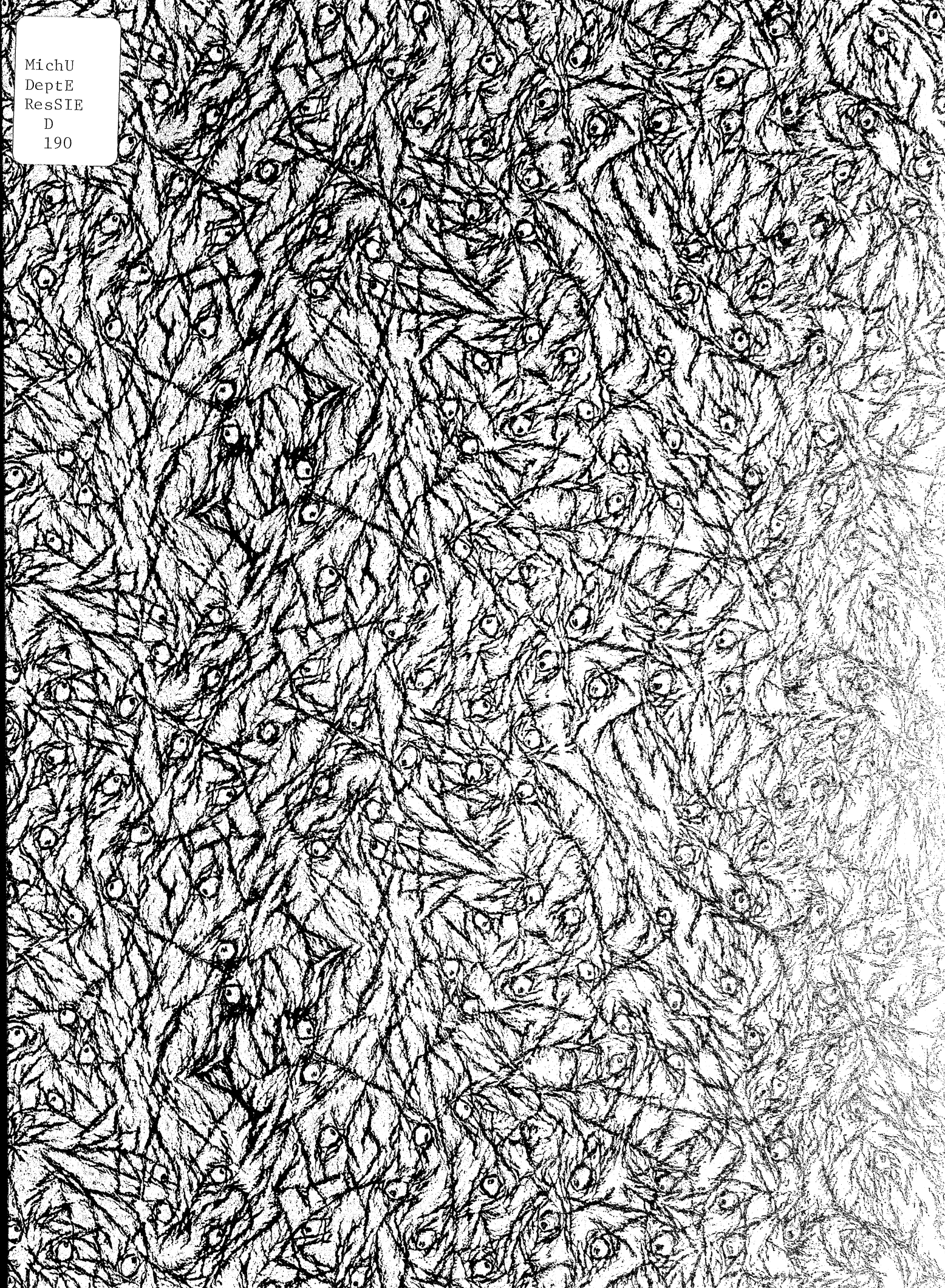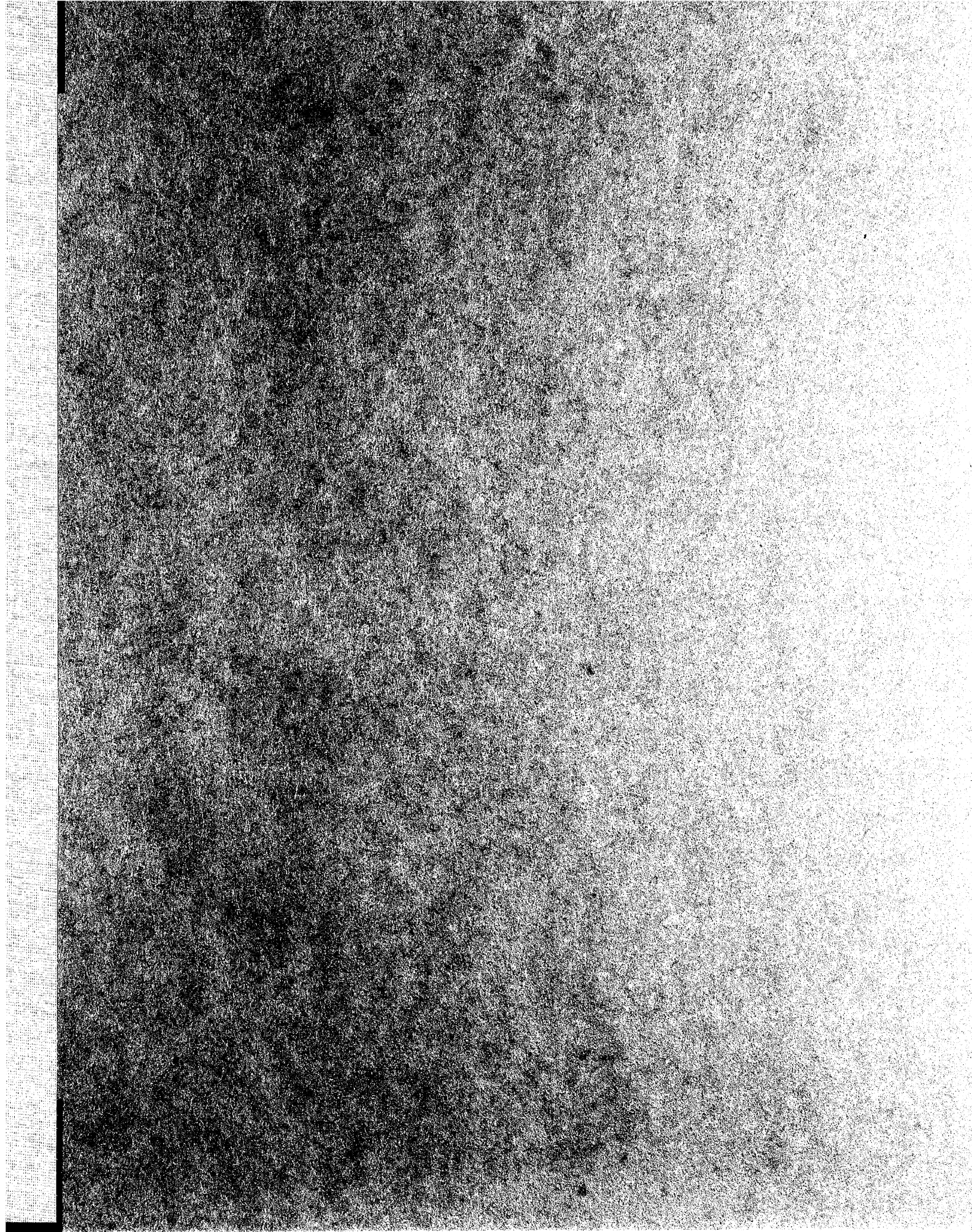# RESEARCH SEMINAR IN INTERNATIONAL ECONOMICS

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SEMINAR DISCUSSION PAPER NO. 190

TRADE PREFERENCES FOR DEVELOPING COUNTRIES: A SURVEY OF RESULTS*

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October 1986

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I. Introduction

Over the past thirty years, preferential tariff treatment of the exports of developing countries has become a salient feature of the international trading system. Many of the arrangements began as extensions of current or former colonial relationships, but now have expanded to the point where virtually all developing countries enjoy some sort of special access to the markets of the industrialized countries. The purpose of this paper is to evaluate the empirical evidence on the effect of differential treatment of developing country exports, and to draw some larger lessons concerning the position of the developing countries in world trade.

The most publicly stated justification of preferential treatment of developing country exports is that "equal treatment of unequals is inherently unequal." Thus, developing countries have been exempted from requirements of reciprocity and multilateralism embodied in the GATT. One might reasonably interpret the foregoing statement as a rhetorical form of the infant industry argument. Thus, trade preferences could be used in cases where other forms of infant industry protection are not available. A second justification is that trade preferences may be expected to stimulate local processing and help diversify the economies of developing countries. Third, preferential tariff reductions could provide needed foreign exchange for exchange controlled countries. Finally, preferences may be offered to obtain political influence or to increase economic stability in a volatile region of the world.

From a theoretical perspective, the effect of a preferential tariff will vary depending on the nature of the market involved. The first case to consider is that of a small developing country which exports only a small fraction of the preference-granting country's

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imports of the preferred product. Marginal consumption in the donor country is imported from third-country suppliers at the prevailing world price plus the tariff. Under these circumstances relative prices in the donor country are unaffected so that there is no trade creating effect. The preferential tariff is purely trade diverting, which reduces the welfare of the donor country. The beneficiary is made better off by this arrangement, as it can increase production up to the point where the supply cost equals the world price plus the MFN tariff of the donor country. All of the economic objectives of the preferential tariff are met: protection for the infant industry is provided, the developing country earns more export revenue, and the transfer of tariff revenue from the donor improves the terms of trade of the beneficiary.

A second possibility is that, within a product category, the developing country may be able to more than satisfy consumers in the donor-country market. In this case, marginal imports by the donor are tariff free. However marginal production by the beneficiary is supplied on the world market at the prevailing world price. Thus, the preferential tariff is purely trade creating, improving the welfare of the donor. In contrast, production by the beneficiary is not affected. The beneficiary only gains from the transfer of tariff revenue from the donor on infra-marginal exports. The objective of providing foreign exchange to the beneficiary is met, but there is no protection provided to the infant industry, and there is no incentive to domestic processing or industrialization.

Both trade creation and trade diversion emerge in models in which the developing country supplies a product which is differentiated from the good being produced both by domestic producers in the donor country and by third-country suppliers. In this case the beneficiary may supply both the donor country and a third country, and the donor may continue to import from both the beneficiary and a third country. Consequently, the preferred import will displace both domestic production and nonpreferred suppliers. The tilt in demand towards the product produced by the beneficiary will increase its price on the world market and stimulate production. Thus, all objectives of preferential treatment

will be satisfied. The impact on the donor depends on the relative size of trade creation and trade diversion.

The preceding results will break down if trade in the preferred product is governed by a cartel arrangement, or if preferred imports are bound by quantitative restrictions. In these circumstances, production in the beneficiary will not be stimulated. However, the transfer of tariff revenue to the beneficiary will provide foreign exchange as long as the importer is not able to capture the rent from the preferential treatment.

Objections to preferential treatment come primarily from displaced domestic producers and nonpreferred third-country suppliers. More meaningful questions are raised by those concerned with the effect of special treatment on the world trading system. First, preferential tariff rates are a violation of the principle of nondiscrimination, which weakens discipline under the GATT. Second, preferential tariff reductions have spawned an administrative apparatus designed to minimize its trade effects. Instruments initially designed to control preferential trade, once in place, may easily be extended to limit MFN trade, further undermining GATT discipline.

A third criticism concerns the effect of preferences on the developing countries. None of the preferential schemes for developing countries currently in place requires reciprocity.[1] Thus, the pressure to induce the developing countries to remove distorting and economically inefficient tariff protection on their own imports is diminished. However, this is not strictly true for countries which impose import licensing as a method of allocating foreign exchange. Increased export earnings lower the premium on foreign exchange, which lowers the implicit tariff on imports. Though the statutory tariffs are not changed, the effective tariff equivalent applying to imports is lowered.

There are several techniques which have been used to evaluate empirically the effects of a preferential tariff. Among the most popular methods is the ex ante partial

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[1]The only possible exception is the exchange of tariff concessions between the EEC and some of the developing countries around the Mediterranean which precede full membership in the EEC.

equilibrium approach first employed by Baldwin and Murray (1977) in studying the Generalized System of Preferences (GSP). This technique assumes that imports from beneficiaries and nonbeneficiaries are imperfect substitutes (so that preferential treatment has both trade creating and trade diverting effects for the donor country), the elasticity of substitution between imports from preferred and nonpreferred sources is equal to the elasticity of substitution between imports and the domestically produced good, and that supply is infinitely elastic in the donor and recipient countries. This model ignores any general equilibrium price or exchange rate repercussions which might offset the effects of preferential treatment.

Changes in trade derived from the partial equilibrium framework can be used to calculate employment effects. This approach assumes that every dollar of new imports displaces a dollar of domestic production. The labor coefficients are then applied to the change in production to determine the number of jobs lost due to preferential treatment. The most serious shortcoming of partial equilibrium analysis is that it ignores the essential message of general equilibrium international trade theory. Price and exchange rate movements are expected to offset trade imbalances which result from tariff reductions and negate any decline in gross employment. Consequently, the change in production, employment, and trade calculated from partial equilibrium models should not be taken literally. Rather, these models should be used only to rank industries affected by tariff preferences.

Computational general equilibrium (CGE) models have been developed to answer the criticisms of the partial equilibrium approach. These models are essentially theoretical trade models capable of analytical solution which have been specified, drawing on the empirical literature. CGE models have been used to simulate various trade policy initiatives. While these models resolve some of the problems associated with partial equilibrium analysis, they nonetheless introduce some problems of their own. These issues will be discussed further below.

A second class of models focuses on ex post analysis of the trade data. The most simple of these examines the evolution of market shares for preferred and nonpreferred suppliers. However, this procedure does not lend itself well to statistical tests of significance.

The simplest statistical approach is the gravity model, which has a binary preference variable, along with other variables such as GNP and distance, which are regressed on bilateral trade flows. More sophisticated studies test the ability of the preference margin and capital intensity to explain trade. The most interesting of these models tests the role of the preference margin in explaining the composition of exports, focusing in particular on the ratio of processed to unprocessed exports.

Below, the various preferential agreements are described and the relevant empirical research is reviewed. This is followed by a discussion of the evidence and directions for future research.

II. Empirical Results on the Effects of Preferential Tariffs

A. U.S. Preferences for the Philippines: 1900–1944

Until fairly recently, the U.S. has resisted differential tariff treatment. However, the U.S. did grant special preferences to exports from the Philippine Islands between 1900 and 1944. This may seem somewhat removed from the issue at hand, but the empirical results of Badgett (1978) shed some light on the effect of tariff preferences.

Tariff preferences were granted to the Philippines in two stages. Tariffs on all products were first reduced by 25% in 1902, and then reduced to zero in 1908. Quotas were imposed on sugar and cordage in 1934 and 1935, respectively, and preferential treatment was terminated in 1940.

Preferential treatment was intended to stimulate local processing of raw materials. To test the success of the program, Badgett looked at the effect of preferences on the ratio of processed to raw material exports for three products for which the raw product constituted 80% of the material cost. These products were hard fiber abaca which is

processed into hard fiber cordage, copra which is processed into coconut oil, and raw sugar which is processed into refined sugar. For each of these product categories, regression analysis was used to test the power of tariff preferences in explaining the composition of exports to the United States, the rest of the world, and total exports by the Philippines.[2]

The results for cordage indicated that the tariff preferences resulted in a shift in Philippine exports of processed products away from the rest of the world towards the United States. However, the composition of total exports was unaffected. This is not a surprising result. Since the Philippines were a major world supplier of cordage, exporting to 25 countries in addition to the United States, even with preferential treatment, the Philippines continued to export to the rest of the world. At the margin, the price received by Philippine suppliers was not the preferred price in the U.S. market, but rather the price which prevailed on the world market. Thus, the price received for marginal output by Philippine suppliers was not affected by the preferential tariff. As a result, the preferential treatment of Philippine exports in the U.S. market of processed products merely caused a redirection of exports towards the U.S. market, without an increase in total exports. Philippine producers gained only from the transfer of tariff revenue from the U.S.

In contrast, the Philippines exported little or no coconut oil to countries other than the United States. In this case, marginal production was exported to the preferred market, so we would expect that preferences would have increased the price received by the seller for all output. Consequently, the share of processed products in total exports would be expected to have risen. Regression results supported this conclusion. The preference variable was a significant determinant of the degree of processing of total exports. The empirical results indicated that exports of coconut oil increased by 70%, as compared with 9% for cordage and 26% for sugar.

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[2]In addition to the preferential margin, other explanatory variables included were the price of processed relative to raw materials, capital stock used in processing, and a World War I dummy.

The implications of this study are clear. Preferential treatment of fairly homogeneous products can stimulate production only if the beneficiary exports exclusively to the preferred market, as is the case for coconut oil. However, if the beneficiary is a major supplier, then preferential treatment generates a transfer from the donor to the beneficiary, but does not increase total production, as was the case for cordage.

B. The Caribbean Basin Initiative

The Caribbean Basin Economic Recovery Act of 1983 (CBI) provides for economic assistance to most of the countries of the Caribbean Basin (CB) by the United States.[3] In addition to preferential tariff treatment of beneficiary exports, the aid package includes several provisions designed to stimulate direct investment by U.S. firms. The accelerated cost recovery system is extended to all new U.S. investments in the region and insurance coverage of new investment is increased through the Overseas Private Investment Corporation. Direct assistance, in the form of an additional $350 million in concessional aid, is provided through the Economic Support Fund Program and through the Development Assistance and P.L. 480 programs.

Early work on the economic effects of complete tariff removal on CB exports to the U.S. was undertaken by Pelzman and Rousslang (1982). In this study partial equilibrium import demand equations were used to estimate the impact of tariff removal on U.S. imports from this region. Input-output analysis was then used to relate increased imports to their direct domestic employment effects.

Pelzman and Rousslang estimated that CB exports to the U.S. would increase by $675.1 million and employment would decline by 18,132 jobs. This increase is overwhelmingly accounted for by a single product category, apparel from purchased

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[3]The countries and provinces of the region are Anguilla, Antigua and Barbuda, the Bahamas, Barbados, Belize, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, St. Lucia, St. Vincent, Surinam, Trinidad and Tobago, Cayman Islands, Montserrat, Netherlands Antilles, St. Christopher-Nevis, Turks and Caicos Islands, the British Virgin Islands, and the Grenadines. All of these countries, except Cuba and Nicaragua, qualify for preferential treatment.

materials. Imports in this product category alone were estimated to increase by $445.7 million, which would result in a decline in employment in the U.S. of 14,100 workers. Industries of secondary importance were knitting mills, leather goods, sporting goods, games and toys, miscellaneous plastic products, hosiery, electronic computing equipment, shoes, drugs, and rubber footwear.

A couple of qualifications should be considered, however. The first is that this study did not incorporate nontariff barriers which constrain trade. Thus, the reported change in imports of apparel would emerge only if the countries of the CB were not bound by the Multi-Fiber Arrangement (MFA). Secondly, this study did not incorporate all of the general equilibrium ramifications of the tariff reductions. In particular, exchange rate fluctuations would be expected to eliminate any aggregate changes in employment. Nonetheless, these results give an indication of the ranking of employment changes by industry.

The initial legislation effecting the CBI, passed by the U.S. House of Representatives in 1982, was fairly generous. However, it failed in the Senate. When the law was revived in 1983, several products were excluded, including textiles and apparel covered by the MFA; leather, plastic, and rubber gloves; luggage, handbags, and flat goods; leather wearing apparel; most footwear; canned tuna;[4] and petroleum products. Further, beef quotas and quotas on sugar imports from Panama, Guatemala, and the Dominican Republic remained in effect.

The potential for the CBI to significantly affect CB exports is obviously limited by the products which are excluded from preferential treatment, most notably petroleum products, textiles, and apparel. Results from Pelzman and Rousslang, presented above, indicate that two-thirds of the export gains by the beneficiaries was expected to be in apparel. In addition, low MFN tariff rates on the remaining trade further weaken the potential for preferences. U.S. imports from the CB were $10.4 billion in 1980. Of this,

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[4]Canned tuna was excluded to protect the tuna industry in Puerto Rico.

$6.4 billion entered duty-free under MFN conditions. Another $2.7 billion in petroleum exports are excluded from the CBI. Textiles, sugar, and beef are controlled by quantitative limits, and sugar is already duty-free under the GSP. Consequently, the CBI affects trade in only 100 7-digit product categories (out of a total of about 6,000), valued at $425 million, or 4% of total U.S. imports from the region. Of this, ten product categories account for 89% of eligible trade.

Empirical evaluations of the CBI are limited to partial equilibrium studies. Sawyer and Sprinkle (1984) used the Baldwin and Murray approach, and found that imports from the twenty top product categories would rise by an estimated $97 million. Imports in all other product categories would rise by only $12 million. Most of the increase in imports, $102 million, is the result of trade creation and the remaining $7 million is the result of trade diversion. Thus, the CBI is expected to increase U.S. imports from the region by only 1%. Imports of fresh beef are estimated to increase by $56 million, which is 50% of the total increase.[5] Exports of industrial products consist primarily of resistors, capacitors, and integrated circuits.

A second study by Rousslang and Lindsey (1984) related forgone tariff revenue due to the CBI to the trade and welfare effects. Results from this study indicate that CB exports to the U.S. would increase between $37 million to $81 million, depending on elasticity assumptions. These results are based on trade in 1982. The welfare gain by the beneficiaries was estimated to be between $15 million to $24 million, which is only 6% of aid in the form of direct grants to these countries. Exports increase primarily in beef, sugar, fruit juices, rum, tobacco, hormones, television and radio apparatus and parts, and electronic tubes.[6]

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[5]It should be noted that the increase in CB beef exports may be constrained by beef import quotas in the U.S.

[6]A shortcoming of this study is that the largest source of the gain is in sugar exports. However, sugar exports are controlled by quotas and sugar is duty-free under the GSP.

Thus, it is clear that the CBI suffers from limitations which characterize most of the other preferential schemes as well. Limits to the eligibility list remove products which are potentially trade creating, while low MFN tariffs give rise to little trade diversion. As a result, direct aid, rather than aid through trade, is the most significant component of the CBI.

C. The EEC and the Associated African Countries

The former colonies of the members of the EEC are at the top of the hierarchy of preferential arrangements between the EEC and the developing countries. France, in particular, wanted to maintain close ties with its former African colonies, and so pressed to extend preferences throughout the Community which France had already granted. As a result, the former African colonies of Belgium, France, Italy, and the Netherlands,[7] through association with the EEC, agreed to reciprocal preferences and obtained direct economic aid and technical assistance under the 1958 Treaty of Rome. The status of the Associated African Countries (AAC) was renewed under the Yaoundé Convention in 1963, and again in 1969.

Exports by the AAC of manufactured products and agricultural products not covered by the CAP received duty-free treatment in the EEC. Products covered by the CAP were not subject to the specific duty, but the variable levy was still imposed. The EEC also agreed to phase out quota restrictions. In return, the AACs were to grant reverse preferences to imports from the EEC, though reciprocity could be waived for balance of payments or development reasons. Quotas were also to be made nondiscriminatory among the members of the EEC.

Exports by the AAC to the EEC were dominated by tropical products and raw materials on which EEC tariffs were already quite low. Between 1959 and 1964 the trade

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[7]The Associated African Countries (AAC) were Burundi, Cameroon, Central African Republic, Chad, Congo, Gabon, Dahomey, Ivory Coast, Madagascar, Mali, Mauritania, Niger, Rwanda, Senegal, Somalia, Togo, Upper Volta, and Zaire. Mauritius was added in 1972.

weighted average tariff on AAC exports to the EEC declined only from 4.2% to 3.4%. As a result of the nature of trade between the two groups of countries, trade preferences tended to be strongly trade diverting. The EEC excluded agricultural products produced domestically, and the AAC had little ability to produce manufactured products which compete with domestic producers.

There are several empirical studies of the effects of preferential treatment of the AAC. Aitken and Obutelewicz (1976) tested for the significance of a binary preference variable in explaining the pattern of trade between the EEC and a cross-section of preferred and nonpreferred countries.[8] The model was estimated annually for 1958 through 1971. The first year, 1958, was used as a reference year, as the EEC's preferential arrangement was not yet effective. However, the preferential variable for France was expected to be significant as French preferential treatment of African exports pre-dates the Treaty of Rome.

The regression analysis for 1958 indicated that preferential treatment increased French imports from the AAC by $410.2 million. This figure increased over the sample period to $511.9 million in 1971. The coefficient of the preferential dummy variable for the EEC (excluding France) became significantly different from its 1958 value in 1963, and increased until 1971.[9] Non-French preferential treatment accounted for $62.9 million of EEC imports from the AAC in 1963 and $234.4 million in 1971.

Between 1958 and 1971, gross trade creation attributable to preferences offered by France, as a share of total EEC imports from the AAC, declined from 85% to 57%. Over the same period, gross trade creation attributable to preferences offered by the EEC

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[8]Other explanatory variables were distance between pairs of countries, GNP in each country, and preferential treatment received in countries other than the members of the EEC.

[9]The preferential dummy variable was also significant in the 1958 equation for other members of the EEC. Since the agreement did not take effect until 1959, this indicates that the preferential dummy was serving as a proxy for some other variables. As a result, significance of the preferential dummy during the tenure of the agreement was tested against the 1958 value rather than zero.

(excluding France) as a share of total EEC imports from the beneficiaries rose from zero to 26%. The increase in preferred imports by the EEC (excluding France) was more than offset by the decline in preferred imports by France. Thus, the combined gross trade creation (GTC) for all members of the EEC declined slightly from 85% of EEC imports from the AAC before preferential treatment was extended by all members of the EEC, to 83% in 1971.[10]

Based on these results, it appears that EEC preferential treatment of AAC exports was strongly trade expanding, accounting for 85% of imports. These conclusions, however, should be qualified. First, the preferential variable for the non-France EEC was significant in explaining the pattern of trade even before the agreement had taken effect. It is probable, therefore, that the preference variable is serving as a proxy for some other variables. Second, a large part of the gross trade creation is more likely to be the result of close economic and cultural links between France and Africa during the colonial period. One would expect that a dummy variable, capturing past colonial ties, would significantly reduce the gross trade creation due to tariff preferences.

This interpretation of the results obtained by Aitken and Obutelewicz is supported by the work of Young (1972) and Ouattara (1973). Young examined the rate of growth of exports by the beneficiaries to the preferred market, relative to the rate of growth of exports to nonpreferred markets, and compared these figures to that of countries not receiving preferences. The country-pairs chosen were only those for which there was no past colonial relationship. Young found little difference between these relative rates of growth, indicating no significant trade diversion. The lack of trade diversion suggests that the preferential treatment did not stimulate exports. However, the AAC still gained

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[10]The decline in the gross trade creation effect is due to the fact that preferences under the Treaty of Rome were less generous than those granted by France to its former colonies before 1958. Most notably, sugar was excluded. Thus, after 1958 the preferences received by the former French colonies from the EEC were actually inferior to those prior to the Treaty of Rome. This would account for some of the decline in the share of the AAC's exports to France.

because it received a higher price for its exports, which Young estimated to be $41.3 million based on trade in 1969.

Ouattara further investigated the evolution of the AAC's share of EEC imports, and obtained similar results. In the pre-union period, 1953–1958, France imported 38% of AAC exports, and the rest of the members of the EEC imported 34%. Between 1959 and 1964 the EEC's share (excluding France) remained constant, but France's share declined slightly to 37%. The trade pattern was affected more dramatically between 1964 and 1968. France's share declined to 32%, and the EEC's (excluding France) share rose to 38%. However, over this entire period the EEC's share declined from 72% to 69%, indicating little evidence of gross trade creation.

Examination of individual product categories can again give an indication of the effect of preferential treatment. Ten products accounted for 75% of AAC exports to the EEC between 1958 and 1964. These were timber, copper, coffee, cocoa, groundnuts, groundnut oil, iron ore, cotton, palm oil, and bananas. Of these, the preferential margin was trivial or zero on all products except coffee, bananas, and groundnut oil. Preferential margins of between one and three percentage points were available on cocoa, timber, and palm oil for some years between 1958 and 1964.

The increase in AAC exports to the EEC between 1958 and 1968 occurred in product categories which received no preferential tariff treatment. Despite the absence of a preferential margin, copper exported by Zaire accounted for 40% of the increase in AAC exports to the EEC between 1958 and 1968 and timber accounted for an additional 12%. In contrast, exports of groundnuts, cotton, and palm kernels actually declined.

Coffee received substantial protection, particularly after 1964, but the AAC's share of LDC exports of coffee to the EEC declined from 24% before 1964 to 22% after 1964. Ouattara attributes the weak response to preferential treatment primarily to two sources. The first is that under the International Coffee Agreement the coffee producers, including the African countries, agreed to export quotas. The second is that African growers

produce primarily the robusta variety, whereas most Europeans (excluding France) prefer the higher quality arabica variety of coffee. Thus, despite the preferential margin, Europeans could not be persuaded to substitute towards African exports. Rather, over this period, African exports of coffee were diverted to the United States.

Similarly, the AAC was unable permanently to penetrate the EEC's banana market. The AAC's share of the EEC's market rose from 20% to 32% between 1959 and 1963, but declined thereafter to 21% in 1968. Before the association, all members of the EEC except Germany gave preferential treatment to AAC bananas. The associated countries hoped to gain preferred access to the German market as well. However, Germans prefer the type of banana grown in Latin America. Consequently, Germany was allowed a duty-free quota of banana imports from Latin America that was approximately equal to the size of its annual consumption.

In contrast, the AAC's share of the EEC's cocoa market jumped from 35% in 1959 to 48% in 1964, despite a preferential margin of only three percentage points. The Ivory Coast and Cameroon displaced Ghana and Nigeria as major suppliers to the EEC market. Unlike the coffee market, cocoa is a relatively homogeneous product and the market for cocoa is not dominated by cartel arrangements.

Thus, it appears that association with the EEC had little trade impact on the African countries. First, products which were potentially trade creating were excluded. Second preferences under the association were in many cases inferior to the preferences granted in previous post-colonial arrangements. Finally, product differentiation and noncompetitive forces minimized trade diversion. Cocoa and groundnut oil are the only products in which trade diversion clearly emerged. The most notable effect of association was to shift some exports away from France, towards the other members of the EEC.

D. The East African Community and the EEC

The EEC offered a similar preferential package to the East African Community (EAC): Kenya, Tanzania, and Uganda, under the Arusha Agreement. Under the

agreement the EEC and the EAC exchanged preferences on all manufactured products. Preferences were also extended by the EEC on agricultural products not under the CAP or products not subject to quotas or other NTBs. In addition, preferences were limited on products of particular interest to the AACs. EEC imports of coffee, cloves, and canned pineapple from the EAC were subject to quota limits.

E. The African, Caribbean, and Pacific Countries and the EEC

The accession of the U.K. to the EEC led to further expansion of trade preferences extended to the developing countries. The eighteen original members of the Yaoundé Convention plus Mauritius, the three members of the EAC, and 24 of the smaller members of the Commonwealth[11] obtained duty-free and quota-free access to the EEC market for their industrial exports and agricultural exports not covered by the variable levy under the Lomé Convention of 1975. These 46 African, Caribbean, and Pacific (ACP) countries also received special treatment of their exports of sugar, rum, and bananas, and were no longer required to grant reverse preferences to the EEC.

The ACP countries receive the most generous preferential treatment currently offered by the EEC. However, the export performance of the ACPs has been relatively poor. ACP exports are still heavily concentrated in a narrow range of primary products, and little progress has been made towards exporting manufactured products. Manufacturing is confined to small scale factories, producing a limited range of basic consumer goods and construction materials, and simple assembly industries produced for the domestic market. Manufactured goods account for only 4% of ACP exports to the EEC and for only 10% of GDP. In fact, the ACP countries have actually failed to maintain their share of the EEC market and have fared worse than other non-oil producing developing

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[11]The members of the Commonwealth which received preferential treatment are Botswana, Gambia, Ghana, Lesotho, Malawi, Nigeria, Sierra Leone, Swaziland, Zambia, Ethiopia, Equatorial Guinea, Guinea, Guinea-Bissau, Liberia, Sudan, Bahamas, Barbados, Grenada, Guyana, Jamaica, Trinidad and Tobago, Fiji, Tonga, and Western Samoa. Notably, Bangladesh, India, Malaysia, Pakistan, Singapore, Sri Lanka, and Hong Kong were no invited to associate with the EEC under the Lomé Convention.

countries. The ACP countries supply only 1% of manufactured imports by the EEC from developing countries.

Further, exports are concentrated among a small number of beneficiaries. Coffee, copper, and cocoa account for 40% of non-oil exports to the EEC from the ACP countries. Of this, 30% of the coffee is exported by the Ivory Coast, nearly all of the copper comes from Zaire and Zambia, and 80% of cocoa comes from the Ivory Coast, Ghana, and Nigeria.

The safeguard clause, voluntary export restraints (VER), and rules of origin are the tools which have been most commonly used to limit the benefit of preferential treatment. The safeguard clause has been invoked against cotton textiles from the Ivory Coast, Madagascar, and Mauritius, but the rules of origin have proved to be the more significant obstacle to development. The rules of origin are designed to ensure a minimum level of local content in the exports of the beneficiary. Typically a product satisfies the rules of origin if the export is in a different BTN product category than the imported inputs. However, in the case of sensitive and semi-sensitive products, additional criteria must be met. For example, garments must start from yarn rather than fabric to satisfy the rules of origin. Thus, a garment must be 86% value added.[12] Similarly, fabric must start with raw cotton, not yarn, requiring 76% value added.[13] Further restrictions apply to imports of electrical machinery and equipment. In many cases the value added must be 50–60%. Restrictions also apply to the transistors used such that a beneficiary must manufacture all the basic components and assemble the circuit boards to qualify for preferences. The manufacture of transistors, diodes, and resistors is sufficiently complex as to make this requirement prohibitive for most ACP countries. The ACP countries have also faced inhibiting rules of origin in developing fishery resources. Fishery products must be harvested by vessels which are 50% owned and manned by EEC and/or ACP nationals in

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[12]McQueen (1982).

[13]Ibid.

order to satisfy the rules of origin. In most cases the rules of origin can be satisfied by importing the essential parts from the EEC. However, in many cases EEC manufacturers have marked-up prices of intermediate inputs to capture the rents from the preferential treatment.[14]

Thus, despite the apparent generosity of the Lomé Convention, preferential treatment has been severely limited by restrictive clauses, administrative detail, and VERs. On balance, the Lomé Convention appears to have done little to stimulate industrialization of the beneficiaries through export incentives.

F. The EEC and the Mediterranean Countries

Below the ACP countries in the EEC's preferential hierarchy are agreements with the countries around the Mediterranean and in northern Africa. These arrangements are primarily designed to foster stability and political influence in the region. The EEC initiated trade agreements with Greece in 1962 and Turkey in 1964, which were eventually to lead to full accession. This agreement provided for 12 to 22 years of phased-in tariff reductions. Morocco and Tunisia received duty-free access for their industrial exports in 1969.[15] Preferential treatment of agricultural products was limited by quotas to preserve the status of the ACP countries in the EEC market. In the early 1970s the EEC negotiated trade concessions with Malta and Cyprus which were to culminate in the formation of a free-trade area within a ten year period. Cyprus received a 70% reduction in tariffs on industrial exports to the EEC in return for similar tariff reductions which were phased in over five years. Finally, Spain, Israel, Egypt, and Lebanon receive preferential duty reductions on selected industrial and agricultural products exported to the EEC. These agreements are not intended to lead to the formation of a free-trade area, and so are illegal under the GATT.

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[14]The economic rent of preferential treatment accrues to the agents providing the processing necessary to satisfy the rules of origin. EEC producers are thus able to capture the preferential rent in cases where they provide the requisite processing.

[15]Cork and cork products and petroleum products were excluded.

Gaines, Sawyer, and Sprinkle (1981) have studied the economic effects of the EEC's preferential treatment of imports of citrus fruits and juices from Turkey, Morocco, Tunisia, Algeria, Cyprus, Egypt, Lebanon, Syria, Jordan, Malta, Spain, and Israel. In this work, market shares in the pre-agreement period, 1966–1967, are compared to market shares during the tenure of the agreement. The agreement pertaining to fresh lemons, oranges, and grapefruit covered the period 1970–1973. Orange and grapefruit juices were added for the period 1975–1977. The evolution of market shares in the 1970–1973 period clearly indicated significant trade diversion in lemons and grapefruits. The nonpreferred suppliers' share of the EEC grapefruit market declined from 42.7% in the pre-agreement period to 36.1% between 1970 and 1973, while at the same time the preferred suppliers increased their market share from 57.3% to 63.9%. Israel enjoyed the greatest increase in its market share while the United States suffered the largest decline. Similarly, the preferred suppliers' share of the EEC's lemon market rose from 54.5% to 64.2%, while the nonpreferred suppliers' share declined from 45.6% to 35.8%. In this case Spain appeared to gain in market share at the expense of the United States.

The market for oranges was largely unaffected since it takes several years to grow new orange trees to fruit-bearing age. In addition, the United States was concerned about displacement in the EEC market and so obtained a reduction in the MFN rate during the U.S. peak growing season. The introduction of preferential treatment in fruit juices reversed most of the gains in the fresh grapefruit market by the preferred suppliers. The preferred countries' fresh grapefruit market share declined from 63.9% to 55.1% between the first and second stages of the agreement. At the same time, the preferred share of the grapefruit juice market increased from 41.7% to 64.5%, while the nonpreferred share fell from 58.3% to 35.5%. The EEC stopped importing lemon juice in 1977, so that the loss of the fresh lemon market to the preferred suppliers became permanent. Between 1967 and 1977 the preferred suppliers increased their market share in lemons from 54.4% to 66.2%, while the nonpreferred suppliers saw their market share decline from 45.6% to 33.0%.

Trade diversion appears to have most adversely affected the United States. In contrast, the Latin American suppliers increased market share in fresh fruit in every period studied. As of 1977, the nonpreferred suppliers had lost about $22 million in the grapefruit market and $48 million in the lemon market. Most of the loss was incurred by the United States and accrued to Spain. Losses in the orange juice and grapefruit juice markets as of 1977 were $29.4 million and $8.2 million, respectively. Most of the trade diversion in the orange juice market was at the expense of Brazil, with gains accruing to Israel. Israel was also the main beneficiary of trade diversion in the grapefruit juice market.

Pomfret (1982) studied the effect of trade preferences for Malta on foreign direct investment in the textile and apparel industry. Malta received duty-free access to the EEC in 1971, after having lost preferential treatment in the Commonwealth. Malta demanded and obtained waivers on the rules of origin and removal of product exclusions from the EEC. Between 1970 and 1977 Malta had the fastest growing economy in the Mediterranean basin and the third fastest in the world. Exports rose from 50% of GDP to 87% by 1977. Exports grew at a 15% annual rate in this period, compared to a 4% annual rate between 1960 and 1970.

The textile industry led the growth in exports during the 1960s. In 1962 textiles accounted for 3% of exports, but by 1966 46% of exports were in textiles. The sudden burst in textile exports was partly the result of foreign direct investment of British and Italian firms in the textile industry. Preferential treatment in the EEC market redirected textile exports from the United Kingdom to the EEC but did not result in an increase in total textile exports. Economic growth during the 1970s was primarily driven by exports to the EEC of clothing, as well as printed matter, toys and games, rubber goods, and instruments. Unlike textiles, clothing exports were not only redirected away from the United Kingdom, but total exports also increased dramatically. This growth in exports was fueled by an inflow of foreign owned capital. The percentage of foreign-owned capital

increased from 57% in 1970 to 85% in 1976. A survey of 14 subsidiaries, producing one-third of Malta's exports, revealed that half of the subsidiaries gave the EEC agreement as an influence on their investment decision and several others gave it as an influence on their choice of export markets.[16] These subsidiaries exported nearly 75% of their output to the EEC.

There are two characteristics which made Malta a particularly attractive location for export to the preferred market. First, wages in Malta were significantly lower than those prevailing in the EEC. However, the work force in Malta was acquainted with the rigors of factory work. Second, Malta is close to the EEC market. Consequently, inputs can be imported from the EEC, thus satisfying the stringent rules of origin. These conditions allowed Malta to penetrate the EEC market in clothing and textiles, products in which the developing countries have a natural comparative advantage.

G. The Generalized System of Preferences

The most extensive preferences offered to the developing countries are covered by the Generalized System of Preferences (GSP). Most of the industrialized countries introduced ten-year schemes during the 1970s,[17] which were renewed for a second ten years in the 1980s. Country coverage is broad, as developing countries are generally allowed to determine their own eligibility. Preferences are extended primarily on manufactured and semi-manufactured products, though some agricultural products are included. As with other preferential schemes, the extent of preferences is carefully limited by a variety of mechanisms.

The EEC does not grant preferences on metals and most agricultural products. Textile imports are covered for only those countries which limit exports under the MFA.

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[16]Pomfret (1982, p. 247).

[17]The EEC was the first to introduce a scheme in July 1971, and was followed by Japan (August, 1971), Norway (October, 1971), Denmark, Finland, Ireland, New Zealand, Sweden, the U.K. (January, 1972), Switzerland (March, 1972), Austria (April, 1972), Australia, Canada (January, 1974), and the U.S. (January, 1976). Many of the nonmarket industrialized countries also have preferential schemes of their own.

In addition, the EEC places quantitative limits on imports eligible for duty-free treatment. Quotas on sensitive products are administered at the member-country level and imports of semi-sensitive and nonsensitive products are monitored by the Community. Further limits are placed on the fraction of the quota which may be supplied by a single beneficiary. Imports in excess of the quota are subject to MFN treatment. In the case of binding quotas, preferential treatment produces a transfer of tariff revenue to the beneficiary but does not expand exports.

The United States excludes textiles outright, as well as apparel, watches, import-sensitive electronic articles, import-sensitive steel articles, footwear (except Zoris), import-sensitive glass products, articles under the escape clause, and articles excluded for national security reasons. Quantitative limits stipulate that countries which exceed 50% of total United States imports within a product category, or exceed a dollar value in a single year will be subject to the MFN rate in that product category in the following year. The United States has also begun graduating beneficiaries to the MFN rate in product categories in which they are regarded as competitive.

Japan also limits product categories covered. Like for the United States, textiles and other sensitive products are excluded from the scheme. Quantitative limits are imposed using a system similar to that maintained by the EEC.

The exclusions from the GSP severely limit the amount of trade covered by this program. For example, the United States imported $243.9 billion from all sources in 1982. Of this, 32%, or $78.3 billion, was imported from the eligible countries under the GSP. However, only $17.4 billion worth of imports, or 7.1% of total imports, were on the eligible list of products, and only $8.4 billion (3.4% of total imports) actually received duty-free treatment.[18] Similarly, only about 5% of beneficiary exports of industrial products to the EEC actually receive duty-free treatment. The empirical research on the economic effects of the GSP is reviewed below. A summary of results is presented in Table 1.

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[18]See Pelzman (1983).

Baldwin and Murray applied the model described above to 1971 trade data at the 4-digit BTN level for the United States, Japan, and the EEC. They estimate that GSP treatment increased U.S. and Japanese imports of GSP products from the beneficiaries by about 29%, and from the EEC by 25%. Most of the estimated increase in imports was attributed to trade creation. The U.S. scheme gave rise to 19% trade diversion, the EEC scheme was only 8% trade diverting, and the Japanese scheme was estimated to be 2.5% trade diverting. The GSP was most stimulating for products in which assembly is labor intensive, such as leather goods, wood products, electrical items, cutlery, glassware, ceramic products, dolls, toys, and sporting goods.

Baldwin and Murray further applied the model, assuming that there were no quantitative limits. Removing the quotas would have increased the trade expanding effects of the U.S. and EEC GSP schemes by about 45%, and the Japanese scheme by 142%. Expanding product coverage to include all industrial products except textiles, shoes, and petroleum would have increased the trade impact of the U.S. scheme by another 17%, but would have increased the export gain under the Japanese scheme by an additional 57%. Interestingly, the expansion of product coverage did not seem to increase the trade creating component. Thus, it appears that many of the exclusions are not necessarily aimed at products for which the domestic interests are particularly strong.

Export gains under the GSP accrued primarily to the countries of Asia and Oceania. The effect on Africa was negligible. These trade gains were obtained primarily at the expense of nonbeneficiary developing countries rather than the industrialized countries.

Sapir and Lundberg (1984) applied a similar model to 1979 trade data for the United States and found a gross trade creation effect of about 21% of GSP imports, or $1.3 billion. However, the increase in trade was only about 2% of total imports from the beneficiaries. If quantitative restrictions were removed the GSP would increase imports from the beneficiaries by an estimated $2.2 billion. The top 10 beneficiaries accounted for

90% of the increase in exports to the U.S. by the beneficiaries. The export gains from the GSP accrued overwhelmingly to Hong Kong, Korea, and Taiwan.

Pelzman (1983) also used the Baldwin and Murray approach on 1979 imports by the United States and found that gross trade creation was a somewhat smaller $753.5 million. Gross trade creation for 1982 was estimated to be $912.2 million. As in the Sapir and Lundberg study, the top 15 beneficiary countries accounted for over 90% of the increase in GSP exports.

Bayard and Moore (1979) adopted the partial equilibrium approach, as well, and found that the GSP increased U.S. imports from the beneficiaries by $650 million in 1976 and $1.3 billion in 1978. In this study the employment effects were also calculated.[19] The GSP was found to cost the U.S. 35,000 jobs in 1976 and 67,000 jobs in 1978. The sectors most likely to be affected are jewelry, furniture and fixtures, games and toys, apparel made from purchased materials, pottery products, sporting goods, plastic products, lighting fixtures, broadwoven fabric mills, furnaces and steel products, computing machines, artificial flowers, wiring devices, and wood products.

Finally, Ahmad (1978) used this approach in a study of the GSP scheme of Canada. Unlike previous studies, Ahmad found the Canadian GSP to be strongly trade diverting. Imports from beneficiary countries increased by $18.4 million, of which $11.4 million (or 60%) was trade diversion. Ahmad's work highlights one of the major shortcomings of the Baldwin and Murray approach. The assumption that the elasticity of substitution among imports from beneficiaries and nonbeneficiaries is equal to the elasticity of substitution between imports and the domestically produced good implies that a preferential tariff will automatically be trade creating if domestic producers have a larger share of the domestic

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[19]Bayard and Moore assumed that a dollar's worth of imports displaces a dollar's worth of domestic production. Labor coefficients were applied to the change in production to find the direct and indirect effects on employment.

market than nonbeneficiary suppliers.[20] Canada, unlike the United States, Japan, and the EEC, imports more manufacturing goods in its GSP eligible product categories than it produces domestically. Thus, Canada's GSP appears to be trade diverting.

The conclusion that trade creation exceeds trade diversion could be reversed if imports from different sources were found to be closer substitutes than imports and the domestic good. Ahmad cites estimates by Verdoorn and Schwartz (1972) which suggest that imports from different sources are 2.5 times more substitutable than imports and the domestic good. Moreover, if products are homogeneous, rather than imperfect substitutes, and the donor country imports the preferred product from both the beneficiary and the nonpreferred suppliers, then the preferential arrangement is purely trade diverting.[21] Thus, the degree of product differentiation and relative substitutability among products from various suppliers is crucial to the results obtained from the partial equilibrium models.

A more serious shortcoming with this approach is its partial equilibrium nature. It is expected that the resulting trade imbalance would lead to price changes and a currency depreciation. The resultant stimulation of the export industries should leave aggregate employment unaffected. Thus, the results from this model are primarily useful for ranking the effects on industries, rather than yielding actual changes in production, employment, imports, and exports.

The computational general equilibrium (CGE) approach has been adopted by Brown (1985a, 1985b, 1986) in studying the GSP schemes of the United States, Japan, and the

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[20]Under these assumptions trade diversion is equal to trade creation times the ratio of supply by domestic producers and imports from nonbeneficiaries.

[21]If marginal imports from the nonpreferred supplier are subject to the tariff, then the preferential tariff reduction has no effect on relative prices prevailing on the domestic market. In this case, the levels of domestic production and consumption are unaffected. Consequently, increases in imports from the preferred supplier come at the expense of the nonpreferred supplier, rather than domestic producers.

EEC and EFTA.[22] As was expected, price and exchange rate considerations dramatically alter the results obtained by the partial equilibrium models. First, the gross trade creation effect was much smaller. The U.S. GSP was estimated to increase beneficiary exports to the U.S. by $223.1 million based on 1976 trade. Of this, $143.6 million was the result of trade diversion. Similar results were obtained for the schemes of Japan and the EEC and EFTA. The Japanese scheme generated $103.4 million in gross trade creation, with $36.3 million of trade diversion, and the EEC/EFTA scheme resulted in $129.6 million in gross trade creation, with $56.8 million in trade diversion.

As in other studies, the beneficiaries which gained the most (as measured by the equivalent variation[23]) were the higher income developing countries. The major beneficiaries from the U.S. scheme were Hong Kong ($51.2 million), Taiwan ($10.2 million), Yugoslavia ($8.7 million), Mexico ($8.4 million), and Singapore ($7.2 million). Similarly, under the EEC/EFTA GSP scheme, the major beneficiaries were Yugoslavia ($27.7 million), Hong Kong ($15.5 million), and Singapore ($6.3 million).

The most surprising result from this approach is that, despite the fact that trade creation exceeded trade diversion under the EEC/EFTA and Japanese schemes, the donor countries were always made worse off (as measured by the equivalent variation) by their own GSP schemes. For example, welfare in the EEC and EFTA declined by $109.4 million. Further, many of the nonbeneficiaries were made better off, and many of the beneficiaries were made worse off. Under the EEC/EFTA scheme, Japan's welfare rises by $13.9 million, and under the U.S. scheme, Japan gains $70.4 million. Small gains also

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[22]This is a simulation model which consists of 18 industrialized and 16 developing countries, producing 29 goods, of which 22 are tradable. Markets are generally assumed to be perfectly competitive, although constrained by some nontariff barriers. All goods can be used as intermediate inputs, or for final consumption. Imports are disaggregated by place of production by the Armington (1969) method. Each country of the model is assumed to export a differentiated product which is imperfectly substitutable for goods produced by other countries of the model.

[23]The equivalent variation is the income change that yields the same level of utility as the policy change.

emerged for Germany ($28.9 million), France ($11.4 million), and the Netherlands ($11.1 million). In contrast, Brazil, Chile, Colombia, Greece, South Korea, Spain, and Turkey were made worse off by the EEC/EFTA scheme, and Brazil, Colombia, and South Korea were made worse off by the U.S. GSP.

These counter-intuitive results for the donor country emerge because the tariff reductions by the donor country have the usual effect of worsening the terms of trade. The United States GSP worsens the U.S. terms of trade by 0.12%. The deterioration in the terms of trade was sufficient to exceed the efficiency gains from the tariff reduction, resulting in a loss of welfare for the donor. The nonbeneficiaries gain for a similar reason. The fall in the price of imports from the donor country improves the terms of trade of its major trade partners. Thus, for example, Japan and Germany benefit from the falling prices of U.S. produced goods resulting from U.S. tariff reductions.

There is also a second source of terms-of-trade gain for the nonbeneficiaries. All of the beneficiaries in the model (with the exception of Singapore) were required to spend revenue earned through exports on imports, maintaining the current account balance at the base level. Nonbeneficiaries which export heavily to the beneficiaries enjoyed an increase in demand for their exports, further improving their terms of trade. Japan, in particular, benefited from re-spending by the Asian NICs, Yugoslavia re-spent primarily in Europe, and Mexico in the U.S.

Trade diversion tends to offset only part of the terms-of-trade gain enjoyed by the nonbeneficiaries which is generated by re-spending and falling donor export prices. This conclusion is a result of the trade creating nature of the GSP, for the following reason. Revenue re-spent by the beneficiaries is earned both by displacing domestic suppliers in the donor country (trade creation) and by displacing third country suppliers (trade diversion). However, since the impact effect of preferential treatment is largely trade creating, the initial trade diversion effect is weak. On the other hand, the re-spending effect is strong since the trade creation component is large. Thus, on balance the re-spending effect

dominates the trade diversion effect, raising the demand for goods produced by the nonbeneficiaries.

As noted above, not all of the beneficiaries gain. This is partly due to the general omission of agricultural and resource products and textiles from the GSP. Exchange controls also adversely affect some of the beneficiaries. Many of the developing countries have pegged exchange rates, but use import licensing to maintain the balance of payments. The licensing mechanism offsets the stimulating effect of the tariff concession in the following manner.[24] The increase in foreign exchange due to increased exports to the donor country lowers the implicit premium on foreign exchange used for imports. The fall in the cost of importing automatically triggers a substitution out of the domestic good into imports. The rise in export demand is approximately matched by the fall in domestic demand so that the net effect on the demand for the domestically produced good is zero. Consequently, there is no improvement in the terms of trade for the beneficiary which uses import licensing. Thus, preferential treatment cannot improve the welfare of the beneficiary by expanding exports and improving the terms of trade, but rather by inducing the beneficiary to remove import barriers effected by licensing. However, as appears to be the case for some beneficiaries, the terms of trade actually deteriorate enough to offset the efficiency gains associated with the relaxed licensing, leading to a decline in welfare. In contrast, beneficiaries which allow the currency to float, experience an increase in the demand for the domestically produced good. The consequent rise in price stimulates both domestic production and imports. These countries enjoy a terms-of-trade improvement, which accounts for their large welfare gain.

The beneficiaries of South America which are included in the model (Argentina, Brazil, Chile, and Colombia) all use the licensing scheme. The estimated welfare gains for these countries are quite small, and in some cases negative. Hong Kong, Mexico, Taiwan,

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[24]Countries which use import licensing will still increase exports, but the welfare gain due to a terms-of-trade improvement will be absent.

and Yugoslavia, on the other hand, are all assumed to allow their currencies to float, and Singapore has a pegged exchange rate. Therefore, the preferential tariff concession is permitted to stimulate production and increase the price received for exports. Not surprisingly, these countries gain the most from the GSP.

Results from the general equilibrium approach differ from those obtained using partial equilibrium methods on one final point. The employment effects are very small. Employment in the donor country never falls in any of the 22 product categories by more than 1000 jobs as a result of any of the GSP schemes studied. In fact, employment actually rises in many of the same industries in which the preferential tariff concessions are largest.

The GSP generally results in a trade imbalance in the donor country, leading to a currency depreciation. The depreciation stimulates the export industries which draw labor out of the nontradable sectors. Due to the high degree of intra-industry trade, many of the sectors for which the tariff concessions are largest are also major export industries. Consequently, the decline in employment in these sectors is small or nonexistent.

The CGE model improves upon some features of the partial equilibrium approach, but introduce shortcomings of its own. In order to capture the preferential nature of the tariff concessions, each country is assumed to export a differentiated product. National product differentiation implies that each country, no matter how small, has monopoly power over its export market. Consequently, such models are characterized by implausibly strong terms-of-trade effects.[25] (For example, even the smallest countries can exercise control over the terms of trade through the use of a tariff.)

Strong terms-of-trade changes clearly affect the conclusions drawn from this model concerning the welfare effects of the GSP. The change in the terms of trade due to the tariff reductions are more important for welfare conclusions than the efficiency effects. This leads to the conclusion that trade creating tariff reductions may be welfare reducing.

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[25] See Shoven and Whalley (1984).

Thus, it is not clear that nationally-differentiated products models are appropriate for this type of policy analysis.

A third popular method for evaluating the trade effects of the GSP is to test the significance of a GSP variable in explaining the pattern of trade, either across countries or products. Sapir (1981) used this approach in evaluating the effect of the EEC's GSP scheme. Sapir regressed GNP, distance, population, and a GSP dummy variable[26] on bilateral trade between the EEC and a selection of ten beneficiaries and fourteen nonbeneficiaries. The model was re-estimated annually for the period 1967 to 1978.

In the case in which imports from all product categories were aggregated into a single equation, the model performed poorly. The GSP variable was significant at the 5% level in only two of the eight years of the sample period in which the GSP was in effect. Equations for individual product categories performed somewhat better. The GSP variable was significant in explaining trade in five of the eight years of the sample in product category SITC 5 and SITC 7.

Estimates of gross trade creation based on these results were broadly similar to those obtained by Baldwin and Murray. In 1971 the 10 countries of the sample increased GSP exports to the EEC by 24%. However, this figures rose to 31% in 1972, and then remained in the range of 44% to 48% between 1973 and 1978.

Pelzman (1983) estimated a similar model for the U.S. over the period 1976 to 1981. However, the GSP variable was significant in explaining bilateral trade only in 1978. Furthermore, the results implied that gross trade creation in 1978 was $8.2 billion, which is 84% of total GSP imports in that year.

Sapir and Lundberg (1984) introduced some refinements into the estimation of gravity models when studying the effect of the U.S. GSP scheme. They chose the 4-digit SIC product categories expected to be most affected by the GSP. In this study the size of

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[26]The GSP dummy variable is zero for nonpreferred suppliers and unity for preferred suppliers.

the actual preferential margin was used to explain the change in market share across products for 1979.[27] The results indicated the presence of both net trade creation and gross trade creation since the market share for both total imports and imports from beneficiaries increased. There was no evidence of trade diversion, as the preference variable was not significant in the equation for nonbeneficiaries. The degree of pure trade creation depended critically on the pre-GSP market share of the beneficiaries. U.S. producers lost market share only when the beneficiaries' market share in 1975 exceeded 4.5%.

Of the 208 products in the sample, 33 showed a significantly positive GSP effect on market share. These results indicate a gross trade creation effect of $928.7 million in 1979, and that trade creation is about 2.5 times larger than trade diversion. Trade expansion was very heavily concentrated among 20 product categories,[28] which alone accounted for 95% of the trade expansion.

Employment effects were obtained by multiplying the estimated trade creation by the corresponding labor requirements. These calculations indicate that the direct effect of the GSP on the top twenty industries that account for most of the increase in imports, amounted to a loss of 24,000 jobs. The direct plus indirect employment effects of the GSP amounted to a loss of 43,000 jobs. The biggest losses emerged in industries producing games and toys, dolls, and artificial flowers.

Finally, Pelzman (1983) compared the actual growth in beneficiary share of imports by the U.S. to expected growth based on the experience in the pre-GSP period. Two

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[27]Other explanatory variables included the physical and human capital intensities for each product.

[28]These product categories include: games and toys; dolls; feathers and artificial flowers; manufactures, nec.; wood products, nec.; costume jewelry; rubber footwear; sporting and athletic goods, nec.; lapidary work; radio and TV receiving sets; pottery products, nec.; veneer and plywood; petroleum refining; women's handbags and purses; primary nonferrous metals, nec., industrial inorganic chemicals; radio and TV communication equipment; electrical equipment, nec.; semiconductors; and children's vehicles.

methods were used to form the expected beneficiary market share. He first compared the beneficiary country's actual market share to the market share that had prevailed previously. Based on this comparison, he calculated that the U.S. GSP increased imports from the beneficiaries by $571.4 million in 1979 and $816.1 million in 1982. In both cases about 80% of new imports came from the top 15 beneficiary countries, particularly Taiwan, Hong Kong, and Chile.

In the second procedure, the expected beneficiary share is adjusted for differences in the rate of growth of total U.S. imports and imports from the beneficiaries. This method yielded a somewhat higher estimate of the effect of the U.S. GSP. Based on this model, the GSP was estimated to have increased imports from the beneficiaries by $1.6 billion in 1979 and $2.3 billion in 1982. This is an increase of 23% of GSP duty-free trade in 1979 and 19.6% in 1982. An interesting note in this case is that the top 15 beneficiaries accounted for more than 100% of the increase in beneficiary exports to the U.S. This implies that at least part of the trade diversion is at the expense of the lower income beneficiaries.

III. Conclusions

Empirical results do not give a clear picture of the effects of preferential treatment of developing country exports. Estimates of the impact of the CBI by Sawyer and Sprinkle and Rousslang and Lindsey attribute 1% of total beneficiary exports to the United States to preferences. At the other end of the spectrum, Aitken and Obutelewicz estimate that 85% of the EEC's total imports from the AAC was the result of preferential treatment. However, Young found no trade effect due to the association, though his results were not subject to statistical tests of significance. Most other studies lie in between. Gaines, Sawyer, and Sprinkle attribute 10% to 35% of Mediterranean exports to the EEC of grapefruit, lemons, orange juice, and grapefruit juice to preferences, while preferential treatment of fresh oranges account for only 1.4% of beneficiary exports.

The trade expansion effects estimated by various studies of the GSP are reported in Table 2. Gross trade creation is first expressed as a percentage of GSP duty-free imports from the beneficiaries. This figure gives an indication of the power of preferential treatment to stimulate exports. The results are mixed, ranging from a high of 67% to a low of no effect. Both of these extremes were obtained by Pelzman, using various techniques. However, most estimates lie between 10% and 30%, indicating that preferential treatment does have the power to substantially stimulate exports by at least some of the beneficiaries. Gross trade creation is also expressed as a percentage of total imports from the beneficiaries. This figure gives an indication of how individual schemes perform overall. The GSP appears to have increased total beneficiary imports between 1% and 3%. Thus, the GSP has not distinctively altered the pattern of world trade.

The impact of preferences on the donor and nonbeneficiaries is correspondingly small. Most studies found preferences to be largely trade creating, suggesting that the tariff reductions are welfare improving for the donor and have little impact on the third-country suppliers. In some studies, such as Sapir and Lundberg, trade diversion was not even detectable. There were some exceptions however. Preferences for the AAC were largely trade diverting since the agricultural products under the CAP were excluded and the beneficiaries did not have sufficient industrial capacity to compete with EEC producers. Similarly, the EEC's preferential treatment of imports of citrus from the Mediterranean countries largely displaced U.S. exports, as citrus fruit is not generally grown domestically.

General equilibrium studies indicated that tariff reductions might worsen the terms of trade for the donor country, thus offsetting the efficiency gain. However, even under these pessimistic assumptions, the welfare of the donors declined by less than 0.01% of GDP. Moreover, the terms of trade of some of the nonbeneficiaries actually improved, thus making them better off despite trade diversion.

The validity of these results is open to question. Several of the studies did not discriminate between preferential treatment and the effect of other cultural and economic links, particularly post-colonial ties, which might give rise to increased trade. Secondly, in several of the regression analysis studies, the preference variable was not significant during the period in which preferences were available, (e.g., Sapir, Sapir and Lundberg, and Pelzman) or the preference variable was significant prior to the introduction of preferences (e.g., Sapir and Lundberg and Aitken and Obutelewicz).

Another difficulty with these results is that authors which examined the evolution of market shares detected little evidence of either penetration of the domestic market or displacement of third country suppliers (e.g., Young and Ouattara). There were some exceptions for a limited number of product categories for most of the schemes studied, such as the EEC's preference for Mediterranean citrus products, the EEC's preference for cocoa from the AAC, and the Philippines' exports of coconut oil to the U.S. These products are homogeneous, relatively free of noncompetitive market arrangements, and exported almost solely to the preferred market. Further, the USITC (1983a) identified several GSP products in which the beneficiaries had significantly penetrated the U.S. domestic market. For example, imports of costume jewelry from the beneficiaries increased 18.4% per annum between 1978 and 1981. The beneficiaries' share of U.S. consumption increased from 6.6% to 12.7% during the same period. Penetration was also notable in sugar, cigars, mirrors of glass, fans, and blowers, air and vacuum pumps, electric cooking stoves and ranges, and some canned fish. There was also one case, Malta, in which there was some evidence that preferential treatment played a significant role in the rapid growth of the economy of the beneficiary.

A final criticism of these studies is that they do not test for the main objectives of preferential treatment: protection for infant industries, diversification of exports away from materials, and increased processing. Badgett's approach to testing the composition of

exports of the Philippines could usefully be applied to the GSP and other preferential agreements.

There are a couple of points on which most of the studies generally agree. First, trade expansion is concentrated in a small number of products, typically products which require labor-intensive assembly. These product categories are typically those in which the beneficiaries already have a substantial market share.

Second, preferential treatment, particularly under the GSP, has its greatest impact on the newly industrialized countries (NICs), Hong Kong, Taiwan, South Korea, Singapore, Brazil, Israel, and Yugoslavia. Incentives to export in the less industrialized beneficiaries have been disappointing. Product exclusions, quantitative restrictions, rules of origin, and graduation severely limit the impact of preferential treatment. Product categories for which preferences are potentially trade creating are not included in most schemes. In other product categories, for which there might be substantial trade diversion, MFN tariffs are already very low or zero.

Finally, most important for the poorer of the developing countries are the controls on textiles, wearing apparel, and agricultural products. The low income countries have not shown the ability to skip the stages of industrialization which involve exporting agricultural products and textiles, resulting in export gains that are highly concentrated among those beneficiaries which have already industrialized. For example, the omission of textiles from the CBI virtually converted this trade initiative to a program of direct aid. Work by Pelzman shows that the trade expansion effects of tariff elimination by the U.S. on imports from the CB would have been almost entirely concentrated in apparel from purchased materials. However, textiles and wearing apparel were excluded from the final legislation. Similarly the textile and apparel industries played a central role in the development of Malta, the one case in which there is some evidence that trade preferences dramatically altered the rate of economic growth and the standard of living in a

beneficiary. The importance of agricultural and textile exports in economic development cannot be understated.

TABLE 1

ESTIMATED GROSS TRADE CREATION DUE TO THE GSP SCHEMES OF
THE U.S., JAPAN, THE EEC, EFTA, AND CANADA

Author	U.S.	Japan	EEC/EFTA	Canada
Sapir Lundberg[1]				
1979	$929 M			
Sapir[2]				
1971			$153 M	
1972			305 M	
1973			752 M	
1974			935 M	
1975			841 M	
1976			1.4 B	
1977			1.8 B	
1978			2.1 B	
Pelzman				
Method 1[3]				
1979	$754 M			
1982	912 M			
Method 2[4]				
1979	571 M			
1982	816 M			
Method 3[5]				
1979	1.6 B			
1982	2.3 B			
Method 4[6]				
1979	938 M			
1982	5.6 B			
Method 5[7]				
1976	4.3 B			
1977	3.9 B			
1978	8.2 B			
1979	7.8 B			
1980	8.8 B			
1981	4.8 B			
Baldwin Murray[3]				
1971	$236 M	$ 25 M	$217 M	

Table 1 (continued)

Author	U.S.	Japan	EEC/EFTA	Canada
Bayard Moore[3] 1976 1978	$650 M 1.3 B			
Ahmad[3]				$ 18 M
Brown[8] 1976	$223 M	$103 M	$130 M	

[1]Test of significance of GSP margin in explaining bilateral trade. Calculation based on 33 of 208 largest GSP categories.

[2]Test of significance of GSP binary variable across countries.

[3]Ex ante partial equilibrium calculations based on theoretical preferential tariff margin.

[4]Calculations based on comparison of actual beneficiary market share to beneficiary market share in pre-GSP period, 1972–1975.

[5]Same as footnote 4, except shares adjusted for differential rate of growth between total U.S. imports and imports from beneficiaries.

[6]Linear extrapolation based on beneficiary exports 1972–1975.

[7]Gravity model.

[8]General equilibrium computational model.

TABLE 2

ESTIMATED GROSS TRADE CREATION (GTC) OF THE
GENERALIZED SYSTEM OF PREFERENCES
AS A PERCENT OF GSP DUTY-FREE IMPORTS
AND TOTAL BENEFICIARY EXPORTS

Author	Year	GTC	GTC as a Percentage of	
			GSP Duty-Free Imports	Total Beneficiary Exports to Donor
Sapir (EEC)	1974	$935 M	48%	2%
Baldwin Murray[1]	1971			
U.S.		$236 M	29%	18%
EEC		217 M	25	18
Japan		25 M	29	7
Pelzman (US)	1982			
Method 1[2]		$912 M	11%	1%
Method 2[2]		816 M	10	1
Method 3[2]		2.3 B	27	3
Method 4[2]		5.6 B	67	7
Method 5[2]		0	0	0
Sapir Lundberg (US)	1979	$929 M	15%	2%

[1]Total beneficiary exports exclude textiles, shoes, and petroleum.

[2]See Table 1.

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