499	51.09	2,598	44.93	1,084	21.95	1,070	18.97	948	14.24
	Africa	1,161	28.37	1,261	50.82	1,175	33.85	1,601	32.73	3,033	52.45	3,773	76.39	4,558	80.83	5,591	83.92
	ROW	2,881	70.41	138	5.57	377	10.87	791	16.18	151	2.62	82	1.66	11	.20	113	1.84
013.80	EEC	1,151	77.82	1,383	83.76	1,379	78.89	2,012	73.94	2,032	69.04	2,363	73.82	1,923	71.67	2,497	71.06
	Africa	221	14.94	166	10.05	203	11.61	164	6.02	406	13.79	377	11.78	312	11.63	306	8.71
	ROW	107	7.24	102	6.19	166	9.50	545	20.04	501	17.17	461	14.40	448	16.70	711	20.23
031.10	EEC	96	39.02	228	38.19	317	69.06	596	68.98	672	62.92	878	44.01	996	50.48	99	24.26
	Africa	111	45.12	327	54.77	98	21.35	138	15.97	256	23.97	217	10.88	499	25.29	259	63.48
	ROW	39	15.86	42	7.04	44	9.59	130	15.05	140	13.11	900	45.11	478	24.23	140	12.25
031.20	EEC	5	.10	15	.35	35	1.19	50	.90	25	.46	6	.16	3	.07	3	.10
	Africa	4,619	99.74	4,201	99.52	2,897	98.50	5,412	97.67	4,955	91.44	4,424	95.01	4,025	99.06	2,932	99.59
	ROW	7	.16	5	.13	9	.31	79	1.43	439	8.10	174	4.79	35	.77	9	.31
031.30	EEC	201	68.36	262	77.51	468	82.39	1,048	82.65	1,101	82.72	1,348	67.33	1,561	64.50	1,686	50.75
	Africa	78	26.53	56	16.57	73	12.85	184	14.51	142	10.67	179	8.94	312	12.89	98	5.96
	ROW	15	15.11	20	5.92	27	4.76	36	2.84	88	6.61	475	23.73	547	22.61	1,438	43.29
032.01	EEC	5,307	99.14	8,072	99.23	5,376	99.26	5,419	99.39	5,834	99.55	6,530	99.42	7,797	99.13	8,263	98.66
	Africa	38	.71	36	.44	30	.55	25	.45	26	.44	16	.24	33	.42	21	.25
	ROW	8	.15	26	.33	10	.19	8	.15	0	.01	22	.34	35	.45	91	1.07
042.20	EEC	5,009	56.13	4,084	72.73	4,804	79.48	2,487	90.04	3,236	72.39	3,085	40.64	3,769	30.42	3,551	37.45
	Africa	3,095	34.68	1,416	25.22	1,152	19.06	268	9.70	902	20.18	4,258	56.09	8,198	66.16	5,890	62.13
	ROW	820	9.19	115	2.05	88	1.46	7	.26	332	7.43	248	3.27	424	3.42	39	.42

TABLE A-4c.-- (Continued)

CST Code	Desti-nation	1962		1963		1964		1965		1966		1967		1968		1969	
		V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS
053.50	EEC	870	92.65	1,223	91.75	1,463	94.33	1,429	93.64	1,363	89.73	1,431	92.26	1,424	89.51	1,561	89.10
	Africa	26	2.77	78	5.85	47	3.03	97	6.36	130	8.56	110	7.09	120	7.49	127	7.25
	ROW	43	4.58	32	2.40	41	2.64	0	.00	26	1.71	10	.65	48	3.00	64	3.65
055.45	EEC	1,041	95.42	1,168	97.25	1,081	97.92	921	98.61	970	96.71	1,012	99.70	1,018	98.74	1,033	99.33
	Africa	34	3.12	5	.42	8	.72	1	.11	2	.20	1	.10	5	.48	4	.38
	ROW	16	1.46	28	2.33	15	1.36	12	1.28	31	3.09	2	.20	8	.78	3	.29
061.10	EEC	4,178	96.89	5,375	80.46	5,222	77.39	2,630	73.98	873	26.22	4,154	61.07	836	19.82	1,356	32.25
	Africa	134	3.11	175	2.62	147	2.18	166	4.67	0	.00	1,129	16.60	2,297	54.44	1,855	44.11
	ROW	0	.00	1,130	16.92	1,379	20.44	759	21.35	2,456	73.78	1,519	22.33	1,086	25.74	994	23.64
061.50	EEC	0	.00	189	100.00	183	100.00	151	86.29	218	80.15	986	100.00	471	91.63	89	25.36
	Africa	0	.00	0	.00	0	.00	11	6.29	0	.00	0	.00	0	.00	0	.00
	ROW	0	.00	0	.00	0	.00	13	7.42	54	19.85	0	.00	43	8.37	262	74.64
072.31	EEC	97	31.19	210	55.56	50	10.46	368	55.01	344	73.82	1,811	84.86	8,009	93.77	11,513	93.22
	Africa	0	.00	0	.00	0	.00	0	.00	1	.21	14	.66	58	.68	70	.57
	ROW	214	68.81	168	44.44	428	89.54	301	44.99	121	25.97	309	14.48	474	5.55	767	6.21
072.32	EEC	3,209	85.05	3,708	71.10	4,953	84.67	5,236	54.35	5,669	56.23	10,493	72.25	18,351	84.39	20,472	63.12
	Africa	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
	ROW	564	14.95	1,507	28.90	897	15.33	4,397	45.65	4,413	43.77	4,030	27.75	3,394	15.61	11,959	36.88
081.20	EEC	494	33.65	484	44.81	386	26.24	346	24.38	919	48.78	1,245	75.00	906	70.84	946	46.01
	Africa	97	6.61	80	7.41	114	7.75	65	4.58	95	5.04	79	4.76	49	3.83	155	7.54
	ROW	877	59.74	516	47.78	971	66.01	1,008	71.04	870	46.18	336	20.24	324	25.33	955	46.45
112.40	EEC	244	96.06	341	95.52	252	87.80	321	85.37	251	70.90	338	66.67	287	52.37	449	71.61
	Africa	10	3.94	15	4.48	35	12.20	53	14.10	96	27.12	164	32.35	258	47.08	171	27.27
	ROW	0	.00	1	.00	0	.00	2	.53	7	1.98	5	.98	3	.55	7	1.12

TABLE A-4c.-- (Continued)

CST Code	Desti-nation	1962		1963		1964		1965		1966		1967		1968		1969	
		V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS
421.40	EEC	42,046	93.94	39,020	98.35	48,281	97.14	52,854	96.89	53,119	93.92	58,346	96.01	52,450	94.92	35,485	95.46
	Africa	580	1.29	622	1.57	1,263	2.54	1,696	3.11	3,385	5.98	2,404	3.96	2,517	4.66	1,588	4.27
	ROW	2,421	5.37	34	.08	156	.31	2	.00	55	.10	21	.03	240	.42	99	.27
422.20	EEC	2,256	91.74	2,619	96.00	3,443	96.63	3,717	90.75	1,998	84.91	1,473	94.73	3,089	95.49	2,536	81.60
	Africa	182	6.53	107	3.92	117	3.28	304	7.42	112	4.76	81	5.21	146	4.51	531	17.08
	ROW	48	1.72	2	.08	3	.08	75	1.83	243	10.33	0	.06	0	.00	41	1.32
422.40	EEC	430	96.20	131	86.18	327	89.59	3,591	82.74	1,746	63.72	2,023	46.54	2,740	35.04	3,604	57.81
	Africa	16	3.80	10	6.58	32	8.77	166	3.82	155	5.66	6	.14	53	.68	33	.53
	ROW	0	.00	11	7.24	6	1.64	583	13.43	839	30.62	2,318	53.32	4,576	64.28	2,597	41.66
422.90	EEC	360	47.81	838	84.48	1,000	78.31	638	63.42	546	64.24	394	75.48	410	58.74	726	60.30
	Africa	113	15.01	141	14.21	175	13.70	126	12.52	86	10.12	55	10.54	66	9.46	58	4.82
	ROW	280	37.08	13	1.31	102	7.99	242	24.06	218	25.64	73	13.98	222	31.81	420	34.88
561.29	EEC	483	56.56	208	80.00	420	89.55	83	91.21	550	96.66	406	87.69	464	87.38	1,116	89.86
	Africa	73	8.55	9	3.46	37	7.89	7	7.69	5	.88	44	9.50	67	12.62	123	9.90
	ROW	298	34.89	53	16.54	12	2.56	1	1.10	14	2.45	13	2.81	0	.00	3	.24
599.51	EEC	429	83.30	466	87.59	535	83.33	386	84.28	37	42.05	213	72.20	336	74.01	159	54.27
	Africa	18	3.50	15	2.82	9	1.40	12	2.62	24	27.27	17	5.76	18	3.96	26	8.87
	ROW	68	13.20	51	9.59	98	15.26	60	13.10	27	30.68	65	22.03	100	22.03	108	36.86
611.40	EEC	248	92.88	179	90.40	264	92.96	365	89.90	556	81.41	339	75.50	157	51.31	392	49.75
	Africa	15	5.62	15	7.58	19	6.69	26	6.40	65	9.52	26	5.79	30	9.80	192	24.37
	ROW	4	1.50	4	2.02	1	.35	15	3.70	62	9.08	84	18.71	119	38.89	204	25.89
631.10	EEC	765	42.08	800	32.57	863	24.50	1,848	33.02	2,062	33.47	2,304	34.57	2,650	33.09	2,804	32.51
	Africa	9	.50	34	1.38	56	1.59	125	2.23	183	2.97	150	2.25	18	.22	26	.30
	ROW	1,044	57.42	1,622	66.04	2,604	73.91	3,623	64.74	3,915	63.56	4,210	63.18	5,340	66.68	5,614	67.18

TABLE A-4c.-- (Continued)

CST Code	Destination	1962		1963		1964		1965		1966		1967		1968		1969	
		V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS	V	MS
631.21	EEC	1,470	22.51	2,012	28.53	2,128	29.54	2,147	31.12	2,456	38.88	2,788	42.00	3,457	41.88	4,809	49.38
	Africa	1,067	16.34	1,148	16.28	1,212	16.82	1,059	15.35	952	15.07	983	14.81	1,013	12.27	1,249	12.82
	ROW	3,993	61.15	3,891	55.18	3,865	53.64	3,693	53.53	2,909	46.05	2,867	43.19	3,785	45.85	3,681	37.80
632.89	EEC	5	35.71	19	52.78	14	28.57	9	20.45	17	54.84	10	30.30	43	58.11	26	49.06
	Africa	3	21.43	14	38.89	22	44.90	18	40.91	11	35.48	20	60.61	27	36.49	15	28.30
	ROW	6	42.86	3	8.33	13	26.53	17	38.64	3	9.68	3	9.09	4	5.40	22	22.64
655.61	EEC	58	42.34	126	56.25	133	44.78	132	45.83	106	45.11	42	17.36	4	2.13	15	8.38
	Africa	75	54.74	98	43.75	159	53.54	145	50.35	123	52.34	194	80.17	181	96.28	163	91.06
	ROW	4	2.92	0	.00	5	1.68	11	3.82	6	2.55	6	2.49	3	1.60	1	.56
656.10	EEC	726	84.22	401	72.91	329	60.70	174	29.00	136	15.98	175	46.79	238	21.79	120	13.89
	Africa	61	7.08	67	12.18	74	13.65	340	56.67	630	74.03	148	39.57	785	71.89	637	73.73
	ROW	75	8.70	82	14.91	139	25.65	86	14.33	85	9.99	51	13.64	69	6.32	107	12.38
657.80	EEC	385	80.21	390	72.63	481	78.47	515	78.27	485	81.93	351	75.97	452	81.29	438	70.87
	Africa	58	12.08	98	18.25	72	11.75	99	15.05	62	10.47	51	11.04	55	9.89	140	22.65
	ROW	37	7.71	49	9.12	60	9.79	44	6.69	45	7.60	60	12.99	49	8.82	40	6.47
684.10	EEC	21,466	99.98	20,178	91.03	19,392	93.58	12,990	64.98	13.283	64.99	3,992	95.23	18,813	98.56	21,006	96.96
	Africa	5	.02	0	.00	47	.23	1,409	7.05	2,228	10.90	2	.05	5	.03	0	.00
	ROW	0	.00	1,988	8.97	1,284	6.20	5,591	27.97	4,926	24.10	198	4.72	270	1.41	658	3.04

Source: Same as that for Table A-1

TABLE A-5.-- GNP, PCI, and language of countries trading with the AAS (1967)

Country	GNP ($ m.)	PCI ($)	a)	Country	GNP ($ m.)	PCI ($)	a)
Afars-Issas	54	606	1	Finland	8,799	1,886	2
Algeria	3,192	255	1	Fr. Polynesia	192	1,920	1
Angola	898	170	2	Gabon	238	504	1
Argentina	15,017	646	2	Gambia	42	122	2
Australia	27,100	2,295	2	Germany	124,000	2,149	2
Austria	10,731	1,465	2	Ghana	2,063	253	2
Benelux	20,054	2,005	1	Greece	6,900	792	2
Brazil	32,607	381	2	Guadalupe	224	679	1
Bulgaria	8,252	973	2	Guinea	323	87	1
Cambodia	875	140	1	Haïti	412	90	1
Cameroon	891	163	1	Honduras	592	254	2
Canada	58,372	2,856	2	Hong Kong	2,328	602	2
Central African Rep.	178	122	1	Hungary	11,300	1,106	2
Chad	241	70	1	Iceland	546	2,744	2
China	70,000	100	2	India	41,467	81	2
Colombia	6,115	319	2	Irak	2,381	273	2
Comoro Islands	29	116	1	Iran	7,881	300	2
Congo	228	265	1	Ireland	3,052	1,053	2
Cyprus	443	722	2	Israël	4,031	1,510	2
Czechoslovakia	22,173	1,550	2	Ivory Coast	1,117	279	1
Dahomey	208	83	1	Jamaica	1,044	557	2
Denmark	12,188	2,519	2	Japan	120,008	1,201	2
Dominican Republic	1,104	284	2	Jordan	544	267	2
Ecuador	1,310	238	2	Kenya	1,209	122	2
Egypt	5,773	187	2	Koweit	2,442	3,757	2
Ethiopia	1,486	63	2	Lebanon	1,220	484	2

TABLE A-5.-- (Continued)

Country	GNP ($ m.)	PCI ($)	a)	Country	GNP ($ m.)	PCI ($)	a)
Liberia	330	297	2	Rhodesia	1,093	229	2
Libya	2,218	1,276	2	Rumania	15,274	792	2
Madagascar	737	116	1	Rwanda	151	46	1
Malawi	274	66	2	Saudi Arabia	3,201	458	2
Malaysia	3,251	324	2	Senegal	787	217	1
Mali	414	88	1	Sierra Leone	393	161	2
Malta	175	549	2	Somalia	159	61	2
Martinique	189	572	1	South Africa	13,616	727	2
Mauretania	178	162	1	South Viet Nam	2,849	168	1
Mauritius	200	258	1	Spain	26,770	829	2
Mexico	24,560	538	2	Spanish Guinea	28	100	2
Morocco	2,688	190	1	Spanish North Africa	3	100	2
Mozambique	1,131	159	2	Sudan	1,568	109	2
Netherland	22,735	1,805	2	Sweden	24,143	3,069	2
New Caledonia	159	1,747	1	Switzerland	15,481	2,550	1
New Zealand	5,558	2,039	2	Syria	1,177	211	2
Niger	350	95	1	Taiwan	3,581	272	2
Nigeria	4,321	71	2	Tanzania	874	73	2
Norway	8,540	2,257	2	Thailand	5,074	155	2
Panama	801	602	2	Togo	229	133	1
Pakistan	13,875	129	2	Trinidad-Tobago	834	826	2
Peru	3,591	290	2	Tunisia	1,011	210	1
Poland	34,563	1,082	2	Turkey	11,522	352	2
Portugal	4,574	488	2	Uganda	774	98	2
Port. Guinea	37	70	2	United Kingdom	108,791	1,976	2
Reunion	273	641	1	Upper Volta	246	49	1

TABLE A-5.-- (Continued)

Country	GNP ($ m.)	PCI ($)	a)	Country	GNP ($ m.)	PCI ($)	a)
U.S.A.	804,000	4,038	2	Yugoslavia	9,479	475	2
U.S.S.R.	228,856	1,184	2	Zaire	1,353	83	1
Venezuela	9,224	986	2	Zambia	1,248	316	2

a) The code number 1 stands for French while the code number 2 stands for a language other than French.

Source: (1) United Nations, Department of Economic and Social Affairs, World Economic Survey: 1969 - 1970, New York: United Nations, 1971

(2) Agency for International Development, Statistics and Report Division, Reports Control Number 137, Washington D.C.: A.I.D., July 25, 1968

TABLE A-6.-- Distance between individual AAS countries and individual importing countries

(Miles)

IMPORTING COUNTRY	EXPORTING COUNTRY													
	Sen.	Cam.	Iv. C.	Mad.	Congo	Nig.	Mali	Up.Vo.	Maur.	Chad	Togo	Dah.	C.A.R.	Gab.
Afars-I.	4,800	5,800	6,000	2,000									2,500	
Algeria	1,740	3,780	2,900	4,530	3,940	700	400	3,600	1,340	2,200	3,220	3,320	3,000	3,720
Angola	2,850	600	900		270					2,500				
Argentina	3,870			5,300					4,000					
Australia	8,300	7,500		3,800										7,400
Austria		5,500	4,400	4,700							5,000			
Benelux	2,600	4,600	3,500	6,400	4,700	4,400		4,200	2,200	4,200	4,000	4,100	5,200	4,700
Brazil			1,900											
Bulgaria							4,000							
Cambodia	9,100			4,200										
Cameroon	2,040		900	3,850	530			1,500	2,440	400	560	460	200	138
Canada	2,960	6,000	4,300	8,500	6,400	5,200				6,300	5,500			6,100
Centr.A.R.	2,500	200	1,500	4,500				2,100		200	1,200			
Chad	2,900	1,000	1,550		1,500				3,300		1,250		200	1,500
China	10,700		3,900		10,700	11,000	11,300	10,600						
Colombia			3,900											
Comoro I.	5,500			300										
Congo	2,650	530	1,200	3,500					3,050	1,400	910			
Cyprus			4,700						3,000					5,400
Czechosl.		5,400	4,600				4,000							
Dahomey	1,550	480	420	2,350		200		400			100			400
Denmark	2,900	4,900	3,800	6,800	5,100	4,700		4,500		4,500		4,400	5,500	5,000
Dom. Rep.														4,000
Ecuador														5,000

TABLE A-6.-- (Continued)

IMPORTING COUNTRY	EXPORTING COUNTRY													
	Sen.	Cam.	Iv. C.	Mad.	Congo	Nig.	Mali	Up.Vo.	Maur.	Chad	Togo	Dah.	C.A.R.	Gab.
Egypt	3,270	5,310	4,450	3,240		5,000	3,900				4,750			
Ethiopia	4,500		6,100	2,000										
Finland		5,500	4,400		5,700								6,100	5,600
France	2,200	4,400	3,100	4,700	4,500	4,000	2,800	3,800	1,800	2,500	3,800	3,900	3,400	4,500
Fr.Poly.	8,200		8,700	9,300										9,200
Gabon	1,980	140	1,100	3,500					2,380	1,200	500	400		
Gambia	50		850	5,100			500	1,600			1,400			
Germany	2,900	4,900	3,800	6,700	5,100	4,700	3,500	4,500	2,500	4,500	4,300	4,400	5,500	5,000
Ghana	1,200		100			500	700	150	1,600		100	200		600
Greece	3,000		3,900	3,700					2,600	2,000	4,450	4,550	2,900	5,700
Guadalupe	2,500	3,300	6,700						2,500					3,400
Guinea	200	1,700	750				100				1,600	1,700		1,780
Haiti														4,200
Honduras			4,500											
Hong Kong	9,950	9,700	9,700	5,000				10,400		10,500		10,200	10,300	
Hungary	3,500	5,600	4,400							2,600				5,700
Iceland	3,200				5,400	5,000								
India	6,500	7,000		2,340							7,500			
Irak			7,600						6,400					
Iran	6,200		7,100	3,300										8,000
Ireland	2,380	4,380	3,280		4,600									5,000
Israel		5,300	4,400	3,300	5,700									5,400
Italy	2,350	4,350	3,250	4,200	4,550	4,150	2,950	3,950	2,000	2,100	3,750	3,850	3,000	4,450
Iv.Coast	950	800		4,200	1,200	900	300	150		1,500	320	420		820
Jamaica														4,300

TABLE A-6.-- (Continued)

IMPORTING COUNTRY	EXPORTING COUNTRY													
	Sen.	Cam.	Iv. C.	Mad.	Congo	Nig.	Mali	Up.Vo.	Maur.	Chad	Togo	Dah.	C.A.R.	Gab.
Japan	11,400	11,400	11,300	6,400	11,300	12,200	12,000	12,000		12,500	12,000	11,900	12,000	11,300
Jordan			4,600											
Kenya	6,100		5,200	750										4,500
Koweit		7,500	7,500											7,600
Lebanon	3,500	5,540	4,600	3,470		5,500		5,300		2,300	2,020			5,600
Liberia	690	1,210	100				500				650			1,200
Libya	2,580		3,700	3,690		700			2,180	700				4,560
Madagascar	5,220	3,800	4,200					3,200						3,600
Malawi	5,350			650										
Malaysia		7,700		3,200								8,200		
Mali	250	1,300	200	5,200	1,500	300		200			520	800		1,200
Malta			3,400	4,100					2,100				3,000	4,500
Martinique	2,500	3,200	3,000	6,700						5,100				3,300
Mauretania	390		1,300	5,500			250	2,100						2,380
Mauritius	5,900		5,000	470										4,300
Mexico		6,400												
Morocco	1,100	3,140	2,050	5,180	3,300		1,800	2,800		2,800	2,580	2,680	3,800	3,080
Mozambique			3,800	350	2,900									3,000
Netherland	2,700	4,700	3,600	6,400	5,000	4,500	3,300	4,300		4,300		4,200	5,300	4,800
New Caled.	10,400	12,000	10,900	6,800						13,000				10,000
New Zeal.	9,450	9,600	10,000	6,600									10,200	9,700
Niger	2,200	1,000	900	5,000	1,500		200	200		400	600	300	1,600	1,200
Nigeria	1,600	120	550	4,000	680	200	800	1,100	2,300	200	420	320		720
Norway	3,200	5,200	4,100	6,800	5,400									5,300
Panama				8,000					3,750					

TABLE A-6.-- (Continued)

IMPORTING COUNTRY	EXPORTING COUNTRY													
	Sen.	Cam.	Iv. C.	Mad.	Congo	Nig.	Mali	Up.Vo.	Maur.	Chad	Togo	Dah.	C.A.R.	Gab.
Pakistan			7,400											
Peru														5,850
Poland	3,300						3,900							
Portugal	1,500		2,400	5,400		3,300				3,200			4,000	3,700
P. Guinea	200													
Reunion	5,800		4,900	500	4,000					5,400				
Rhodesia			4,600											3,800
Rumania			4,450											
Rwanda										6,000				5,100
Saudi Ar.	4,100	6,100	5,200											6,200
Senegal		2,040	947	5,100	2,200	1,500	250	1,700	400	2,700	1,480	1,580	2,500	1,980
Sierra L.	500		550				500				980			1,500
Somalia	6,000		5,500	900										
S. Africa	3,600	2,200		920	1,870					3,000	2,100		2,800	2,000
S. Vietnam				4,100										8,500
Spain	1,500	3,500	2,400	4,800	3,900	3,300		3,100	1,100	2,600	3,900	4,000	3,400	3,600
Sp. Guinea		50	1,000							2,500				100
Sp. N. Af.	580	2,600	1,500		2,780				180	3,300	2,060	2,160		2,560
Sudan		6,260	5,100		6,500					400			1,500	
Sweden	3,100	5,100	4,000	6,900	5,300	4,900	3,700	4,700		4,700		4,600	5,700	5,200
Switzerl.	2,400	4,400	3,300	5,000	4,600	4,200	3,000	4,000		2,800		3,900		
Syria	3,700	5,700	4,600	3,600										
Taiwan			9,900	5,100										
Tanzania			3,800	660	4,000									4,100
Thailand	9,300	8,800			4,400									

TABLE A-6.-- (Continued)

IMPORTING COUNTRY	EXPORTING COUNTRY													
	Sen.	Cam.	Iv. C.	Mad.	Congo	Nig.	Mali	Up.Vo.	Maur.	Chad	Togo	Dah.	C.A.R.	Gab.
Togo	1,480	526	320	2,250	900	400		200				100		500
Trin.+Tob.	2,630													3,300
Tunisia	2,310	4,350	3,400	4,410				4,100						4,290
Turkey		5,150		3,500	5,450			5,000		2,200				
Uganda			5,800											5,000
U.K.	2,300	4,300	3,200	6,100	4,500	4,100	2,900	3,900		3,900	3,700	3,800	4,900	4,400
Upper V.	1,560	1,200	200	5,000	1,200	200	200			1,600	200	600		900
U.S.A.	3,300	5,600	4,200	8,000	6,000	5,100	3,900	4,900	3,200	6,200	5,000	5,100	6,300	5,700
U.S.S.R.	3,650	5,650	4,550	4,300	6,000	5,450	4,200							5,750
Venezuela	2,920													
Yugoslavia		5,100		4,200	5,400	5,100	3,500	4,900		2,200	4,500		3,000	
Zaire	2,840	700	1,400	3,300	140				3,240	1,600	1,360		200	400
Zambia			2,300	1,150										2,500

Source: (1) Department of the Navy Oceanographic Office, Distance between ports - 1965, Washington D.C.: U.S. Government Printing Office, 1965

(2) P.H.ADY and the Cartographic Department of the Calendron Press, Oxford Regional Economic Atlas - Africa, Oxford: Calendron Press, 1965

TABLE A7.-- Results of the test of the Linder model for individual AAS countries

1. Cameroon

CST[a)] group	Regression coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
Inter-mediate goods (C1)	C PCI D L P	9.021 - .193 - .526 1.145 2.958	 - .115 - .243 .207 .432	 - .728 -1.744 1.437 3.509	 .471 .088 .158 .001	.5028	.0005	43
Consumer goods (C2)	C PCI D L P	17.073 - .339 -1.702 1.577 2.137	 - .146 - .562 .209 .223	 -1.283 -4.993 2.073 2.092	 .207 .0005 .044 .042	.6126	.0005	42
G0-C1	C PCI D L P	-9.675 - .404 1.792 .977 3.609	 - .320 .778 .240 .822	 -2.000 4.665 1.430 5.294	 .058 .0005 .166 .0005	.6288	.0005	23
G2	C PCI D L P	8.030 - .020 - .584 .267 .876	 - .016 - .356 .062 .174	 - .071 -1.900 .303 .933	 .944 .067 .764 .358	.2050	.109	32
G6-C1	C PCI D L P	9.100 - .604 - .551 3.118 2.591	 - .254 - .193 .396 .306	 -1.305 -1.209 2.368 2.054	 .204 .239 .026 .051	.6304	.0005	24
G6-C2	C PCI D L P	13.957 - .702 -1.305 2.424 1.200	 - .279 - .463 .293 .142	 -1.303 -2.450 2.033 1.108	 .206 .023 .054 .280	.6920	.0005	22

TABLE A7.-- (Continued)

1. (Continued)

CST[a)] group	Regression coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
G7	C	14.370						
	PCI	- .431	- .204	-1.936	.063			
	D	-1.619	- .583	-6.180	.0005	.8034	.0005	27
	L	2.598	.359	3.883	.001			
	P	2.099	.253	2.664	.013			
G8	C	15.162						
	PCI	- .646	- .228	-1.142	.267			
	D	-1.335	- .466	-2.401	.026	.5678	.002	20
	L	1.683	.189	1.195	.246			
	P	2.187	.225	1.352	.192			

2. Madagascar

C1	C	10.456						
	PCI	.105	.071	.401	.691			
	D	-1.062	- .333	-1.970	.056	.3259	.005	37
	L	2.567	.471	3.414	.002			
	P	.853	.104	.727	.472			
C2	C	11.637						
	PCI	.078	.044	.357	.722			
	D	-1.165	- .285	-2.533	.014	.4339	.0005	61
	L	4.129	.622	5.955	.0005			
	P	.313	.025	.247	.805			
G0-C2	C	11.824						
	PCI	- .070	- .040	- .286	.776			
	D	-1.056	- .262	-2.085	.042	.3721	.0005	54
	L	3.509	.530	4.472	.0005			
	P	.350	.030	.259	.797			

TABLE A7.-- (Continued)

2. (Continued)

CST[a)] group	Regression coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
G2	C	11.803				.3786	.008	28
	PCI	- .152	- .110	- .517	.609			
	D	-1.194	- .408	-2.091	.046			
	L	1.546	.295	1.867	.072			
	P	.480	.068	.408	.686			
G6-C2	C	18.341				.6588	.0005	25
	PCI	.313	.221	1.249	.223			
	D	-2.400	- .807	-4.693	.0005			
	L	2.027	.366	3.028	.006			
	P	.665	.090	.734	.470			
G7	C	14.439				.8612	.0005	17
	PCI	- .133	- .084	- .670	.512			
	D	-1.900	- .579	-5.100	.0005			
	L	3.786	.586	6.279	.0005			
	P	- .441	- .053	- .502	.622			
G8	C	18.310				.7937	.0005	19
	PCI	- .206	- .115	- .752	.462			
	D	-2.288	- .663	-4.330	.0005			
	L	3.041	.421	3.979	.001			
	P	.520	.060	.509	.617			

TABLE A7.-- (Continued)

3. Senegal

CST[a)] group	Regression Coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
C1	C	10.765						
	PCI	.272	.144	1.088	.281			
	D	-1.088	- .387	-3.056	.003	.2666	.001	57
	L	2.432	.427	3.351	.001			
	P	- .596	- .081	- .650	.519			
C2	C	18.854						
	PCI	- .575	- .229	-2.901	.005			
	D	-1.715	- .444	-5.747	.0005	.6618	.0005	65
	L	3.785	.494	6.298	.0005			
	P	.602	.058	.733	.466			
G0-C1	C	5.515						
	PCI	.602	.315	1.392	.175			
	D	- .628	- .214	-1.012	.321	.1201	.466	27
	L	1.069	.178	.858	.399			
	P	-2.091	- .319	-1.609	.119			
G0-C2	C	13.960						
	PCI	- .519	- .220	-1.759	.087			
	D	-1.185	- .385	-3.173	.003	.5489	.0005	37
	L	3.657	.533	4.652	.0005			
	P	- .465	- .061	- .500	.620			
G2	C	8.777						
	PCI	.128	.069	.357	.724			
	D	- .926	- .384	-2.143	.040	.2072	.115	31
	L	1.075	.195	1.114	.274			
	P	.759	.117	.663	.512			
G4	C	8.079						
	PCI	.532	.195	1.252	.219			
	D	-1.174	- .409	-2.759	.009	.4132	.001	36
	L	4.344	.642	4.690	.0005			
	P	-1.843	- .248	-1.701	.098			

TABLE A7.-- (Continued)

3. (Continued)

CST[a)] group	Regression coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
G5-C2	C	14.129						
	PCI	-1.440	- .524	-4.347	.0005			
	D	- .674	- .231	-2.010	.055	.7289	.0005	25
	L	2.861	.426	3.270	.003			
	P	.007	.001	.007	.994			
G6-C1	C	5.432						
	PCI	- .561	- .456	-2.385	.026			
	D	- .136	- .074	- .457	.652	.4896	.003	23
	L	1.335	.337	1.929	.066			
	P	.627	.148	.876	.390			
G6-C2	C	16.789						
	PCI	- .692	- .282	-2.271	.028			
	D	-1.497	- .383	-3.434	.001	.5868	.0005	42
	L	2.467	.333	2.861	.007			
	P	1.669	.191	1.748	.088			
G7	C	17.146						
	PCI	- .571	- .250	-2.445	.018			
	D	-1.645	- .489	-5.323	.0005	.6513	.0005	48
	L	2.703	.406	4.113	.0005			
	P	- .392	- .047	- .488	.628			
G8	C	17.288						
	PCI	-1.572	- .572	-4.410	.0005			
	D	- .878	- .247	-1.854	.073	.5932	.0005	32
	L	1.980	.242	1.889	.068			
	P	.382	.041	.333	.742			

TABLE A7.-- (Continued)

4. Mali

CST[a)] group	b)	Value	Beta weight	t	p	Overall regression R^2	p	Degr. of free-dom
C1	C	10.610						
	PCI	- .113	- .095	- .411	.686			
	D	- .860	- .476	-1.698	.106	.4917	.009	19
	L	.728	.143	.611	.549			
	P	.566	.111	.553	.586			
C2	C	27.722						
	PCI	- .530	.251	1.163	.261			
	D	-4.022	-1.137	-4.828	.0005	.8205	.0005	17
	L	- .751	- .087	- .658	.520			
	P	.394	.044	.351	.730			
G2	C	9.589						
	PCI	- .200	- .139	- .570	.576			
	D	- .667	- .347	- .846	.410	.3448	.128	16
	L	- .045	- .009	- .027	.979			
	P	1.181	.235	.912	.375			

5. Dahomey

C1	C	5.313						
	PCI	- .388	- .404	-1.718	.101			
	D	.003	.002	.009	.993	.4754	.009	20
	L	1.137	.311	1.601	.125			
	P	1.034	.272	1.553	.136			
C2	C	17.526						
	PCI	- .493	- .307	-1.798	.090			
	D	-1.772	- .622	-3.831	.001	.7614	.0005	17
	L	.065	.009	.059	.954			
	P	1.054	.145	1.099	.287			

TABLE A7.-- (Continued)

5. (Continued)

CST[a)] group	Regression coefficients					Overall regression		Degr. of free- dom
	b)	Value	Beta weight	t	p	R^2	p	
G2	C	- .289						
	PCI	- .638	- .455	-1.584	.133			
	D	.706	.381	1.345	.197	.4192	.056	16
	L	2.558	.521	2.456	.026			
	P	.455	.090	.444	.663			

6. Ivory Coast

C1	C	6.026						
	PCI	- .135	- .091	- .675	.503			
	D	- .189	- .092	- .660	.512	.2553	.002	57
	L	.287	.061	.461	.647			
	P	2.541	.430	3.319	.002			
C2	C	14.634						
	PCI	- .255	- .116	-1.424	.158			
	D	-1.260	- .387	-4.495	.0005	.5434	.0005	79
	L	2.867	.404	4.879	.0005			
	P	1.453	.147	1.725	.089			
G0-C1	C	- .909						
	PCI	- .847	- .524	-1.569	.133			
	D	1.096	.605	1.827	.083	.2748	.171	19
	L	.940	.193	.758	.458			
	P	2.027	.437	1.687	.108			
G0-C2	C	10.196						
	PCI	- .310	- .158	-1.612	.111			
	D	- .735	- .251	-2.411	.018	.3793	.0005	74
	L	2.322	.364	3.652	.0005			
	P	1.294	.147	1.437	.155			

TABLE A7.-- (Continued)

6. (Continued)

CST[a)] group	Regression coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
G2	C PCI D L P	4.942 - .207 - .038 .296 1.858	 - .152 - .020 .069 .360	 -1.053 - .132 .466 2.511	 .297 .895 .643 .015	.1876	.027	52
G4	C PCI D L P	6.633 - .247 - .610 .540 2.797	 - .176 - .358 .122 .616	 - .900 -2.023 .869 4.500	 .378 .056 .395 .0005	.7316	.0005	21
G5-C2	C PCI D L P	12.730 - .567 -1.409 4.691 1.150	 - .197 - .411 .557 .136	 -1.287 -2.938 4.574 1.085	 .210 .007 .0005 .289	.6980	.0005	24
G6-C1	C PCI D L P	7.785 - .568 - .319 .547 2.559	 - .346 - .141 .105 .440	 -1.623 - .768 .618 2.787	 .115 .449 .541 .009	.4602	.001	31
G6-C2	C PCI D L P	14.513 - .414 -1.334 2.545 2.129	 - .179 - .415 .358 .229	 -2.064 -4.609 4.211 2.622	 .043 .0005 .0005 .011	.6196	.0005	62
G7	C PCI D L P	13.949 - .415 -1.351 2.472 .734	 - .213 - .503 .404 .099	 -2.410 -5.619 4.702 1.117	 .020 .0005 .0005 .270	.7033	.0005	47

TABLE A7.-- (Continued)

6. (Continued)

CST[a)] group	Regression coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
G8	C	15.688						
	PCI	- .436	- .189	-2.206	.033			
	D	-1.588	- .527	-5.935	.0005	.7535	.0005	44
	L	2.583	.363	4.323	.0005			
	P	1.104	.131	1.561	.126			

7. Togo

C1	C	4.048						
	PCI	- .368	- .270	- .718	.483			
	D	- .016	- .010	- .035	.972	.1865	.478	16
	L	1.028	.250	.923	.370			
	P	1.045	.205	.691	.499			
C2	C	15.366						
	PCI	- .650	- .337	-2.005	.057			
	D	-1.377	- .487	-3.317	.003	.6496	.0005	23
	L	1.624	.253	1.930	.066			
	P	.217	.024	.143	.887			
G6-C2	C	16.471						
	PCI	-1.098	- .460	-3.281	.004			
	D	-1.384	- .429	-3.247	.004	.7121	.0005	20
	L	2.156	.298	2.284	.033			
	P	.454	.025	.179	.860			

TABLE A7.-- (Continued)

8. Chad

CST[a)] group	Regression coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
C1	C	.656						
	PCI	- .568	- .448	-1.641	.113			
	D	.780	.367	1.311	.201	.1290	.445	26
	L	.401	.094	.481	.634			
	P	1.401	.266	1.250	.223			
C2	C	9.208						
	PCI	-1.532	- .701	-3.468	.002			
	D	.154	.041	.200	.843	.5371	.001	23
	L	1.741	.201	1.327	.198			
	P	1.080	.108	.605	.551			
G2	C	- .325						
	PCI	- .669	- .519	-1.946	.063			
	D	.969	.449	1.640	.113	.1685	.290	26
	L	.459	.106	.555	.584			
	P	1.611	.301	1.448	.160			

9. Gabon

C1	C	9.956						
	PCI	- .446	- .195	-1.715	.091			
	D	- .444	- .190	-1.692	.095	.2615	.0005	65
	L	1.721	.357	3.213	.002			
	P	- .110	- .014	- .127	.900			
C2	C	15.997						
	PCI	- .296	- .096	- .418	.681			
	D	-1.284	- .476	-2.168	.045	.2985	.174	17
	L	- .590	- .081	- .367	.718			
	P	-1.317	- .153	- .661	.517			

TABLE A7.-- (Continued)

9. (Continued)

CST[a)] group	Regression coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
G2	C	7.635						
	PCI	- .292	- .133	- .592	.561			
	D	- .593	- .238	-1.061	.302	.1629	.470	19
	L	1.362	.225	1.004	.328			
	P	.315	.052	.223	.826			
G6-C1	C	10.494						
	PCI	- .495	- .206	-1.802	.076			
	D	- .487	- .181	-1.567	.122	.2805	.0005	63
	L	1.853	.364	3.208	.002			
	P	- .504	- .062	- .548	.586			

10. Upper Volta

C1	C	7.204						
	PCI	- .412	- .213	- .993	.330			
	D	- .280	- .121	- .544	.592	.3021	.062	24
	L	1.658	.277	1.400	.174			
	P	1.165	.183	.926	.364			
C2	C	18.342						
	PCI	- .595	- .250	-1.785	.089			
	D	-1.900	- .647	-4.672	.0005	.8122	.0005	21
	L	.430	.056	.471	.643			
	P	.785	.101	.955	.351			
G2	C	5.137						
	PCI	- .411	- .212	-1.010	.324			
	D	- .110	- .046	- .208	.837	.3707	.031	22
	L	2.395	.401	2.041	.053			
	P	1.079	.173	.851	.404			

TABLE A7.-- (Continued)

10. (Continued)

CST[a)] group	Regression coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
G6-C2	C PCI D L P	15.088 - .439 -1.700 1.072 - .231	 - .201 - .630 .149 - .032	 -1.062 -3.237 .970 - .221	 .303 .005 .346 .828	.7358	.0005	17

11. Niger

C1	C PCI D L P	10.122 .238 -1.132 - .032 .742	 .179 - .513 - .006 .137	 .741 -1.810 - .022 .587	 .467 .084 .982 .563	.2425	.173	22
G2	C PCI D L P	7.691 .182 - .839 .636 .724	 .129 - .351 .104 .125	 .505 -1.189 .364 .465	 .619 .248 .719 .647	.1934	.317	21

12. Mauretania

C2	C PCI D L P	17.295 .219 -2.052 3.250 -4.851	 .103 - .408 .441 - .543	 .468 -2.127 2.184 -2.535	 .645 .047 .042 .020	.4063	.034	19
G0-C2	C PCI D L P	17.168 .218 -2.036 3.251 -4.836	 .103 - .405 .442 - .542	 .465 -2.113 2.187 -2.529	 .647 .048 .041 .020	.4053	.035	19

TABLE A7.-- (Continued)

13. Central African Republic

CST[a)] group	Regression coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
C1	C PCI D L P	4.731 - .435 .092 1.032 1.452	 - .334 .046 .228 .298	 -1.073 .155 .960 1.349	 .295 .879 .347 .191	.3150	.070	22
G2	C PCI D L P	4.679 -1.132 .685 .397 1.899	 - .755 .370 .090 .417	 -1.942 1.067 .331 1.667	 .068 .300 .745 .113	.3858	.056	18

14. Congo

C1	C PCI D L P	2.538 - .018 .085 .822 - .042	 - .012 .033 .155 - .007	 - .048 .142 .666 - .032	 .962 .888 .512 .975	.0223	.965	25
C2	C PCI D L P	13.520 - .499 -1.282 2.425 1.139	 - .233 - .399 .363 .144	 -1.559 -3.069 2.480 1.168	 .131 .005 .020 .253	.6823	.0005	27
G2	C PCI D L P	5.814 - .379 - .216 .740 .127	 - .242 - .072 .138 .021	 -1.003 - .305 .562 .098	 .327 .763 .580 .923	.1350	.504	22

TABLE A7.-- (Continued)

14. (Continued)

CST[a)] group	Regression coefficients					Overall regression		Degr. of free-dom
	b)	Value	Beta weight	t	p	R^2	p	
G6-C2	C	9.348						
	PCI	- .420	- .319	-1.694	.105			
	D	- .862	- .411	-2.665	.014	.6420	.0005	21
	L	.879	.193	1.025	.317			
	P	1.261	.259	1.656	.113			

a) The CST code used refers to the following groups of commodities:

C1 = Intermediate goods and semi-manufactures

C2 = Consumer goods

G0-C1 = Intermediate goods and semi-manufactures in CST Group 0

G0-C2 = Consumer goods in CST Group 0

G5-C2 = Consumer goods in CST Group 5

G6-C1 = Intermediate goods and semi-manufactures in CST Group 6

G6-C2 = Consumer goods in CST Group 6.

b) The regression coefficients are designated as follows:

C = Constant

PCI = Absolute difference between the per capita income of the exporting country and that of the importing country

D = Distance between the exporting country and the importing country

L = Binary variable for identity or non-identity of languages spoken in the importing and exporting countries

P = Binary variable showing whether a trade agreement exists between the importing and exporting countries.

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