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THE COMMODITY COMPOSITION OF INTRA-INDUSTRY TRADE BETWEEN DEVELOPED MARKET ECONOMY COUNTRIES AND THE DEVELOPING WORLD

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The SITC three digit products which recorded high values (> 50) of the Grubel and Lloyd index of Intra-Industry trade of the Developed Market Economy countries with the developing world in the years 1970 and 1982 are listed in table I. In 1970, six SITC 3 digit level products registered such high values. But by 1982, the corresponding number had more than doubled.

Out of the six products which showed the Grubel and Lloyd index of more than 50 in 1970, only three (SITC 513: Carboxylic Acids, etc; SITC 551: Essential Oils, Perfume and Flavouring materials; SITC 632 : Manufactured articles in wood n.e.s.) appear in the corresponding list for the year 1982. Nevertheless, it is worth noting that in the case of the three remaining products also (SITC 612 : Manufactures of leather n.e.s. ; SITC 656 : Tulle, lace embroidery, etc. and SITC 842 : Men's outerwear, not knitted) intra-industry trade between the two groups of countries continued to be important.

The list of products pertaining to 1982 in table I show a greater amount of diversification in comparison to the corresponding list for 1970 in the same table. While there were only 3 products from the SITC group 6 in 1970 which registered Grubel and Lloyd index of more than 50, by 1982 the corresponding number had increased to seven. Two product groups from the SITC group 7 (i.e. : SITC 714 : Reaction engines, Gas Turbines, and SITC 729 : Machines and Electric Appliances, n.e.s.) also showed high levels of intra-industry trade while none from that SITC group appeared in the list for 1970. The two items from the SITC group 8 (i.e. SITC 893: Article of Plastic, n.e.s. and SITC 899: other manufactured goods, n.e.s.) were different from the one that appeared in the corresponding list in 1970.

Table II shows the SITC three digit products which recorded high rates of growth (> 20 points of the Grubel and Lloyd index) in the intra-industry trade between the Developed Market Economy countries and the Developing World during the period 1970-1982. Out of the 20 product groups listed in table II, seven are those which appeared in the list corresponding to 19 (table I). In other words more than half of the product groups which showed high indices of intra-industry trade in 1982 were those recorded hig

Table I

PRODUCTS WHICH RECORDED HIGH VALUES (> 50) OF THE GRUBEL AND LLOYD INDEX OF INTRA-INDUSTRY TRADE OF THE DEVELOPED MARKET ECONOMY COUNTRIES WITH THE DEVELOPING WORLD IN 1970 AND 1982

1970		1982	
SITC	PRODUCT DESCRIPTION	SITC	PRODUCT DESCRIPTION
513	Carboxylic Acids, etc.	513	Carboxylic Acids, etc.
551	Essential Oils, Perfume and Flavouring materials	551	Essential oils, Perfume and Flavouring materials
612	Manufactures of leather, n.e.s.	611	Leather
632	Manufactured articles in wood, n.e.s.	613	Furskins, tanned or dressed
656	Tulle, lace, embroidery, etc.	632	Manufactured articles in wood, n.e.s.
842	Men's outerwear, not knitted	651	Textile yarn
		652	Cotton fabrics, woven, except special fabrics
		682	Copper
		689	Miscellaneous Non-ferrous base metals
		714	Reaction engines, Gas turbines
		729	Machines and Electric appliances, n.e.s.
		893	Articles of plastic, n.e.s.
		899	Other manufactured goods, n.e.s.

growth of intra-industry trade during the period 1970-1982. While this is to be expected, what is more interesting is the fact that in a number of cases other than those which showed high levels (> 50 of the Grubel and Lloyd index) of intra-industry trade in 1982, such trade between the market economy developed countries and the developing world was rapidly increasing. This was, for example, the case in SITC 629 : Manufactured articles in rubber, n.e.s., SITC 642 : Articles of paper, pulp and paperboard, SITC 672 : Ingots of primary iron, SITC 683 : Nickel, SITC 693 Wire products and fencing grills, SITC 694 : Nails, bolts, nuts, screws et SITC 695 : Machine or handtools, SITC 698 : Other manufactured articles in common metals, n.e.s., SITC 725: Paper and pulpmill machinery, SITC 861: Scientific, optical, measuring appliances, SITC 891 : Musical instruments, phonographs, records and SITC 895: Office and Stationery Supplies, n.e.s. In other words, a first analysis of the data shows that the period covered by the study was marked by a substantial increase in the number of manufactured products recording high levels of intra-industry trade between the Developed Market Economy countries and the Developing World. Further, even more products registered noticeable increase in the intra-industry trade between the above-mentioned two groups of countries.

Before proceeding to analyse in some detail the pattern of these changes and suggest some of the reasons behind them, two general points are worth noting here. On the whole the period covered by the study saw a faster growth of the output in the developing world than in the developed market economy countries [1] thus leading to a slight narrowing down of the differences in the gross output levels between the two groups of countries Secondly, the period covered by the study coincided with the implementatic of the Generalized Scheme of Preferences by the Developed Market Economy countries (and six socialist countries of Eastern Europe) in favour of the imports of (mainly) manufactures from the Developing World. In fact the base year used in this study, i.e. 1970, was the last year before the implementation of the GSP [2]. The system is a highly complex one [3] and it is characterised by a number of exclusions, limitations and quotas, particularly in the case of products for which the developing countries have demonstrated competitiveness. In fact the results of the econometric studies on the commodity composition of intra-industry trade in manufactur between Developed Market Economy countries and the developing world suggest that it is mainly in the product groups excluded from the scope of the GSP that the intra-industry trade between the two groups of

Table II

PRODUCTS WHICH RECORDED HIGH RATES OF GROWTH (> 20 POINTS OF G+L INDEX) IN THE INTRA-INDUSTRY TRADE BETWEEN DEVELOPED MARKET ECONOMY COUNTRIES AND THE DEVELOPING WORLD 1970-1982 (CHANGES IN THE VALUES OF IIT INDEX IN BRACKETS)

SITC	PRODUCT DESCRIPTION		SITC	PRODUCT DESCRIPTION	
613	Furskins, tanned, dressed	(29.17)	714	Reaction engines, gas turbines	(28.68)
629	Manufactured articles in rubber, n.e.s.	(27.25)	725	Paper and pulp mill machinery	(41.79)
642	Articles of paper, pulp, paperboard	(27.83)	729	Electrical machines, apparatus, n.e.s.	(26.79)
651	Textile yarn	(35.96)	861	Scientific, optical, measuring appliances	(23.22)
672	Ingots, primary form of iron	(41.98)	891	Musical instruments, phonographs, records	(22.00)
682	Copper, except cement copper	(34.00)	893	Articles of plastic, n.e.s.	(20.06)
683	Nickel	(38.98)	895	Office and stationery supplies, n.e.s.	(30.63)
689	Miscellaneous Non-ferrous base metals	(44.49)	899	Other manufactured goods n.e.s.	(22.07)
693	Wire products and fencing grills	(30.88)			
694	Nails, bolts, nuts, screws, etc.	(27.96)			
695	Machine or handtools	(34.94)			
698	Other manufactured articles in common metals, n.e.s.	(28.48)			

countries tend to be high (see Tharakan 1984, Tharakan 1986). Since it cannot be directly checked in the present case where the IIT figures pertain to countries operating different conditions of exclusions and limitations, one should be careful in interpreting the coincidence between the general increase in the intra-industry trade noted here and the implementation of the GSP by the Developed Market Economy Countries.

As was seen in the introductory part of this section, the currently available stock of knowledge on the intra-industry trade between the Developed Market Economy Countries and the Developing World shows : a) the value of the Grubel and Lloyd index of IIT decreases when the product groups are more narrowly defined, although they do not disappear, b) some of the observed IIT is the result of vertical intra-industry specialization, c) a trend towards a similarity in income levels contributes to intra-industry trade, d) the commodity composition of IIT between small industrialized countries and the developing world seems to be determined by the interaction between product differentiation and economies of scale while e) this variable does not seem to explain the IIT between larger DMEs and the developing world.

In so far as this study deals with IIT indices of large groups of countries, it will be impossible to test the determinants of the commodity composition of trade using truly representative industry characteristics. Hence in the ensuing pages we shall devote our attention to reviewing the patterns of IIT that emerge from more disaggregated information at product and country levels. While such an analysis cannot provide definitive conclusions it is important for at least two significant theoretical reasons. First, the disaggregation at the product level could yield some insight as to whether the IIT observed at SITC three digit level consists of highly heterogeneous products in terms of factor contents and/or enduses. Secondly, disaggregation at the level of countries are important because recent theoretical developments [see Deardorff (1979), Baldwin (1979), Krueger (1979), Yungho You (1979)] suggest that the generalised commodity version of the Heckshser-Ohlin-Samuelson theorem does not hold valid for a country's multilateral trade while it remains valid at the bilateral level and hence

the presence of IIT at the multilateral level is not surprising, but it is at the bilateral level (Bergstrand 1983).[4] Hence in the ensuing paragraphs we shall briefly analyse the intra-industry trade patterns disaggregated at country and product levels. Given the enormous number of observations that would result from such a disaggregation, we are obliged to be highly selective in the cases to be analysed. The purpose is to be illustrative rather than exhaustive. In selecting the bilateral IIT cases to be analysed, the trade of the members of the European Community with the Develop countries is chosen mainly because in such cases the problem of border trade can be eliminated and because the similarity or lack of it in the patterns of the IIT of the big and small Developed Market Economy industrialised countries with the Developing World can be more readily illustrated.

2. Analysis of Intra-Industry Trade at Disaggregative Levels

In choosing the product groups to be analysed at a disaggregative level, we shall focuss attention on the list of products which showed high levels (> 50 of the Grubel and Lloyd index) of IIT in 1982, reported in table 1. It is important to stress here that such an analysis can be only illustrative. By concentrating our attention on the product groups with high IIT of the DMEs with the Developing Countries we could learn more about the pattern of intra-industry trade in such products, but it will not of course tell us anything about the products which failed to register such high indices which could also sometimes provide useful insights. Secondly, the products which showed high levels of intra-industry for the DMEs as a whole need not be the ones which record such high indices for particular countries or groups of countries belonging to such a category. But inspite of these limitations, a detailed analysis at a disaggregative level should be of use illustrating the nature of the products entering into the stream of IIT between the DMEs and the developing world and help us in identifying some of the countries which carry out such intra-industry trade.

In the ensuing paragraphs we shall present our analysis in the following manner: First, the SITC five digit level products contained in the respective 3 digit product groups listed for the year 1982 in table 1 are mentioned.[5] Subsequently the information concerning the European Communities' (EC 10) IIT with the developing world as a whole is provided. Then the analysis at the bilateral level is provided. Making use also of other relevant information, where available, inferences are drawn on the patterns of IIT emerging from such a disaggregative analysis.

SITC 513: Carboxylic Acids etc:

This product group consisting of chemical acids showed high IIT indices in both 1970 and 1982. Within this SITC three digit group trade figures are available for EC10 for five digit product groups. All of them except two (SITC 513.73: Methacrylic acid and its salts and esters; SITC 513.82: Phthalic Anhydride) show intra-industry trade at the EC 10 - DC level for the year 1982. The highest IIT index in the EC 10 - DC trade among the 5 digit groups is recorded by SITC 513.90 (G+L index of 43) ("Carboxylic acids with alcohol, phenol, aldehyde or ketone function and other single or complex oxygen function carboxyl IC acids and their anhydrides, helides, peroxides and perecids and their halogenated, sulphonated, nitrated or

nitrosated derivations"). The total EC 10 - DC trade in this sub-group is also substantial (more than 57 million units of accounts). Other SITC 5 digit sub-groups showing high amounts of total trade show low indices of IIT between EC 10 and DCs.

When we carry the analysis down to bilateral, 5 digit trade level, three of the remaining 7 sub-groups within SITC 513 fail to show intra-industry trade between any of the EC 10 member countries and individual developing countries. For example, in the case of SITC 513.71 (Acetic acids and its salts) there are small amounts of imports into Belgium-Luxembourg from Mexico, but no exports from the former to the latter although Belgium-Luxembourg has small amounts of such exports to Singapore. Similarity in the case of SITC 513.81 (Maleic Anhydride) while imports come in from Brazil to selected European countries, the exports of such countries go to Taiwan. For SITC 513.84 (Esters of Terephthaclic Acid) the whole of the imports coming into the EC-10 from the developing world is accounted for by Italy's imports from Mexico. But Italy does not export the same product to Mexico.

Among the remaining four SITC 5 digit product groups in which bilateral IIT is seen between member countries of EC 10 and individual developing countries, in the case of SITC 513.72 (Esters of Acetic acid) the G+L index of IIT between the Federal Republic of Germany and Argentina is above 50, but the total trade in this sub-group amounts to only about 200 thousand units of account. On the other hand, the total trade in SITC 513.79 (other Monocarboxylic acids and anhydrides, halides, peroxides and perecids of monocarboxylic acids and the halogenated, sulphonated, nitrated derivatives of the products falling within heading 513.7) amounts to more than 71 million units of account. Bilateral trade with individual members of EC-10 is carried out mainly by two developing countries : Brazil and India. Brazil exported to both Netherla and the Federal Republic of Germany and imported the same product from them. In the case of the Brazil-Netherlands bilateral IIT, the G+L index was above 50 and the total value of that particular bilateral trade amounted to more than 1 million units of account. The bilateral of IIT of India was with Germany, Netherlands and UK, although in this case the European exports to India clearly dominated the flow. Although the total EC10 - DC trade in the 5 digit SITC subgroup 513.89 (Polcarboxylic acids and anhydrides, halides, peroxides and peracids of polycarboxylic acids, n.e.s., and the halongenated sulphonated, nitrated or nitrosated derivatives of the products falling within

heading 513.8) amounted 62.472 million units of accounts in 1982, the imports from the developing countries into EC 10 were only about 382 thousand units o accounts and hence IIT index was very low. More than 83% of such imports originated in Brazil. Two European Community countries had bilateral IIT wit Brazil, namely Italy and France. The Grubel and Lloyd index in the Italy-Brazil trade was 75.47 and for France-Brazil it was 57.45. But the amounts involved were small. Finally in SITC 513.90, as mentioned already, there was considerable amount of trade between EC 10 and the developing world (worth more than 57 million units of account) and a relatively high level IIT (Grubel and Lloyd index of 43). More interestingly a number of EC 10 countries had bilateral IIT which was,in this case, basically limited to one developing country partner, i.e. Brazil. Table III shows the Grubel and Lloyd index in the bilateral IIT of Brazil with 5 European Community countrie for the product SITC 513.90 for the year 1982. In case of all of them, the G+L index was above 50. It is obvious that similarity in income levels, border trade or vertical IIT hypotheses cannot explain this flow of bilateral intra-industry trade.

SITC 551: Essential Oils, Perfume and Flavouring Materials

This SITC three digit group registered high IIT indices in both 1970 and 1982. This group consists of two 5 digit products. They are 551.30 i.e. Essential oils (Terpeneless or not) concretes and absolutes; resinoids; concentrates of essential oils in fats, in fixed oils, or in waxes or the like obtained by cold absorption or by maceration; terpenic by-products of the deterpenation of essential oils and SITC 551.40 i.e. Mixtures of two or more odoriferous substances (natural or artificial) and mixtures (including alcoholic solutions) with a basis of one or more of these substances, of a kind used as raw materials in the perfumery, food drink or other industries. Apparently, even at the 5 digit level there can be considerable differentiation within these product groups, particularly due to the type of natural resources particular to the country of origin. At the EC 10 - Developing World level, for both five digit product groups the trade flows we substantial. For SITC 551.30 it amounted to 91.6 million units of accounts and for SITC 551.40 it was worth 219.2 million units of account. The Grubel and Lloyd index of IIT at the EC 10 - Developing World level was 54.85 for the former, but was only 2.216 for the latter.

Table III

INTRA-INDUSTRY TRADE IN SITC 513.90 BETWEEN SELECTED EUROPEAN COMMUNITY COUNTRIES AND BRAZIL IN 1982

Trading Partners	Exports (in 000 Units of Accounts)	Imports (in 000 Units of Accounts)	Grubel and Lloyd Index of Intra-Industry Trade
Germany - Brazil	1640	1113	80.86
France - Brazil	990	369	54.30
Italy - Brazil	533	283	69.36
Netherlands - Brazil	192	548	51.89
United Kingdom - Brazil	442	175	56.72

For SITC 551.30, nineteen developing countries had bilateral IIT with one or more European Community countries in 1982. The developing countries concerned were : Algeria, Tunisia, Egypt, Ivory Coast, Kenya, Mexico, Cuba, Jamaica, Peru, Brazil, Argentina, Pakistan, India, Indonesia, Malaysia, Singapore, South Korea, Taiwan and Hong Kong. Exports to India, Brazil and Egypt alone accounted for more than 33 per cent of EC-10's exports to the developing world. Imports coming into EC - 10 from Tunisia, Egypt, Ivory Coast, Mexico, Brazil, Argentina, India and Indonesia accounted for nearly 58% of the total EC imports from the developing world. Germany, France and the United Kingdom were the main importers from the developing countries, although the imports of Italy and the Netherlands were not insignificant. Exports to the developing countries were mainly important in the case of France and hence bilateral IIT was mainly important for France. Some of the such significant (both in terms of amounts involved and the level of the Grubel and Lloyd index) bilateral IIT of France were as follows :

TABLE IV

INTRA-INDUSTRY TRADE IN SITC 551.30 BETWEEN FRANCE AND SELECTED DEVELOPING COUNTRIES IN THE YEAR 1982

Trading Partners	Exports (in 000 units of accounts)	Imports (in 000 units of accounts)	Grubel and Lloyd index of IIT
France - Egypt	1594	3844	58.62
France - Brazil	1624	2365	81.42
France - India	3227	1458	62.24

In the case of SITC 551.40, as we have seen, EC 10's exports to the developing countries outstrip, by far, its imports from the same group. EC-10's exports go to a large number of developing countries although two among them - Nigeria and Indonesia - account for about half of such trade. European Community countries had bilateral IIT with only two developing countries : Brazil and India. In value terms, both flows were relatively small. Only in the case of Germany - Brazil was the bilateral IIT of some importance. It covered a total trade flow of 586 thousand units of account and had a Grubel and Lloyd index of 76.79.

SITC 611: Leather

This SITC three digit group consists of 8 five-digit sub-groups. At the level of EC-10, there was intra-industry trade with the developing world in 7 of those sub-groups in 1982. But rather surprisingly bilateral IIT in the various categories of leather for which the developing countries have considerable amount of production was very limited. Brazil had some bilateral IIT with Germany and France in SITC 611.30 (calf leather, except leather falling within heading 611.8). But only in the case of the IIT between Germany and Brazil the value of the flow exceeded even 1/2 million units of account and the value of the Grubel and Lloyd index in that case was only 12.44. In the case of SITC 611.40 (Leather of other bovine cattle, including buffels leather, and equine leather, except leather falling within heading 611.80), there was one case of significant bilateral intra-industry trade, i.e. between Italy and India. The total value of this flow of trade amounted to 19.4 million units of account in 1982 with the imports coming from India to Italy being considerably higher than Italy's exports to India. The value of the Grubel and Lloyd index in this case amounted to 28.68. Apparently the differentiation in terms of the raw material content probably can explain this particular flow of bilateral IIT. In the case of SITC 611.50 (sheep and lambskin leather except leather falling within heading 611.8) the United Kingdom and France have some bilateral IIT with some developing countries. In the case of the United Kingdom the bilateral intra-industry trade was with Kenya and Hong Kong. France's IIT was with Hong Kong and Morocco. Only the trade flow with Hong Kong was significant in the case of U.K. and France, amounting to 2.2 and 3.8 million units of account respectively. But in these cases too the intra-industry intensity was very low. The Grubel and Lloyd index of the IIT between U.K. and Hong Kong was 8.59 and that for the France-Hong Kong trade was only 1.08.

SITC 613 : Furskins tanned or dressed

Unfortunately the 1982 trade statistics for the EC-10 do not report the exports and exports under this item in more detailed breakdown. At the SITC 3 digit level Germany, France and the United Kingdom show bilateral intra-industry trade with Hong Kong and South Korea. Both Germany and France also show some bilateral IIT with Argentina. In all cases, even at this rather high level of aggregation the Grubel and Lloyd indices of the bilateral IIT are very low.

SITC 651: Textile Yarn

SITC 651 (Textile yarn) is a highly differentiated product group which conta 48 five digit sub-groups. Out of these 48 sub-groups 5 are of silk or silk type yarn, 7 of yarn made of wool, 2 of yarn made of other animal hair, 5 of yarn of cotton, 23 sub-groups of synthetic yarn, 1 of metalized yarn, 1 of glassfibre yarn, 2 of flax or ramie yarn, 1 of jute yarn and 1 sub-group of other yarn. With such an extent of heterogeneity and because of the fact that the product concerned is an intermediate one, there is of course the likelihood that what appears as intra-industry trade is mainly an exchange of products with different input requirements or the type of exchange in which commodities of vertically adjacent or complementary stages. Yet, a close examination of the international trade in the five digit sub-groups showsthat the entire intra-industry trade in SITC 651 cannot be ascribed to these reasons. If we use the European Community's (EC 10) trade with the developing world for illustrative purposes, we find that, in certain sub-groups such as silk yarn, the intra-industry trade index being very low (G+L index of 11 for SITC 651.11) or for even nil (for SITC 651.17). In such cases, imports clearly dominate suggesting a clear revealed comparative disadvantage for Europe with respect to the developing world, probably due to the nature of the natural resource content of the product concerned. The situation is more complex in the case of wool yarn. Here the European exports generally have the upper hand although in the case of SITC 651.21 (Wool tops) the imports from the developing countries clearly dominate with a G+L index of 20.30 for that sub-group. In the case of two sub-groups (SITC 651.27 : carded wool, blended yarn, and SITC 651.29: Wool etc, blended yarn, retail) the G+L index was 0 with there being only exports from the European Community to the developing world and no imports from the developing world. All of the five cotton yarn product groups at SITC five digit level contained in SITC 651 clearly show intra-industry trade. The highest G+L index is recorded in this case for 651.32 (Cotton yarn of 14 KM/LG or less) with the value of the index being 92. The lowest G+L index is for SITC 651.35 (Cotton yarn put up for retail) which stood at In some of the sub-groups, the value of trade involved was substantial: for example, in the case of SITC 651.33 (Cotton yarn + 40 but under 80 KM/KG) the imports from the developing world into EC 10 amounted to more than 132 million ECU while the exports of EC 10 to the developing world were about

22.65 million ECU, thus yielding a G+L index of about 29. Interestingly, out of the 23 five-digit sub-groups of synthetic yarn, 16 recorded intra-industry trade. In all the cases except one (SITC 651.47 synthetic fibre yarn, bulk, monofil, of other contd. synthetic fibres) the exports by the EC 10 to the developing world were higher than the imports from the developing world into EC 10. Nevertheless, in certain SITC 5 digit sub-groups such as SITC 651.48 (Synthetic Fibre yarn, bulk, monofil of discont. synthetic fibres) imports from the developing countries into the EC 10 were as high as 48 million ECU. In the six sub-groups where there were no imports from the developing countries, the exports were also marginal with only one sub-group (SITC 651.73 : Other continous Regenerated fibre yarn) recording 5 million ECU worth of exports.

It is interesting to note that even in the case of jute yarn (SITC 651.98) for which the comparative advantage of the developing world is unquestionable both in terms of the natural resource content availability and the factor intensity of the production process, there is a certain amount of intra-industry trade between Euro-10 and the developing world which yields a G+L index of 26.

It is of course impossible to reach definitive conclusions about the determinants of the commodity composition of intra-industry trade on the basis of the analysis of trade figures alone, however detailed they might be. Nevertheless a careful consideration of the patterns apparent here suggests some explanations. As we disaggregate the import and export figures into more detailed levels, the inter-industry nature of the trade as distinct from the intra-industry pattern becomes more pronounced, but in the vast majority of the cases, the latter type of trade does not disappear. In a number of cases it even remains substantial, both in terms of the value of the trade flows and the level of the G+L index. In the case of an intermediate product such as the textile yarn, a part of the intra-industry trade seems to be explainable by the advantages due to the ready availability of the natural resources contained. But even this cannot completely explain the IIT in wool, cotton or synthetic yarn. The hypothesis of vertical intra-industry trade according to which trade in heterogeneous commodities of vertically adjacent or complementary stages or processes of production in the same sector explains the observed IIT, is also non-applicable in this case since here we have such trade in a product in the same stage of production. In other words, at least part of the IIT in textile yarn consists of

simultaneous exchange of "similar products produced by similar processes from similar materials". But it is also important to note that when we disaggregat the trade date by the countries within the exporting and importing groups at SITC 5 digit level in most cases the European member countries concerned that import a given product from a particular developing country do not export the same product to the same country. Thus, for example, in the case of SITC 651.22 (Yarn containing 85% or more by weight of combed sheep's or lamb's wool - worsted yarn - not put up for sale) the United Kingdom exports to India but has no imports from that country. On the other hand, Belgium-Luxembourg imports that product (SITC 651.22) from Pakistan but have no exports to that country. In fact similar observations would apply to the intra-industry trade in most of the SITC 5 digit sub-groups contained in the 3 digit group Textile Yarn.suggesting that differentiation of the product by country of origin probably plays a certain role in such exchanges. In certain cases some of E.C. countries have developed a specialization in certain variaties of a product which they succeed in exporting to certain countries for a certain time, while other European countries not having developed such a specialization tend to import other developing countries as they start developing comparable products. An example is Dundee's exports of jute yarn which is used for backing for high quality carpets and the increasing inroads being made by India for the same product.

In Table V, all the cases in which at SITC 5 digit level there was bilateral IIT between the European Community member countries and the developing countri in Textile Yarn (SITC 651) in the year 1982 are shown. There were 8 instances where Grubel and Lloyd index in such bilateral trade was over 50. But if we apply a more selective norm of at least half a million units of account for the total trade flow at SITC 5 digit level and an above 50 Grubel and Lloy index, only in three instances such criteria were met : SITC 651.44 in the bilateral trade between France and Morocco, SITC 651.52 in the bilateral trade between U.K. and Hong Kong and SITC 651.74 in the bilateral trade between Belgium-Luxembourg and Morocco. Firms from all the three European Community countries concerned are known to have direct investment or sub-contracting arrangements in the textiles and clothing industries in the trading partner countries involved here. Whether these or the activities under the special tariff provisions for off-shore assembly would explain bilat trade in textile yarn at the level of disaggregation considered here is not clc

TABLE V

BILATERAL INTRA-INDUSTRY TRADE OF THE EUROPEAN COMMUNITY COUNTRIES WITH THE DEVELOPING COUNTRIES IN SITC 651 (TEXTILE YARN) IN 1982

SITC	TRADING PARTNERS	EXPORTS (in 000 Units of Accounts)	IMPORTS (in 000 Units of Accounts)	GRUBEL & LLOYD INDEX OF INTRA-INDUSTRY TRADE
651.23	Germany - S. Korea	138	1394	18.00
	U.K. - S. Korea	20	1183	3.33
651.32	France - Morocco	113	1652	12.80
651.33	Germany - Egypt	48	12658	0.76
	Italy - Egypt	92	1616	10.77
	U.K. - Egypt	27	1593	3.33
	Denmark - Egypt	22	3692	1.18
	Germany - Morocco	5	16	47.62
	France - Morocco	219	5298	7.94
	Bel./Lux. - Morocco	74	34	62.96
651.35	Germany - Hong Kong	184	173	96.92
	France - Hong Kong	62	84	84.93
	Italy - Hong Kong	46	3	12.24
	U.K. - Hong Kong	541	31	10.84
651.41	France - Morocco	167	1972	15.61
	France - Taiwan	532	57	19.35
	Italy - Taiwan	5	955	1.04
651.44	France - Morocco	381	202	69.30
651.46	Germany - Brazil	3	704	0.85
651.47	Italy - S. Korea	10	68	2.56
	Bel./Lux. - Mexico	5	402	2.46
651.48	U.K. - Hong Kong	177	746	33.91
	France - Mauritius	136	1136	27.2
	Germany - Mauritius	16	2022	0.79
	Italy - Mauritius	116	329	52.13
651.49	Germany - Hong Kong	117	61	68.54
	U.K. - Hong Kong	29	127	37.18
651.52	Germany - Hong Kong	69	265	41.32
	France - Hong Kong	488	7	2.83
	U.K. - Hong Kong	435	485	94.56
651.55	France - Morocco	83	1097	14.07
	Italy - Morocco	18	3	28.57
	Bel./Lux. - Morocco	2	23	15.38
651.71	U.K. - India	2	484	0.82
651.74	France - Morocco	10	206	0.93
	Bel./Lux. - Morocco	776	2127	53.46
651.99	U.K. - Sri Lanka	112	897	22.20

SITC 652 : Cotton fabrics woven, except special fabrics

Out of the 9 five digit SITC items contained in this, no IIT even at EC 10 - developing world level is recorded in two items, i.e. SITC 652.11 (cotton gauze, unbleached, not mercerized) and SITC 652.21 (Cotton gauze, bleached, mercerized, dyed, printed or otherwise finished). Among the 7 remaining items, there is no bilateral IIT between European Community countries and the developing countries in two products, namely, SITC 652.15 (other woven cotton fabrics, containing less than 85% by weight of cotton unbleached, not mercerized) and SITC 652.22 (Terry towelling and similar terry fabrics, of cotton, bleached, mercerized, dyed, printed or otherwise finished). In the case of one product, i.e. SITC 652.12 (Terry towelling and similar terry fabrics, of cotton unbleached, not mercerized) there is a small amount of IIT at EC 10 - Third World level, but the breakdown of trade figures by countries is not reported. The bilateral IIT for the remaining 4 items at SITC 5 digit level is reported in table VI. All four items are varieties of woven cotton fabrics. For various reasons, woven cotton fabrics is one of the product groups in which there is the possibility of horizontal intra-industry trade between the developed market economy countries and the developing countries. The developing countries have already developed considerable experience in this industry. Nevertheless, a number of DME countries which have a long established tradition in this industry have been trying to retain at least sub-sections of it, mainly on the basis of product differentiation into high-priced and fashion-oriented products. Thus, most of the requirements suggested in theoretical literature concerning the development of horizontal intra-industry trade are present in the case of this sector.

In the case of all the four SITC 5 digit products mentioned above, there was considerable amount of IIT between EC 10 and the Third World. But as table V shows, at the bilateral level, the picture that emerges is a far more qualified one. The bilateral IIT in SITC 652.14 (Other woven fabrics containing 85 per cent or more by weight of cotton, unbleached, not mercerized) and SITC 652.23 (Pile fabrics and chenille fabrics, woven, of cotton) was not very important with the probable exception of the trade between Italy and Hong Kong. None of the cases meet the double criteria of the Grubel and Lloyd index of 50 or more and of the value of more than 1/2 million units of accounts. The case of SITC 652.25 (Other woven cotton fabrics, containing less than 85% by weight of cotton, bleached, mercerized, dyed, printed, otherwise finished) is somewhat different. There are clearly more cases of bilateral IIT, and the

TABLE VI

BILATERAL INTRA-INDUSTRY TRADE OF THE EUROPEAN COMMUNITY COUNTRIES WITH THE DEVELOPING COUNTRIES IN SITC 652 (COTTON FABRICS) IN 1982

SITC	TRADING PARTNERS	EXPORTS (in 000 Units of Accounts)	IMPORTS (in 000 Units of Accounts)	GRUBEL & L INDEX OF I INDUSTRY T
652.14	France - Hong Kong	29	510	10.76
	Italy - Hong Kong	126	437	44.76
	U.K. - Hong Kong	69	26783	0.51
	Germany - Taiwan	117	7079	3.02
652.23	Germany - Hong Kong	2284	144	11.86
	France - Hong Kong	1454	89	11.54
	U.K. - Hong Kong	77	10773	1.42
652.24	Germany - Hong Kong	3588	785	35.90
	France - Hong Kong	765	110	25.14
	Italy - Hong Kong	2004	302	26.19
	Netherlands - Hong Kong	811	32	7.59
	U.K. - Hong Kong	1046	6272	28.59
	Denmark - Hong Kong	102	561	30.77
	Germany - S. Korea	690	8	2.29
	Italy - S. Korea	272	530	67.83
	Germany - Tunisia	15466	115	8.12
	France - Tunisia	12353	7708	76 85
	Italy - Tunisia	2832	740	30.04
	Netherlands - Tunisia	437	6	2.71
	Bel.Lux. - Tunisia	6253	6251	99.98
	U.K. - Tunisia	105	776	23.84
	France - Morocco	12635	5052	57.13
	Netherlands - Morocco	173	33	32.04
	Bel.Lux. - Morocco	591	21	6.86
	U.K. - Morocco	39	2	9.76
	Germany - Singapore	1177	40	6.57
	Italy - Singapore	127	53	58.89
	U.K. - Singapore	380	116	48.77
	U.K. - Malaysia	68	86	88.31
652.25	Germany - Hong Kong	3588	1	0.06
	France - Hong Kong	765	1	0.26
	Italy - Hong Kong	2004	86	8.23
	U.K. - Hong Kong	1046	2673	56.25
	Germany - S. Korea	149	1	1.33
	France - S. Korea	15	4	42.10
	Italy - S. Korea	118	33	43.71
	Germany - Malaysia	105	168	76.92

double criteria mentioned above has been met in one case, i.e. the trade between U.K. and Hong Kong. But bilateral IIT is clearly more important in the case of SITC 652.24 (Other woven fabrics containing 85% or more by weight of cotton bleached, mercerized, dyed, printed or otherwise finished). For this sub-group there were 22 cases of bilateral intra-industry trade. In four cases, the double criteria mentioned above was met and in 5 other cases, the flow was clearly far from marginal whether considered in terms of value or the Grubel and Lloyd index.

Interestingly, in all cases of bilateral IIT reported in table VI, a limited number of developing countries figure. They are : Hong Kong, Taiwan, S. Korea, Singapore, Malaysia, Tunisia and Morocco. Private direct investment in, and subcontracting arrangements involving these developing countries and the members of the European Community do exist. But private direct investment by itself need not lead to intra-industry especially at SITC 5 digit level. For example, there is no special reason why a British company should export cotton yarn (SITC 651.35) to Hong Kong and at the same time import into U.K. the same product from its U.K. affiliate. But it is possible that in the case of products such as cotton fabrics, sub-contracting provisions and off-shore assembly arrangements might lead to intra-industry trade even when the product is considered at the five digit level. Whether this is actually the case, is at present not possible to verify. Most of the evidence concerning the sub-contracting and off-shore assembly arrangements of the European companies have been reviewed elsewhere (see Tharakan 1979, pp. 95-103). What it confirms is that an important part of such arrangements is in the textiles and clothing industry and is located mainly in the South-East Asian and North African countries which appear in table VI.

SITC 682 : Copper

This group consists of nine SITC five digit products. Out of these, 7 products show some intra-industry trade at the EC-10 - Third World level. But at least in three cases, the value of Grubel and Lloyd index even at the EC 10 - Third World level is marginal. These are : SITC 682.22 (Copper plate, sheet, strip, wrought), SITC 682.23 (Copper foil of a thickness not exceeding 0.15 mm) and SITC 682.26 (Tube and pipe fittings). Nevertheless in one of these, i.e. SITC 682.22 there were four instances of bilateral IIT involving Italy-Hong Kong, U.K.-Hong Kong, U.K.-Brazil and Germany-Brazil. The Italy-Hong Kong flow

registered a Grubel and Lloyd index of 99.14 but in value terms it amounted to only 234 thousand units of account. In the other three cases both Grubel and Lloyd index and the value of the trade flow were low. Among the other product groups there was only one case where the bilateral IIT exceeded both 1/2 million units of account and 50 points in terms of the Grubel and Lloyd index. This was the trade in SITC 682.21 (Copper bars, rods, angles, shapes and sections wrought of copper, copper wire) between Italy and Hong Kong where the Grubel and Lloyd index was 78.56 and the value of the flow was worth 583 thousand units of account.

SITC 689 : Miscellaneous Non-ferrous Base Metals :

Only four SITC five digit products in this group show IIT even at EC 10 - Third World level. In most cases the value involved is small even at that level of aggregation. One exception is SITC 689.99 (Other base metals, n.e.s., Unwrought; Cermets, Unwrought; Waste and scrop of base metals, n.e.s. and of cermets) in which the value of the EC 10 - Third World trade flow amounted to 42.86 million units of account, most of which was accounted for by the imports coming into the European Community from the third world countries. Even in the case of this product, there was only one instance of bilateral IIT. This was between Germany and South Korea. The amount involved was very low (118 thousand units of account).

SITC 714 : Reaction Engines, Gas Turbines :

As can be seen from table VII, all of the 5 SITC five digit products in this three digit group report considerable amount of intra-industry trade at bilateral level, whether considered in terms of the value of the trade flow or the magnitude of the Grubel and Lloyd index. In the case of SITC 714.41 (Reaction engines) there were 5 cases of bilateral IIT where the value of the trade flow far exceeded the 1/2 million units of account benchmark. In three of these cases, the Grubel and Lloyd index surpassed 50. For SITC 714.81 (Turbo-propellers) both of the reported cases of bilateral IIT met this double criteria. It was almost the case for the 2 instances of bilateral IIT reported under SITC 714.88 (Other Gas turbines). Similarily, in the case of SITC 714.91 (Parts, n.e.s. of reaction engines or turbo-propelle in two cases of bilateral IIT high values of trade flow and high value of the

TABLE VII

BILATERAL INTRA-INDUSTRY TRADE IN SITC 714 (REACTION ENGINES, GAS TURBINES) BETWEEN THE EUROPEAN COMMUNITY COUNTRIES AND THE DEVELOPING COUNTRIES IN 1982

SITC	TRADING PARTNERS	EXPORTS (In 000 Units of Accounts)	IMPORTS (In 000 Units of Accounts)	GRUBEL & LL INDEX OF IN INDUSTRY TR
714.40	U.K. - Saudi Arabia	103093	254675	57.63
	U.K. - Bahrein	36140	18224	67.04
	U.K. - India	67369	4775	13.27
	U.K. - Jordan	21291	9025	59.54
714.81	U.K. - Iran	908	2498	53.32
	U.K. - Malaysia	842	1840	62.79
714.88	Germany - Saudi Arabia	2260	7273	47.41
	Germany - Iran	2332	1955	91.21
714.91	U.K. - Saudi Arabia	38535	56211	81.34
	U.K. - Brazil	13807	4203	46.67
	U.K. - India	23219	1579	12.73
714.99	Netherlands - Saudi Arabia	6378	3879	75.64
	U.K. - Saudi Arabia	12758	3025	38.33
	U.K. - Phillippines	1253	468	54.39
	U.K. - Hong Kong	1026	169	28.28

Grubel and Lloyd index are seen. Finally, for SITC 714.99 (Parts n.e.s. of reaction engines or turbo-propellers, there were 4 cases of bilateral intra-industry trade out of which two cases met the above mentioned double criteria.

Out of the 15 instances of bilateral IIT reported in table VII, 12 involved the United Kingdom, two cases pertained to Germany and one the Netherlands. At least in 8 cases the Third World partner involved was one of the oil-rich Middle East countries. In view of the absence of production of this product in a number of these countries the most likely explanation of this phenomenon is that what shows up as IIT here is probably reaction engines and gas turbines sent to the European countries for repairs or servicing and returned during the same year.

SITC 893: Articles of Plastic n.e.s.

Out of the 9 three digit sub-groups for which trade data are reported for the year 1982, only in the case of one product (SITC 893.92: Copolymers of vinyl chrolride and vinyl acetate in the form of plates, tiles or strip of the types used for flooring) no intra-industry trade between EC10 and the developing world was noted. In the case of one other product (SITC 893.93 : Roller blinds, venetian blinds and similar articles, and parts thereof, of the materials falling within division 58) there was no bilateral IIT between the European Community countries and the developing countries. For all the other SITC five digit products, varying degrees of bilateral intra-industry trade took place between different members of the European Community and some of the developing countries. Because of the rather large number of such cases reported, we have shown in table VIII only those instances in which the value of bilateral IIT exceeded half a million units of accounts and the Grubel and Lloyd index of over 25. As can be immediately seen from table VIII, all the developing countries involved belonged to the South East Asian group, particularly the four export-oriented NICs (Singapore, Taiwan, Hong Kong and South Korea).

Table VIII

SELECTED CASES OF BILATERAL INTRA-INDUSTRY TRADE IN SITC 893 (ARTICLES OF PLASTIC n.e.s.) BETWEEN EUROPEAN COMMUNITY COUNTRIES AND DEVELOPING COUNTRIES IN 1982

SITC	TRADING PARTNERS	EXPORTS (in 000 Units of Accounts)	IMPORTS (in 000 Units of Accounts)	GRUBEL & LLOYD INDEX OF INTRA INDUSTRY TRADE
893.10	U.K. - Thailand	225	1297	29.56
	Germany - Malaysia	428	1703	40.16
	Germany - Singapore	247	1330	31.33
	U.K. - Singapore	869	4343	33.34
	U.K. - Taiwan	373	1285	44.99
	U.K. - Hong Kong	428	1093	56.28
893.20	U.K. - Hong Kong	501	336	80.29
893.50	U.K. - Hong Kong	130	533	39.21
893.94	Germany - Hong Kong	269	1495	30.61
893.99	Germany - Hong Kong	7436	1100	25.77
	France - Hong Kong	2957	1078	53.43
	Italy - Hong Kong	1183	763	78.42
	Bel./Lux. - Hong Kong	687	205	45.96
	U.K. - Hong Kong	9082	5338	74.03
	Denmark - Hong Kong	842	207	39.47
	Italy - Taiwan	217	1136	32.07
	Germany - S. Korea	405	1830	36.24
	France - S. Korea	213	1133	31.65
	Italy - S. Korea	275	614	61.87
	Netherlands - S. Korea	262	842	47.46
	U.K. - S. Korea	266	867	46.95

The six cases of bilateral IIT reported in table VIII for SITC 893.10 (Articles for the conveyance or packing of goods - including containers without handles usable also as disposable drinking cups -, stoppers, lids, caps and other closures, of the materials falling within Division 58) involved considerable amounts. Four cases involved the United Kingdom and two concerned the Federal Republic of Germany. For SITC 893.20 (Sanitary and toilet articles, of the materials falling within division 58) only in the case of U.K. - Hong Kong bilateral trade the criteria specified for table VIII was met. Similarily, for SITC 893.50 (Articles of electric lighting, of the materials falling within division 58) only the U.K. - Hong Kong flow could be included in table VIII. The Germany - Hong Kong flow IIT in SITC 893.94 (Office or school supplies, of the materials falling within division 58) also exceeded half a million units of account and the Grubel and Lloyd index of 25. SITC 893.99 (other articles, n.e.s., of the materials falling within division 58) is a heterogenous group even at five digit level. Hence it is perhaps not very surprising to find a number of instances of bilateral IIT between European Community countries and the developing countries involving considerable amounts and high or relatively high Grubel and Lloyd index. Twelve such cases are reported in table VIII. But it is important to bear in mind that the substitutability in consumption of the products involved in these flows might not be high. In general in most of the significant cases of bilateral IIT, the developing countries involved are known to have high amounts of private direct investments or sub-contracting arrangements.

SITC 899: Other Manufactured Goods, n.e.s.

This SITC three digit group consists of 26 five digit items of usually low unit value. Given the great heterogenity of the group, the high IIT value at the SITC 3 digit level does not by itself mean very much. Nevertheless it is worthwhile paying some attention to the IIT at the 5 digit level in this group because these are the items for which some developing countries have developed considerable exports and secondly in 24 out of 26 five digit products there exists considerable amount of IIT (both in terms of value and often in terms of the magnitude of the Grubel and Lloyd index) at the EC 10 - Third World level. Nevertheless when we retain only those products which show bilateral IIT, eleven of

the SITC 5 digit products do not qualify. For two other SITC five digit products (SITC 899.82: Powder puffs and pads for applying cosmetics or toilet preparations of any material, and SITC 899.86: Scent and similar sprays of a kind used for toilet purposes and mounts and heads therefor) the breakdown of trade figures by countries is not available. Among the other SITC five digit products which have registered bilateral IIT with the developing countries, those instances in which the trade flow exceeded 1/2 million units of account and the Grubel and Lloyd index of more than 25 are reported in table IX.

Once again, from the Third World side the South East Asian countries, particularly Hong Kong dominate such flows. In fact, out of 8 cases of bilateral IIT reported in table IX, Hong Kong is concerned in six. Interestingly, its bilateral IIT is not only with the United Kingdom, but also with other members of the European Community. In four instances out of the 8 cases reported in table IX, the rigorous double criteria of more than 1/2 million units of accounts and the Grubel and Lloyd index of more than 50 are met. Two of these instances are in trade in SITC 899.72 (Brooms and brushes, consisting of twigs or other vegetable materials merely bound together and not mounted in a head - with or without handles ; other brooms and brushes - including brushes of a kind used as parts of machines - ; prepared knots and tufts for broom or brush making ; paint rollers ; squeegees and mops). The trading partners concerned were Italy and Hong Kong in one case and Germany and South Korea in the second. Another instance of significant (according to the criteria stated above) bilateral IIT was in the case of SITC 899.84 (Slide fasteners and parts thereof) and the trading partners were Germany and Malaysia. Finally, there was also an important bilateral IIT flow between France and Hong Kong in SITC 899.85 (Combs, hair slides and the like)

TABLE IX

SELECTED CASES OF BILATERAL INTRA-INDUSTRY TRADE IN SITC 899 (OTHER MANUFACTURED PRODUCTS, n.e.s.) BETWEEN THE EUROPEAN COMMUNITY COUNTRIES AND THE DEVELOPING COUNTRIES IN 1982

SITC	TRADING PARTNERS	EXPORTS (in 000 Units of Accounts)	IMPORTS (in 000 Units of Accounts)	GRUBEL & LLOYD INDEX OF INTRA INDUSTRY TRADE
899.34	Netherlands - Hong Kong	462	1774	41.23
899.62	Netherlands - Hong Kong	546	169	47.27
899.72	Italy - Hong Kong	166	356	63.60
	U.K. - Hong Kong	387	2281	29.01
	Germany - S. Korea	250	425	74.07
899.83	U.K. - Hong Kong	207	1200	29.42
899.84	Germany - Malaysia	565	1117	67.18
899.85	France - Hong Kong	997	1104	94.91

General Remarks:

The number of products (at SITC three digit level) showing high values (> 50 of the Grubel and Lloyd index) of intra-industry trade between Developed Market Economy countries and the developing world has more than doubled during the period covered by this study. The present stock of knowledge on the determinants of the commodity composition of IIT deal mainly with such trade between countries with similar (and high) income levels. In fact intra-industry trade between countries with clearly different factor endowment patterns is not easy to explain within the usual theoretical framework dealing with IIT. In the present context we have carried out the analysis at highly disaggregative levels, both in terms of products and countries. The evident reason for analysis at a more disaggregative level of products is that at the usually used SITC 3 digit level, commodity groups might contain sub-groups which are not close substitutes in terms of factor intensities or end uses. Disaggregation in terms of countries is interesting because recent theoretical developments suggest that the existence of IIT at multilateral level is not surprising, but at the bilateral level it is. We have chosen to apply such a disaggregative analysis to the European Community countries trade with the developing countries, for those products which recorded high levels of IIT in 1982 in the DME-Developing World flow.

Strictly speaking, and inspite of the last-mentioned theoretical development the prevalence of IIT between EC 10 and the Developing World as groups also is significant, given the difference in the income (and factor endowment) levels between these two groups of countries. Our analysis shows that even at SITC 5 digit levels most products show intra-industry trade between and Third World. But when the analysis is carried down to bilateral level the picture changes considerably. Although the IIT does not disappear, it becomes less important, particularly if we apply "selection criteria" such as 1/2 million units of accounts and a Grubel and Lloyd index of more than 50. Further, the nature of the IIT (or its determinants) appear to change among different product groups. The significant bilateral IIT of EC-10 countries, at SITC 5 digit levels in product groups such as Carboxylic Acids or Essential Oils, Perfume and Flavouring Materials take place with countries such as Brazil, Mexico, India, Egypt etc. In certain cases the

difference in the natural resource content might be one of the explanations.

The bilateral intra-industry trade at SITC 5 digit level in product groups such as Textile yarn (SITC 651) and cotton fabrics woven, except special fabri (SITC 652) is far more widespread. It could well be that the theoretically postulated determinants of horizontal IIT, such as the interaction between economies of scale and product differentiation play a certain role here. But it is worth noting that most of such bilateral IIT of the EC-10 countries takes place with developing countries which are known to have foreign direct investments or contractual trading arrangements with European firms. While such arrangements need not in themselves be sufficient explanations of IIT observed at SITC 5 digit levels, they could be channels which facilitate such flow.

The substantial amount of IIT observed in SITC 5 digit products in product groups such as Reaction Engines, Gas Turbines (SITC 714), can only be due to repairs or servicing arrangements as most of the developing country partners concerned are not producers of such products.

Finally in a number of low unit value products contained in product groups such as Articles of plastic (SITC 893) and other Manufactured Goods (SITC 899) there is considerable amount of bilateral IIT between EC 10 countries and the developing countries. Product differentiation (also in the form of heterogeneity even at SITC 5 digit levels) probably play a role here. It is also likely that foreign direct investment or contractual trade arrangements have facilitated such flows of bilateral IIT.

FOOTNOTES

1. See UNCTAD 1984, p. 14, table I.

2. By the end of 1972, all the schemes had been implemented except those of Canada and the United States whose schemes were introduced in 1974 and 1976 respectively.

3. The GSP is indeed a complex system and its essential elements which are of relevance here can be summed up as follows : The products covered include mainly manufactures and semi-manufactures. Agricultural products are included only to a limited extent. In general, manufactured products covered by the schemes enjoy duty-free treatment. Preferential imports to the E.C. and Japan are subject to safeguard mechanisms in the form of tariff quotas, ceilings and maximum country amounts. Preferential imports to the U.S. are limited to products for which developing countries do not demonstrate competitiveness. Preferential imports to Australia are subjected to competitive need exclusions and tariff quotas (see UNCTAD 1985, p. 110).

4. This reasoning, based on the so-called "chain of comparative advantage" suggests the following: Although the H.O.S theorem must hold valid in constructing some ranking of commodities to predict the pattern of trade between any two countries, in a world of unequal factor prices it need not hold in this "ordering sense" for a country's <u>multilateral</u> trade under conditions of factor price non-equalization. Stated otherwise, the pattern of a country's multilateral trade is likely to be inconsistent with the rankings constructed according to the H.O.S. proposition, although interestingly, it will hold between any pair of countries.

5. SITC 632 and SITC 735 are left out as the <u>Analytical Tables of Foreign Trade</u> of 1982 of the European Communities do not provide the data pertain to them.