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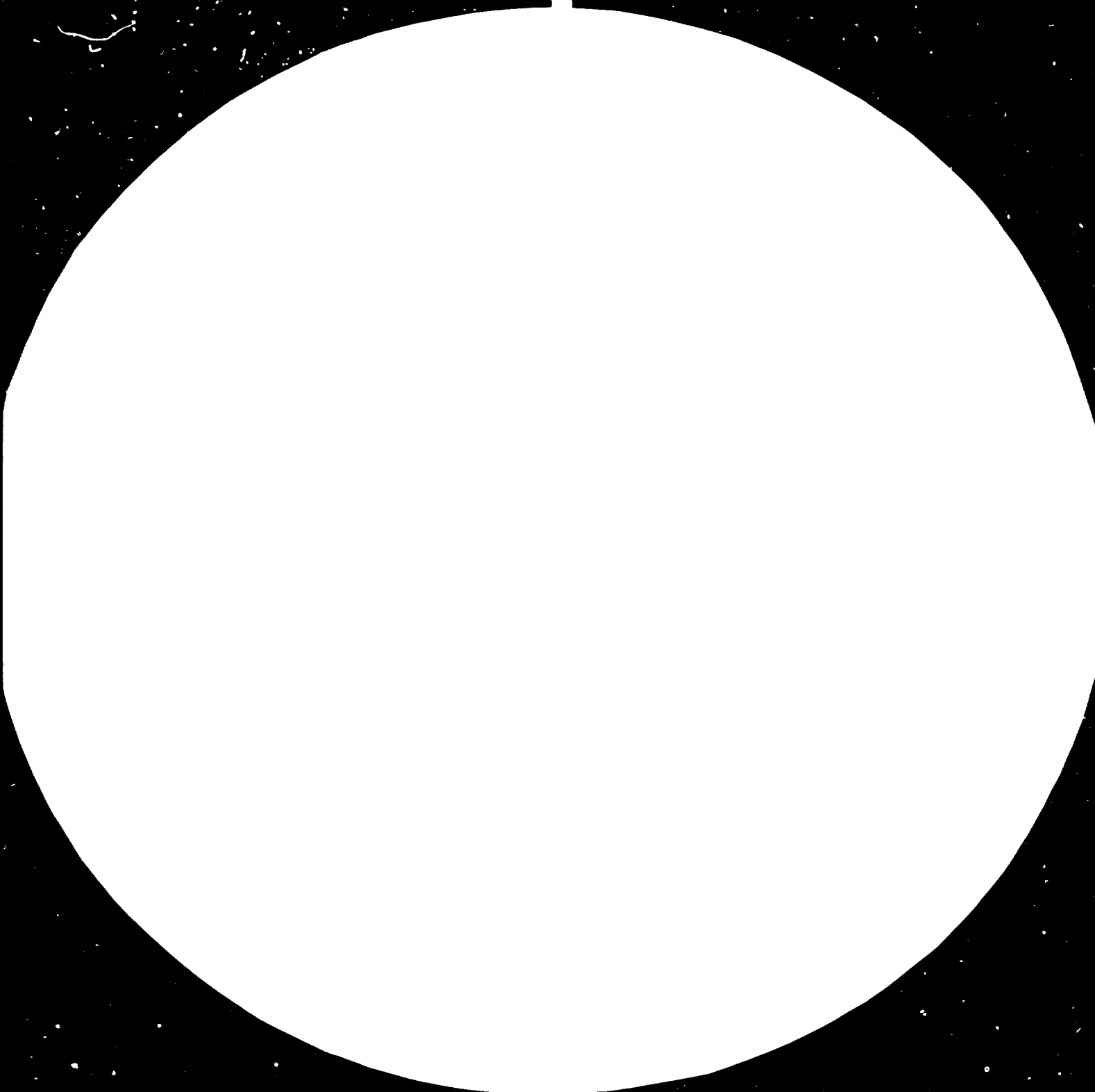

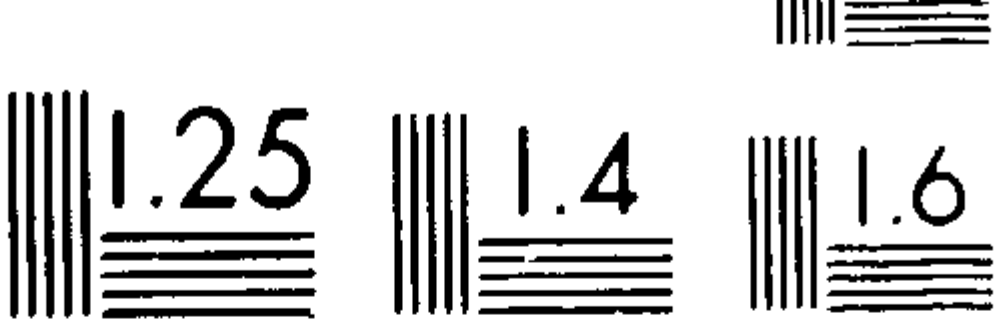
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INTRA-FIRM TRADE AND INTERNATIONAL INDUSTRIAL RESTRUCTURING

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FOREWORD

This study is one of a series in UNIDO's research programme on international industrial restructuring. This programme aims to identify trends in factors affecting industrialization and restructuring and to analyze their implications for industrialization and redeployment to the developing countries within the changing division of labour.

The study focuses on "intra-firm" trade in manufacturing, that is, the estimated one-third of world trade in manufactures which is transacted between affiliated parties. As firms realize the increasing potential for integrating their operations throughout the world, they are contributing to significant shifts in the patterns of international trade and industrial development in both the industrialized and developing nations. Thus, the study examines the internationalization of industrial production through trade and the issues raised by the internalization of this trade within the ambit of the transnational corporation.

This study was prepared by E. Koseoglu as consultant in collaboration with the UNIDO Secretaria .

I. INTRODUCTION*

This report and the implications on such trade for international industrial restructuring examines intra-firm trade by transnational corporations (TNCs). Its purpose is to review the literature concerning these two subjects and to analyze pertinent recent data.

Part II of the report reviews the changes in the structure of international trade which have taken place since World War II, focusing in particular on the impact of the spread of TNC operations on trade.

Part III examines changing patterns of trade and how they relate to industrial redeployment, by analyzing the characteristics and recent growth of intra-industry trade and intra-firm trade. This section also reviews the theoretical approaches used to interpret such trade.

Part IV investigates the role of TNCs in industrial redeployment, concentrating on why these firms have reorganized their operations on an international scale and on the importance of intra-firm trade to this reorganization.

Part V reviews some of the implications of international redeployment and intra-firm trade for developed and developing nations.

Part VI presents suggestions for future research and Part VII offers the conclusions of the study.

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* The invaluable suggestions and comments of Dr. Robert Cohen and the kind co-operation of Real Lavergne in supplying the data on U.S. Related-Party imports are gratefully acknowledged.

II. CHANGES IN THE STRUCTURE OF INTERNATIONAL TRADE SINCE WORLD WAR II

A. The Increasing Share of Manufactures in World Trade

The post-war period has been characterized by steady progress in trade liberalization and an unprecedented growth of international trade, especially in manufactured goods. Total world trade grew more rapidly than total world output. Throughout the 1960s, world output increased at an average annual rate of 5 per cent while the volume of world trade increased at a rate of 8.5 per cent.[1/] This trend has continued in the 1970s.

While the rapid growth of international trade relative to world output has received much attention during the past two decades, it is not a new phenomenon. Kuznets found it to be a secular tendency except for the interruption during and between the two world wars. He further found that the proportion of world trade accounted for by trade among the developed nations had scarcely changed and that the division of total world trade between primary and manufactured products had remained remarkably constant from the 1870s to the early 1950s.[2/]

But, there have been significant changes in the commodity structure of international trade since World War II. The proportion of manufactures in total world trade has grown significantly, rising from 50 per cent in 1955 to 60 per cent in 1965, with the trend continuing in the 1970s.[3/]

The faster growth of world trade relative to world output and the rising share of manufactures in world trade have paralleled the recent emergence of the transnational corporations. To date, however, adequate attention has not been paid to delineating the extent to which these changes in trade are due to the growth of indigenous production and to what extent they are due to the redeployment of industrial activity by TNCs. This question will be addressed below.

1/ IMF, Annual Report, 1976, pp. 5, 10.

2/ S. Kuznets, "Quantitative Aspects of the Economic Growth of Nations," Development and Cultural Change, January 1967.

3/ R. Solomon, The Interdependence of Nations: An Agenda for Research, Washington, D.C., December 1977, p. 28.

B. The Dramatic Increase in the Share of World Exports from Developing Nations

In the first decades following World War II, the share of world exports held by the developing nations steadily declined. This trend was reversed in the 1960s. From 1960 to 1975, exports from developing nations expanded at rates of over 12 per cent a year. This growth accelerated in the late 1960s and early 1970s, and has continued despite the setbacks suffered by the world economy since 1973. Developing nations' exports of manufactured increased by at least 6 per cent per year during the world recession of 1975. They increased by over 20 per cent during the 1976 recovery and expanded once again by over 10 per cent (in real terms) during the slow growth of 1977 (as compared to world trade as a whole which increased by only 4 per cent).[1/] In the aggregate, nearly two-thirds of developing nations' manufactured exports go to developed nations.

This growth of developing nations' exports of manufactured goods came at the very time that their share of intra-firm trade (IFT) was increasing at a rapid pace. Between 1975 and 1977, the share of U.S. related-party imports (imports from U.S. transnationals' affiliates abroad exporting to their U.S. parent and from foreign TNCs exporting to their U.S. affiliates) originating in developing nations rose from 35.5 per cent to 42.4 per cent.[2/] This trend will be discussed more extensively in Part IV B.

C. The Internationalization of Trade By Transnational Corporations

Traditional international trade theorists generally assume, either explicitly or implicitly, that the trading firms in one country are entirely distinct from the trading firms in another. If connections do exist between firms, they are judged to be irrelevant to the analysis. In fact, however, trade is increasingly internalized in TNCs, taking place largely among affiliates or between parent corporations and their affiliates. In 1977, for example, 48.4 per cent of all U.S. imports were from "related parties". Thus international trade has become inextricably bound up with the growth and spread of the TNCs.

1/ H. Chenery and D.B. Keesing, The Changing Composition of Developing Country Exports, World Bank Staff Working Paper no. 314, The World Bank, Washington, D.C., January 1979, pp. 12, 15.

2/ G. Helleiner, "Transnational Corporations and Trade Structures: The Role of Intra-Firm Trade", in H. Giersch (editor), on the Economics of Intra-Industry Trade, Tubingen, 1979, p. 162.

Although this trend has far-reaching implications for the nature of international trade, it has not been adequately appreciated. The growth of intra-firm trade of manufactured goods has been noted in the literature primarily because of its relation to transfer price manipulation by the TNCs.[1/] As Helleiner has pointed out, "there remains a major gap in the trade literature with respect to the fact of private firms' internationalization of some markets and the role of intra-firm international trade."[2/] IFT has nonetheless become a subject of increasing concern in certain quarters during the past few years. A number of studies focusing primarily on TNCs have shed light on the significant role played by IFT in developed and developing nations (See Table 1 below).

As will be noted in Parts III (B) and IV, IFT has grown in importance over the past decade. Thus, it appears that as transnational enterprises become more adept at integrating their operations throughout the world, they are contributing to significant shifts in the pattern of international trade and are having an important impact on industrial development in both the industrialized and developing nations.

1/ For a bibliography of studies on transfer pricing see S. Lall, Private Foreign Manufacturing Investment and Multinational Corporations: An Annotated Bibliography, New York, 1975.

2/ Helleiner, op.cit., p. 160

TABLE 1

SUMMARY OF EVIDENCE ON INTRA-FIRM INTERNATIONAL TRADE

	NATIONS	YEAR	OBSERVATIONS	RESULTS
1.	LATIN AMERICA	1969	257 firms	94 foreign-owned had 72.3% of exports to affiliates; 39.6% for joint ventures, 13.6% for local firms
2.	COLOMBIA	1970	Total imports	20 - 25% non-arms-length
3.	ARGENTINA, BRAZIL, MEXICO, INDIA	Early 1970s	Exports of German MOFAs	60% internalized
4.	LDCs	1970	68 FDI projects	43% of inputs provided by parents (especially Far-Eastern parents)
5.	JAPAN	1973	339 firms (661 MOFAs)	% of purchased inputs provided by parents; Textiles - 29%, Metals - 59%, Consumer electronics - 57%, Precision Instruments - 79%, Motor Vehicles - 82%, Electrical machinery - 60%, Chemicals - 57%, Non-electric machinery - 48%, Pulp and paper - 9%.
6.	AUSTRALIA	1961-1962	76 US subsidiaries	51.48% of imports internalized (94.7% for wholly-owned, and 76.2% for minority-owned joint ventures).
7.	NEW ZEALAND	1963-1964	109 foreign firms	55.4% of imports internalized (31.9% of total inputs; higher for machinery and metals, lower for textiles, paper and apparel affiliates; 6 of 109 accounted for 78% of total internal imports, 29 accounted for 97%.
8.	CANADA	1960	220 foreign firms	Parent-supplied imports/total imports: 0:13%, .01-.29:16%, .30-.69:23%, .70-.99:28%, 1.00:10%
9.	CANADA	1965	266 foreign firms with assets at least $5m.	Export internalization-50.74%, (63.15% to US. 29.50% elsewhere); import internalization-71.86% (71.29% from US, 73.81% elsewhere).
10.	GERMANY	1972	Foreign trade	21% of total exports internalized; 76.1% of imports of 57 largest firms internalized (10.4% of total manufactured imports).

NATIONS	YEAR	OBSERVATIONS	RESULTS
11. BELGIUM	Early 1970s	Finished Manufactured exports	For foreign firms (representing 30% of Belgian total): 1/3 internalized.
12. UNITED KINGDOM	Early 1970s	Finished Manufactured exports	12% of total are by foreign firms to their foreign parents.
13. SCOTLAND	Late 1960s	124 US firms	21% of exports, 57% of imports (especially mechanical engineering) internalized.
14. NETHERLANDS	Mid-1960s	94 US firms	21.95% of sales were related-party imports (65.5% in motor vehicles).
15. SWEDEN	1972	Foreign trade	25% of imports, 30% of exports internal.
16. SWEDEN 16	1975	Foreign trade	25% of imports, 29% of exports internal.
17. NORWAY	1972	421 foreign firms	94/421 procured at least 1/4 of total inputs from related parties.
18. 22 LDCs	1971-1972	90 UK MNCs MOFAs	25% of imported inputs from related parties; 25% of parent exports to related parties.
19. LATIN AMERICA	Early 1970s	240 foreign firms	% of imports from parent country by parent nationality: Japan-93%, Germany-80%,.... Canada-38%, Belgium-18% (others in source).

SOURCE: J.P. Jarrett, "Offshore Assembly and Production and the Internalization of International Trade Within the Multinational Corporation: Their Causes and Effects on US Manufacturing Industry Wage and Profit Rates", unpublished Ph.D. dissertation, Harvard University, Cambridge, Massachusetts, 1979, p.77.

REFERENCES:

1. Muller and Morgenstern (1974).
2. Chudnovsky (1972, p. 243).
3. UNCTAD (1978)
4. Reuber et al (1973)
5. Yoshino (1976) or UNCTAD (1978) both citing a MITI study.
6. Brash (1966).
7. Deane (1970).
8. Safarian (1966).
9. Safarian (1969).
10. Holthus and Koopman (1975).
11. Holthus and Koopman (1975).
12. Holthus and Koopman (1975).
13. Forsythe (1972).
14. Stubenitsky (1970).
15. Helleiner (1978).
16. United Nations (1978).
17. UNCTAD (1977).
18. UNCTAD (1977 and 1978) citing research of J.H. Dunning.
19. Lall (1979).

III. INTRA-INDUSTRY TRADE AND INTRA-FIRM TRADE

A. Intra-Industry Trade

In his 1945 investigation of the industrial structure of world trade, Hirschman pointed out that the proportion of British trade accounted for by the exchange of manufactures for manufactures had been growing for many years. From the middle of the 19th century to 1925-1929, the export of manufactured goods against the import of manufactured goods accounted for a growing share of Britain's total trade, rising from 8.8 per cent to 25.7 per cent. He found a similar increase in other developed nations from 1913 to the late 1920s or early 1930s. Manufactures traded against manufactures accounted for a portion of total trade which ranged from 20 to 30 per cent in the more developed countries.1/

For many countries, the liberalization of world trade in the post-war period has led to a notable increase in both the export and import of manufactured goods classified in the same industry or commodity category. This type of trade has been called intra-industry trade (IIT). Several empirical studies found that the share of IIT in the total trade in manufactured commodities is very high, especially for trade among developed nations. Moreover, the share of IIT in total trade has tended to increase. In a detailed study of the composition of trade, Grubel and Lloyd found that trade within industry (at the 3-digit level) among developed nations accounted for 38 per cent of the total trade in 1959, 45 per cent of the total in 1964, and 50 per cent of the total in 1967.2/

Theoretical interpretations of intra-industry trade

Traditional international trade theory, based as it is on differences in factor endowments among countries, leads one to expect significant qualitative differences between the exports and imports of any given country. However, information about the extent and growth of IIT relative to total trade suggests that countries do simultaneously.

1/ A. Hirschamn, National Power and the Structure of Foreign Trade, Berkely, California, 1945, Chapter VII, cited in R. Solomon, op. cit.

2/ H. Grubel and P. Lloyd, Intra-Industry Trade: The Theory and Measurement of International Trade in Differentiated Products, London, 1975. See H. Hesse, "Hypotheses for the Explanation of Trade between Industrial Countries, 1953-1970" in H. Giersch (editor), The International Division of Labour: Problems and Perspectives, Tubingen, 1974 and 1969 statistics see A. Aquino, "Intra-Industry and Inter-Industry Specialization as current Sources of International Trade in Manufactures, "Weltwirtschaftliches Archiv", Band 114, 1978, pp. 275-296.

export and import very similar goods.[1] For this reason, modifications were introduced into traditional theory to explain the changes observed in the pattern of trade.

Most international economists started from the Hecksher-Ohlin (H-O) model, which argued that if certain conditions were met countries would specialize in producing goods requiring relatively large inputs of resources with which they were comparatively well endowed, and would export these in exchange for others requiring relatively large inputs of factors with which they were comparatively poorly endowed. In their attempts to explain trade patterns as they were rather than as they might be, trade theory focused either on trade flows or foreign investment.

In the area of trade flows, they introduced more realism into the H-O model in two ways. First, through neo-factor theories that extended the two-factor H-O model to embrace location-specific endowments (especially natural resources) and differences in the quality of inputs (especially labour). Secondly, by using neo-technology and scale economy models that allowed for the possibility of differences in the production functions of enterprises and for imperfect markets. These approaches hypothesized a new type of international specialization: that the most developed countries would specialize in the production of new "product-cycle" goods, regardless of whether or not they were capital-intensive, while other nations would specialize in more mature (H-O) goods, whether capital-intensive or labour-intensive (since they ranked lower in per capita income and other development indicators).

Other international trade theorists attempted to explain changes in trade through the growth of foreign direct investment (FDI) or of production financed by such investment.

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[1] In the literature on IIT, there is a controversy over the definition of "industry". The question is whether observed IIT is a purely statistical phenomenon resulting from a faulty aggregation of distinct commodities into a particular industry classification of traded goods (Krugman raises the possibility that "we are actually taking a sort of ink blot test, trying to read significance into what is really measurement error". See Krugman, "Comment" in H. Giersch (editor), On the Economics of Intra-Industry Trade, p. 1?) or whether it has significance for the explanation of trade patterns. In a given "industry" classification, goods may have similar inputs on the demand side, but on the supply side have different factor proportions or different qualities of factors, even if they are used in similar proportions. However, it has been recognized that unless one overdefines the concept of an industry so that each brand of goods becomes an "industry" in itself, the heterogeneity of given types of industrial classification does not account for the phenomenon. Empirical evidence shows that a high degree of IIT remains even if a very disaggregated commodity classification scheme is employed (Hesse, 1974; Willmore, 1974). Thus, even though the level of disaggregation affects the magnitude, it does not change the fact that IIT is real.

Most rewarding was the work by Hymer[1/] and Caves[2/] which identified the distinctive features of FDI in terms of the oligopolistic advantages of foreign firms. Economists working in this framework concluded that the TNCs possessed particular kinds of advantages, such as superior information, and greater capabilities for developing products and for product differentiation.

However, because IIT occurs mainly among developed countries and between them and the newly industrializing developing countries (NICs) which have emerged as dynamic new exporters of manufactures since the mid-1960s, and since there are not significant factor endowment differences among the principal developed countries[3/], IIT has had to be explained with theories other than the Heckscher-Ohlin factor proportions model. Following Linder[4/], most economists have argued that IIT has grown because of the increased demand for highly differentiated manufactured products in the developed nations (which in turn is largely due to the convergence of per capital income levels in these countries and fostered by successive GATT tariff reductions biased in favour of IIT). Most theorists have dealt with IIT by stressing the role of product differentiation. As for the NICs, the explanation given is that IIT takes the form either of horizontal specialization where developing nations produce simpler-quality products or of vertical specialization where developing nations produce more labour-intensive parts.[5/]

Alternatively, it has been argued that IIT might depend on the structure of international product markets and the behaviour of the firms within them. Although product differentiation was viewed as a factor that explains IIT, it could not be its cause, but rather a means through which import penetration takes place. As Hymer[6/] and Caves[7/] pointed out, TNCs and oligopolistic market structures were both associated with product differentiation.

1/ S. Hymer, The International Operations of National Firms: A Study of Direct Foreign Investment, Cambridge, Mass., 1967.

2/ R. Caves, "Industrial Organization" in J. Dunning (editor), Economic Analysis and the Multinational Enterprise, London, 1974, pp. 115-146.

3/ G. Hufbauer and J. Chilas, "Specialization by Industrial Countries: Extent and Consequences, " in H. Giersch (editor), The International Division of Labour ....., pp. 3-38, showed that trade among the OECD countries is increasingly intra-industry as their factor proportions have apparently become more similar.

4/ S. Linder, An Essay on Trade and Transformation, New York, 1961.

5/ B. Balassa, "Intra-Industry Trade and the Integration of Developing Countries in the World Economy", in Giersch (editor) On the Economics of Intra-Industry Trade, Mohr, Tubingen, 1979, p.267.

6/ Hymer, op. cit.

7/ Caves, op. cit.

Moreover, in analyzing international trade (whether inter- or intra-industry) it was necessary to consider the role of international direct investment, since "the value of the production financed by such investment - at least in the manufacturing sector - exceeds that of world trade, while around one-third of that trade takes place within the enterprises undertaking the investment."[1/] TNCs tended to dominate many industries in which IIT is important: rubber tires, pharmaceuticals, motor vehicles and consumer electronics are cases in point. If the notion of IIT is extended to the production processes involved, this dominance is even more striking. Thus, international trade and international investment are inextricably linked in international production, which increasingly takes place within the TNCs.

B. Intra-Firm Trade

The growth of intra-firm trade

The overall dimensions of intra-firm trade (IFT), or trade within TNCs, are not well known and the available statistical information is very limited. The United Nations[2/] has estimated that one quarter of world trade is internalized, while UNCTAD's[3/] estimate is thirty per cent. Data on trade internalization for individual countries is sparse and summarized in Table 1 above. For the United States, 22 per cent of exports[4/] and 24 per cent of imports[5/] are accounted for by trade between US TNCs and their majority-owned foreign affiliates (MOFAs). It should be noted that all the above figures are estimates based on limited surveys of large TNCs and not on systematically collected data.

The USA is the only country which has begun to collect data on trade between "related parties", defined as US as well as non-US TNCs and their affiliates (where the parent firms hold at least 5 per cent equity interest[6/]). As noted previously, related-party

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1/ J. Dunning, "Comment," in Giersch (editor), On the Economics of Intra-Industry Trade p. 62.

2/ UN Department of Economic and Social Affairs, Summary of the Hearings Before the Group of Eminent Persons to Study the Impact of Multinational Corporations on Development and on International Relations, New York, 1974. p. 73.

3/ UNCTAD, "The Role of Transnational Corporations in the Marketing and Distribution of Exports and Imports of Developing Countries", 1978. p. 1.

4/ The most recent available data on export side are for 1970 and show the share of the TNCs in the US total for the manufacturing sector as 62 per cent, of which only 35 per cent went to their own MOFAs, See Table A7.

5/ On the import side, US data for 1974 and 1975 indicate that 32 per cent of the total derived from sales to the US by MOFAs of US firms, and that of this figure, about 74 per cent went to the MOFAs' parent firms, see Tables A5 and A6.

6/ Although some may question the 5 per cent cut-off used to define related parties as being too low, Jarret, op.cit., p. 33, notes that this figure is used by the Canadian Foreign Investment Review Agency to determine its jurisdictional interest. The US House Committee on Banking and Currency, for its part, believes that 2 per cent is sufficient if the remainder of the stock is widely held. In any case, the vast majority of the related-party imports are between majority-owned affiliates.

imports accounted for 48.4 per cent of the total US imports in 1977 (see Table 2 below). Related-party imports would be an even larger part of the US total if at least some of the imports obtained from overseas sub-contractors (using US inputs and qualifying for treatment under Tariff Schedule-USA items 806.30 and 807.00[1/]) were included. International sub-contracting has many of the same characteristics as other related-party imports and can be regarded as equivalent to IDT because full control of every aspect of production - from technology to inputs to the marketing of the final product - remains entirely with the US firm. Furthermore, if some of the trade associated with licensing agreements, and with management or marketing contracts with independent foreign firms is also added, "it seems thoroughly safe to say that US intra-firm transactions make up more than half of the total US imports."[2/]

It is generally assumed that the international redeployment of certain products and processing to developing nations has been concentrated in traditional, labour-intensive fields such as textiles, clothing and footwear. However, data on US related-party imports from the NICs show that IFT in these sectors is much smaller than it is in electronics, machinery, motor vehicles, and parts (see Table 3 on page). While these sectors may be technologically-advanced or capital-intensive, they include production stages requiring the intensive use of labour. As Helleiner suggests, "in assessing the future structure of imports from and protectionism against developing countries, one must therefore look not merely at measures of the developing countries' comparative advantage, but also at the likely role of transnational corporations as shown by the degree to which intra-firm importing is found in different sectors."[3/]

The determinants of intra-firm trade

Referring specifically to market internationalization by TNCs, UNCTAD has stated that "to a great extent, the factors determining related-party trade differ from those affecting trade between unrelated parties."[4/] Lall has investigated the determinants of the IFT pattern of inter-product variation in US MOFA exports, while Helleiner and Lavergne[5/] and Jarret[6/] have studied these determinants for US imports.

1/ Items 806.30 and 807.00 of the US Tariff schedules allow import dues to be paid only on the value-added component of foreign manufactures rather than on the full value of the imported goods. US imports under these items amounted to 9.6 per cent of the US manufactured imports in 1977 (Helleiner, op. cit., p. 165). It is impossible to determine how much of this importing derives from independent firms as opposed to related-parties. Nor are there data on the extent of similar sub-contracting trade that does not benefit from the provisions of tariff items 806.30 and 807.00.

2/ Helleiner, op. cit., p. 165.

3/ G. Helleiner and R. Lavergne, "Intra-firm Trade and Industrial Exports to the United States", University of Toronto and Queen Elizabeth House, Oxford, 1979, mimeo, p. 20.

4/ UNCTAD, "Dominant Positions of Market Power of Transnational Corporations", 1977.

5/ Helleiner and Lavergne, op. cit.

6/ Jarrett, op. cit.

Using 1970 data, Lall[1/] performed a regression analysis to determine what factors explain the extent of exports from US TNCs to their MOFAs and the extent of related-party exports in total MOFA sales for about 24 industries. He found that the after-sales service variable, the FDI-intensity, and the 806.30 - 807.00 dummy, all had significant positive coefficients; that research intensity has a significant positive or inverted U-shaped effect; and that value added per worker did not show any significant impact. In Helleiner's analysis[2/] of the level of related-party imports in 1975 for 100 three-digit SITC industries, only firm size, average wages and research and development had significant positive effects. Jarrett's study of US related-party imports, based on 1977 data for 215 manufacturing industries showed that internalization is greater in industries in which larger firm predominate. Thus, the presence of scale economies had a significant positive effect on ITP (as measured by average plant size, average life time of industry assets, and capital required to enter the industry). Other factors with a significant positive effect on import internalization included measures of the steady flow of, and demand for, output; of technology intensity; and of organizational intensity. Barriers to international trade, such as transport costs and tariffs, had negative effects, while product differentiation (represented by the intensity of sales or technical service requirements) had positive effects. Jarrett, Lall and Helleiner all found that the advertising-to-sales ratio had a significant negative effect. However, contrary to expectations, Jarrett was unable to demonstrate a significant relationship between trade internalization and FDI-intensity or wage rates.

The results of these studies are far from conclusive. There are still no reliable, systematically collected data for many countries and that which exists for the US is too recent to permit a time series analysis of trade internalization.

1/ S. Lall, "The Pattern of Intra-Firm Exports by U.S. Multinationals," Oxford Bulletin of Economics and Statistics, August 1978, pp. 209-222.

2/ Helleiner, op.cit.

IV. THE ROLE OF TRANSNATIONAL CORPORATIONS IN INTERNATIONAL REDEPLOYMENT

A. Reasons for the International Reorganization of Production

Although FDI was well-established in the nineteenth century, the internationalization of production activities is primarily a post-war phenomenon. The growth of transnational corporations, especially in the 1960s and 1970s, was accompanied by an unprecedented expansion of overseas affiliates, with large increases in capital outflows from developed countries and sizable growth in FDI. The growth of FDI expansion into developing nations. During this initial period, US firms accounted for the largest share of new investments. In Japan and the Federal Republic of Germany, businesses were concentrating on domestic reconstruction. Investment flows among the European countries were hindered by foreign exchange shortages and controls on capital movements.

The second phase, starting in the late 1950s and lasting to about 1970, was characterized by a shift of FDI to manufacturing and trade activities. As a result of the restoration of currency convertibility in Western Europe and the establishment of the EEC and EFTA, US investment in Western Europe increased sharply. US manufacturing firms established European plants to maintain the market positions gained through earlier export trade. In developing nations, FDI in manufacturing was a result of import substitution policies adopted by many countries facing balance of payment constraints. Although FDI by US firms remained dominant, by the mid-1960s, foreign investments by European and Japanese firms had increased markedly. Faced with growing international competition in manufactured goods, US firms reacted by establishing "offshore" assembly and production subsidiaries in certain developing countries in order to take advantage of lower wage rates and to put new technologies in place.[1/] This move was facilitated by the policies of both host and home countries.[2/]

The third phase (the current period) has seen a dramatic change in the role of TNCs. This has been due to changes in ownership patterns and in the organization of international production. Two sets of factors, one resulting from changing conditions in the developing nations, and the other from changes in the developed nations, contributed to this transformation.

1/ F. Frobel, J. Heinrichs and O. Kreye, The New International Division of Labour, London, 1979.

2/ This period coincides with many developing nations' shift to export promotion (OECD, "The Impact of the Newly Industrializing Countries on Production and Trade in Manufactures", Report by the Secretary-General, Paris, 1979). The special tariff provisions set up by the US government are one example of a policy by home countries of TNC that stimulated "offshore" assembly and production subsidiaries.

The first set of factors involved two significant policy changes by the developing nations:

a) a wave of nationalizations of foreign investment in the raw materials sector, especially in petroleum extraction, to increase developing nations' share of oligopoly rents. This led to new forms of TNC involvements in developing nations that spread to the manufacturing sector. These new forms included joint ventures, technology transfer agreements (with or without equity provisions), and management contracts. 1/

b) a growing concern on the part of the host developing countries about the impact of foreign investment on the development process. The negative impacts that were of concern included effects on the balance of payments: while imports continued or increased, exports were restricted because of the TNCs' global network of similar import substitution production facilities throughout the developing world. Hence, the export marketing agreements which led the TNCs to set up complementary production projects.

More important was the second set of factors that resulted from increased competition among the TNCs and a significant shift in the comparative costs and exchange rates underlying trade and investment among the industrialized nations. The US TNCs' experience with sub-contracting and "export platform" subsidiaries in developing nations, the relatively rapid rise of wage rates in Western Europe compared to the US and the adverse social consequences of European nations' unfavourable experience with migrant workers 2/ stimulated renewed interest in foreign investments in developing countries. TNCs invested largely in order to export manufactured products, mainly consumer goods. This suggests that production is being truly internationalized (as in the new investment activities of TNCs in the auto industry 3/) and that a new international division of labour is resulting from the reorganization of production operations by TNCs.

B. The International Reorganization of Production Activities and the Importance of Intra-Firm Trade

Inter-country and sectoral variation of intra-firm trade

The importance of intra-firm trade varies substantially according to industry and type of product. 4/ When classified according to the amount of manufacturing involved in a given import, US data show that IFT's share of the total rises as one moves from primary goods (excluding petroleum) to semi-manufactured and manufactured products (see Table 2). While only 23.5 of primary products (excluding petroleum) are from related parties, 37.6 per cent of semi-manufactured goods and 53.6 per cent of fully manufactured goods are.

1/ United Nations, Economic and Social Council, Commission on Transnatoinal Corporations, Transnational Corporation in World Development: A Re-examination, May 1978, pp. 19-24, 34-73.

2/ International subcontracting is often believed to be an alternative to local production using immigrant labour. See M. Sharpston, "International Sub-contracting", World Bank Staff Working Paper No. 181, Washington, D.C. 1974.

3/ R. Cohen, "Economic Crises, National Industrial Strategies and Multinational Corporations", 1978, (mimeo).

4/ See Table A1.

This general pattern - which is contrary to the widely held expectation that the international trade in primary products is the most internalized and that trade in manufacture is mainly arms-length - is found in US imports from both developing and OECD nations. Consequently, other things being equal, one can expect increases in the role of related-party trade as industrialization proceeds in the developing nations and as the relative importance of their export of manufactured goods continues to rise.[1/]

As defined by the US Census Bureau, related-party imports include both purchases by US firms from their foreign affiliates and by US affiliates of foreign-based firms from their non-US affiliates or parents. When the data on related-party imports are classified according to whether the imports are destined for US or non-US TNCs as in Table 3, a number of significant facts come to light. In 1974, about 38 per cent of the total US-related-party imports were undertaken by non-US firms.[2/] Substantially more of the imports by foreign TNCs came from developed nations (60 per cent) than from developing ones (15 per cent). Trade internalization was particularly important in imports by non-US TNCs from the EEC and Japan (78 per cent and 100 per cent, respectively.) IFT was most important in the machinery and transportation industries.[3/] On the other hand, the largest portion of US imports from US MOFAs originated in developing nations and Canada. About 40 per cent of total US related-party imports from developed nations and 85 per cent of total US related-party imports from the developing nations were carried out between US-based TNCs and their foreign affiliates.

Table 3 also makes it possible to compare related-party imports for resale and for further manufacture. There is a striking contrast between imports from the developed nations and those from developing nations and Canada in this regard. While only 4 per cent of total related-party imports from developing nations were destined for resale in the United States by affiliates of non-US firms, 48 per cent of their imports from developed nations were, including 89 per cent of those from Japan. Goods designed for wholesaling accounted for 75 per cent of the imports of non-US firms. This suggests that related-party imports by the US firms are undertaken much less for resale than those of the non-US firms. The related-party imports of US firms are linked to their international production activities and originate mainly from developing nations.

1/ Helleiner and Lavergne, op. cit., p. 4.

2/ Not necessarily firms from the country from which the imports came, since the data are given by the source country of imports rather than by the home country of the firms's ultimate owner.

3/ See Tables A-3 and A-4.

TABLE 2

US RELATED-PARTY IMPORTS AS A PERCENT OF TOTAL IMPORTS, 1977

	PRIMARY[b]			SEMI-MANUFACTURERS	MANUFACTURES	TOTAL	TOTAL
	PETROLEUM	PRIMARY (EXCL. PETROLEUM)	TOTAL PRIMARY	TOTAL	TOTAL		TOTAL (EXCL. PETROLEUM)
OECD[a]	57.2	35.9	41.3	43.4	61.1	53.7	53.6
CENTRALLY PLANNED	0	3.2	2.8	8.9	8.1	7.7	7.8
THIRD-WORLD	59.6	13.6	49.1	17.0	37.0	43.4	28.1
TOTAL	59.4	23.5	47.3	37.6	53.6	48.4	45.2

a Country classifications are according to the United Nations Standard Country Code, except that Cuba and Yugoslavia have been included among the Centrally Planned Economies.

b Products classified according to UNCTAD system as reported in "The Definition of Primary Commodities, Semi-Manufactures and Manufactures", 1965, TD/B/C.2/3.

SOURCE: Gerald K. Helleiner and Real Lavergne, "Intra-Firm Trade and Industrial Exports to the United States", Unpublished paper, University of Toronto and Queen Elizabeth House, Oxford, 1979, p.3.

TABLE 3

ESTIMATED COMPOSITION OF US RELATED-PARTY IMPORTS, 1974.

	ESTIMATED TOTAL RELATED-PARTY IMPORTS[a]	RELATED-PARTY IMPORTS NON-US FIRMS[b] TOTAL	WHOLESALE (3)	(3)/(2)	US IMPORTS FROM MOFAs[c] TOTAL	WHOLESALE TRADE (6)	(6)/(5)	(2)/(1)	(3)/(1)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	$m.	$m.	$m.	%	$m.	$m.	%	%	%
DEVELOPED COUNTRIES	32,161	19,336	15,488	80.1	14,821	1,127	7.6	60.1	48.2
CANADA	12,225	2,570	1,314	51.1	11,411	777	6.8	21.0	10.7
EEC	9,174	7,130	5,826	81.7	2,515	296[d]	11.8	77.7	63.5
JAPAN	8,118	8,266	7,260	87.8	127	5	3.9	100.0[e]	89.4
DEVELOPING COUNTRIES	14,042	2,114	583	27.6	14,763	341	2.3	15.1	4.2
WORLD	44,611	21,451	16,071	74.9	31,801	1,418	4.5	48.1	36.0

a This was obtained by applying 1975 data (1977 for Canada, EEC and Japan) on the share of total imports accounted for by related-party trade since there are none available for 1974- to 1974 figures on general imports, as reported in US Department of Commerce, Survey of Current Business. This procedure causes the estimated total to differ from the sum of the estimates of its components.

b From US Department of Commerce, Foreign Direct Investment in the United States, Report to Congress, 1976, Tables E-2, E-8. This figure for imports shipped to US affiliates by affiliated foreign groups includes imports from parent firms which own ten per cent or more of the US importing affiliate or from other firms related to the parent by at least fifty per cent ownership (op.cit. 5-6). The area or country indicated refers not to the country of ownership of the non-US firms, but to the country of origin of the imports.

c From William Chung, "Sales by majority-owned foreign affiliates of US companies, 1975", Survey of Current Business, (US Department of Commerce), 57, 2, February 1977, Table 3. This figure includes imports from sources which are unrelated to the importer.

d 1975.

e The actual percentage is 101.8, but this has been "rounded down" to 100.0.

SOURCE: See Table 2.

Table 4 illustrates the extent of trade internalization in US imports of selected manufactured goods[1/] from those NICs which account for the great bulk of the manufacturing exports from the developing world. Manufactured exports from developing nations are heavily concentrated in traditional labour-intensive industries, such as textiles, clothing, and footwear. But when it is possible to separate the portion of intra-firm trade, it is seen that TNC trade internalization is highest in technologically advanced or capital-intensive industries, such as electrical machinery, professional and scientific instruments, non-electrical machinery and transport equipment - at least as it is reflected in US related-party imports from the NICs.

Inter-country variations in the relative importance of total related-party exports to the US are shown in the last column of Table 4. Mexico and Ireland are generally above average and Yugoslavia consistently below average in their share of exports that are part of related-party trade. By industry, the Philippines does far more intra-firm exporting in textiles and clothing than the others. Colombia does more in footwear. Spain, Greece and Argentina do more in transport equipment. Malaysia and Singapore do more in the machinery sectors.

There are no data on the internalization of US exports that are comparable to those for related-party imports. From investigations of exports from the US TNCs to their MOFAs[2/] and those of US affiliates to their non-US parents[3/], however, it appears that trade internalization in exports is less extensive than it is for imports. Most exports appear to be destined for resale rather than further processing. As was the case for imports, there is a wide inter-sectoral variation and IFT is significantly greater for exports to developed nations than for exports to developing countries. A substantial portion of the exports of manufactures from US TNCs to their MOFAs in developing nations was intermediate goods for further processing or assembly (67.7 per cent). US affiliates of non-US TNCs act primarily as buyers for their parents: over 85 per cent of their exports are products manufactured by other firms.

1/ See Table A2 for the complete listing of 2-digit SITC categories of related-party manufactures imports from the NICs. In that table, the bottom row gives, for each industry, the number of countries where the percentage of intra-firm exports to the US is higher than both the total Third World Average for the given industry and the country's own overall percentage of trade internalization in the manufacturing sector as a whole.

2/ See Tables A7 and A8.

3/ See Tables A3 and A4.

TABLE 4

US RELATED-PARTY IMPORTS AS A PERCENTAGE OF TOTAL IMPORTS OF SELECTED MANUFACTURED PRODUCTS[a] FROM SELECTED NEWLY INDUSTRIALIZING COUNTRIES, 1977

	Textiles 65	Clothing 84	Footwear 85	Non-electric machinery 71	Electric machinery 72	Transport Equipment 73	Scientific Instruments 86 [a]	TOTAL Manufacturing
Israel	18.9	14.0	0.0	32.8	62.9	0.7	13.0	18.2
Portugal	2.8	0.4	0.2	24.7	78.4	0.1	82.5	12.5
Greece	3.7	5.0	0.8	52.2	99.1	89.3	2.2	7.8
Ireland	36.3	8.3	42.2	78.5	77.8	66.6	91.7	59.0
Spain	1.5	3.7	10.1	36.6	32.6	53.4	7.8	24.1
Yugoslavia	0.1	2.3	2.2	14.0	2.0	27.4	3.6	4.9
Argentina	0.5	2.9	0.8	39.1	76.1	85.4	10.0	9.2
Brazil	9.2	18.0	0.5	59.9	95.3	63.0	38.4	38.4
Colombia	1.5	15.7	81.2	16.8	3.9	26.8	87.8	14.1
Mexico	9.6	68.0	60.9	87.8	95.6	37.7	93.6	71.0
Taiwan	13.1	1.2	3.1	19.3	58.1	4.6	87.1	20.5
Hong Kong	4.9	3.4	3.6	68.5	43.4	10.0	30.4	18.1
Republic of Korea	5.5	7.1	1.8	64.2	67.3	3.1	12.1	19.7
Malaysia	0.2	1.9	0.0	83.2	97.0	0.0	91.9	87.9
Philippines	28.9	53.4	0.0	69.7	31.7	3.0	27.0	47.5
Singapore	4.3	0.5	0.0	90.5	97.0	33.3	85.3	83.3
Total all developing countries	7.8	11.5	4.4	63.5	75.2	32.6	51.2	37.0

a SITC classification

SOURCE: See Appendix Table A2 for source and complete listing of 2-digit SITC industries and Newly Industrializing Countries.

The Implications of growing intra-firm trade

Despite the data limitations, it is apparent that a substantial part of international trade is internalized within the TNCs. The IFT question is largely parallel to the debate concerning the competitive and efficiency implications of vertical integration. Through vertical integration, a corporation by-passes the market by converting market transactions into internal decisions. Moreover, since this takes place at the international level, a firm not only escapes the market but also, to a certain extent, the control of individual governments.

The increase in IFT also implies a growth of what has been called "typing", i.e., linking the activities of foreign affiliates closely to those of their parent firms. Lall has suggested that IFT may best be seen as an extreme form of typing.[1/] There is a growing amount of evidence to support this contention.[2/] In the case of the motor vehicle industry, Baranson has noted that "substantial portions of an international firm's earnings come from the sale of components and parts to the original equipment market and the replacement market. Their investments in overseas manufacturing facilities are in a sense an investment in future demand for components and parts".[3/] Because of the organic ties between subsidiaries and parent companies, it would be less likely for a foreign affiliate to follow cost-minimizing purchasing behaviour. Hence, the more such influence is exerted, the greater the capacity to engage in non-optimal behaviour.

In addition to "quasi-tying", IFT carries the potential for transfer price manipulation. According to Jarrett, "besides the obvious tax and tariff revenue implications, manupulating firms may use artificially depressed profits to claim an inability to pay high wages, a lack of any monopoly rents, or a need for the existence of or an increase in subsidization and/or trade protection."[4/]

To counter the points made above, some economists have argued that "arms-length trade" (trade between unrelated parties in the market that are not necessarily competitive) may not necessarily behave differently from IFT since "opportunity costs are opportunity costs, whether incurred by buying from affiliates or unrelated parties".[5/] Further, it is argued that increasing internationalization

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1/ S.Lall, "Transfer Pricing and Developing Countries: Some Problems of Investigation", World Development, January 1979, pp. 25-42.

2/ An executive of Union Carbide stated at a US Senate hearing that many of his company's exports to its foreign affiliates "were intermediate products which probably would have been bought elsewhere had not Union Carbide owned the affiliates". US Senate, Committee on Finance, as cited in Jarrett, op.cit., p.14.

3/ J. Baranson, International Transfer of Automotive Technology to Developing Countries, New York, 1971, p.8

4/ Jarrett, op.cit., p.15

5/ J. Riedel, "Comment", in H.Giersch (editor), On the Economics of Intra-Industry Trade p. 182.

is not necessarily anti-competitive or less efficient. "It is what happens when the goods come up against similar goods in market places, not what happens as goods pass from hand to hand within companies, that determines whether markets will fullfil their role".[1/] Or, "in the field of economic co-ordination, control and allocation, the speed, accuracy and cost of the communication of information and goods may all be superior when the communcation takes place within a single organization than when it takes place between smaller separate organizations covering the same economic space."[2/]

Jarrett, however, argues that, "while transaction cost considerations (i.e., increased efficiency) may predominate in an atomistic market setting, it is hard to accept this conclusion of superiority, given that it is the role of the market to discipline producers (and consumers as well)".[3/] Moreover, the greater the firm's ability to escape market mechanisms, the less effective the government's economic policy instruments become.

1/ Knickerbocker, as cited in Jarrett, op.cit., p. 13.

2/ Murray, as cited in Jarrett, op.cit., p. 13.

3/ Jarrett, op.cit., p.13.

V. THE IMPLICATIONS OF THE GROWTH OF INTRA-FIRM TRADE

A. The perception of Changes in World Trade

The present study demonstrates that the nature of trade among the developed nations is fundamentally different from trade between developed and developing nations. These differences include the greater proportions of intra-industry and intra-firm trade in trade between developed nations.

The size of IIT reflects specialization a long product lines or processes within industries, the degree of industry specialization among the major industrial countries hardly changing between 1937 and 1969.[1/] In part the rise of IIT reflects the fact that many countries adopted strategies aimed at diversification over a broad range of industries, allowing for specialization along product lines or processes within industries instead of inter industry specialization and, consequently, a more relative ease of adjusting to structural change.

It is generally assumed that a much greater potential exists for expanded intra-industry trade through the exchange of differentiated products among the developed countries. Caves asserts that "there is much to applaud in IIT and little to deplore"[2/] from the objective of securing good market performance. But neither of these general views need apply to developing nations. At first sight, the potential for an increased exchange of differentiated products within industries is obviously much smaller between developed and developing countries. Moreover, it has been suggested that, the additional costs for a developed nation of producing substitutes for imported manufactured goods are relatively small,[3/] while the costs for developing countries usually make such production impossible. Thus, for the developing nations to switch from exporting primary products to exporting manufactures (and particularly specializing in certain parts and processes) may mean exchanging one form of dependence for another.[4/] On the other hand, the growth of consumer markets in those countries plus the increasing differentiation of manufactured goods may mean that IIT between developed and developing nations increases more rapidly than other types of trade.

1/ G. Hufbauer, "Technology Transfers and the American Economy" in U.S. National Science Foundation, The Effects of International Technology Transfers on the U.S. Economy, Washington, D.C., 1974.

2/ R. Caves, "Intra-Industry Trade and Market Structure in Industrial Countries," Harvard Institute Economic Research Discussion Paper Series No. 725, Cambridge, 1979.

3/ K.E. Waltz, "The Myth of National Interdependence" in C.P. Kindleberger (editor), The International Corporation, Cambridge, Mass., 1970, p. 210.

4/ W. Lewis, The Evolution of the International Economic Order, Princeton, 1978, p.70.

Since the start of the recent economic crisis, the developed countries have had to cope with rising inflation rates and/or balance of payments deficits while attempting to reduce growing unemployment and unused capacity in certain industries. This has created pressures for a new protectionism. The developed nations were faced with a choice between international specialization and rationalization of international production through free trade on the one hand and diversification and rationalization of industries within national economies through protectionism on the other. The former is accompanied by the necessity to cope with structural adjustment problems at the national level, while the latter results in forgoing the benefits of increased efficiency at the international level.

Developing countries, on the other hand, must cope with the fact that the development of their indigenous industries in traditional labour-intensive product areas (where IFT does not appear to be very significant) are seen as a threat to the developed nations. Exports by the developing nations in areas such as textiles, clothing and footwear are viewed as creating competitive pressures on the developed countries to make inter-industry reallocations, thus increasing the movement towards protectionism within the developed nations.

B. Issues Raised by the International Spread of Transnational Corporations

The fact that intra-firm trade is on the rise can be taken to mean that the geographical location of production and the global distribution of goods are increasingly the result of managerial decisions made in the interests of large corporations. In view of this, the implications of IFT for individual countries can be far-reaching. First, the creation and distribution of economic profits and social benefits may be sharply at odds with the overall interests of the country in question. For example, after separating U.S. imports into related-party and arms-length components, Jarrett found that "internalization does lead to a significant change in the pattern of U.S. imports" and that "internalized allocation is not only different, but likely less efficient than market allocation as well."[1/] Second, the policy instruments at the disposal of the country are likely to be less effective than they are in cases where international trade is arms-length, between unrelated parties.[2/]

As Hufbauer has noted, the principal danger of the transnational phenomenon is "the worldwide spread of oligopoly relationships."[3/] The resulting imperfections and

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1/ Jarrett, op. cit., pp. 17 and 18.

2/ A large body of literature exists on the impact of IFT on a government's ability to effectively perform its traditional economic functions. Frequent reference has been made to the decreased effectiveness of the exchange rate policy because of TNCs. The ineffectiveness of the U.S. government's capital market policy to restrict technology diffusion by the TNCs and the failure of its price control policy to curb inflation are but two examples. It hardly bears mentioning that the developing nations are infinitely less able to cope with the effects of TNC activities than is the United States.

3/ Hufabuer, op. cit., p. 53.

what some see as the distorting behavior of the TNCs cannot be remedied unless progress is made towards changing the conditions under which such imperfections and excesses thrive.

In light of the problems enumerated here, developing nations will need to devise independent development strategies in keeping with their needs and resources. Within the framework of a well-defined strategy, an appropriate evaluation could be made as to whether, in a particular area, a nation's needs would best be served by the TNC or whether alternative means (national corporations, market channels, government agencies, etc.) provide the only alternative path to development.

As has been emphasized here, international trade is inextricably bound up with the growth and spread of the TNC and its international allocation of production (which is increasingly not so much in products as in stages of production). Trade internalization is accompanied by a centralization of decision-making within TNCs. A new international intra-corporate division of labor is now taking shape. While international trade theory has been mainly concerned with the division of labor among firms co-ordinated by markets, the division of labor has increasingly been co-ordinated by entrepreneurs within the TNCs.

C. Issues Raised by the Recent Global Integration of Productive Activities

Recently, production in the automobile industry has been greatly integrated on a global level. While most current world car production continues to be concentrated in the three major producing areas of Western Europe, North America and Japan, the domestic markets of these countries are nearing saturation. Although these markets will remain vital to the major auto manufacturers because of their size, much of the future growth in demand will probably take place outside these areas.[1/] Since the mid-sixties, competition within the industry has increased substantially. Internationalization of the industry involves competition not only for markets but also for investment opportunities.

In the automobile industry, FDI by TNCs from major producing countries was an extension of their export-oriented penetration strategy, with local production constituting only assembly operations with limited local input. Many non-producing

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1/ For a review of the recent developments in the automobile industry, see R. Cohen,

countries with potential or growing automobile markets are pushing for the creation of their own automobile industries. At the same time, there is an increased interpenetration of the domestic markets of the major producers. Manufacturers are reorganizing the production process around its main components and spreading their automobile production over several countries. The U.S. manufacturers, particularly Ford, are in the forefront of the automobile industry's internationalization, but other major world producers have been obliged to follow suit. Indeed, any producer wishing to survive is now forced to undertake a global reorganization of its production process for a number of reasons. First of all, international competition has grown enormously, both because of the development of non-U.S. TNCs and because of shifting patterns of demand stemming from the maturity of traditional markets. Second, TNCs have faced higher wages, strikes, and productivity problems in their traditional production sites. Third, energy costs and environmental constraints in the developed countries have promoted technological change.

Rationalization schemes both at home and abroad, and industrial relocation abroad - especially to NICs in Latin America and in peripheral Europe - have developed side by side. The recent investment patterns of automobile manufacturers, the growing volume of exports of parts and components by TNCs' affiliates in the NICs, and the rising unemployment in traditional production centers are all indicators of the international integration of production taking place in the automobile industry.

This integration has posed important new problems for both developed and developing nations. Can the developed nations cope with the structural adjustment and social dislocation that may be a result of the international relocation of operations? Will the developing nations be able to integrate other indigenous industrial activities with the operations of multinational firms, or will they end up acting as "export platforms" for specialized, often labour-intensive operations that are part of the new international system of production organized by multinational firms? What will be the extent and structure of employment, especially the distribution of skills among workers? In addition, how will developing nations protect themselves against the loss of investments, once transnationals decide to relocate elsewhere? These and other related issues need to be addressed.

VI. SUGGESTIONS FOR FURTHER RESEARCH

As can be seen from the material presented here, a substantial and growing part of international trade is internalized through the TNCs. This phenomenon has far-reaching implications in that the transnationals not only escape the market mechanism through vertical integration, they also escape, at least to a certain extent, the control of the Governments of the countries in which they operate.

Very few studies have attempted to investigate the determinants of intra-firm trade. Few have examined its implications for developed and developing nations.

A study of the international reorganization of a single major industry would contribute much to the understanding of the role of transnational corporations in the redeployment process and to the analysis of the impact of this process on developed and developing nations. Such a study could begin to investigate the dynamics of the restructuring of production on a global basis, contributing additional insight to those conclusions already reached by previous UNIDO studies of industrial redeployment and future structural changes in developed nations.

The international automobile industry would be a logical subject for this type of study. Employment in the automobile industry is substantial in many developed nations, and developing nations have become important centres for the production of components and cars.

VII. CONCLUSIONS

1. During the post-war period, the share of manufacturing in total world trade has been rising, and the developing nations' share in this manufacturing trade has also been rising. These trends coincide with the growth and spread of the transnational corporations and the rapid growth of intra-firm trade.

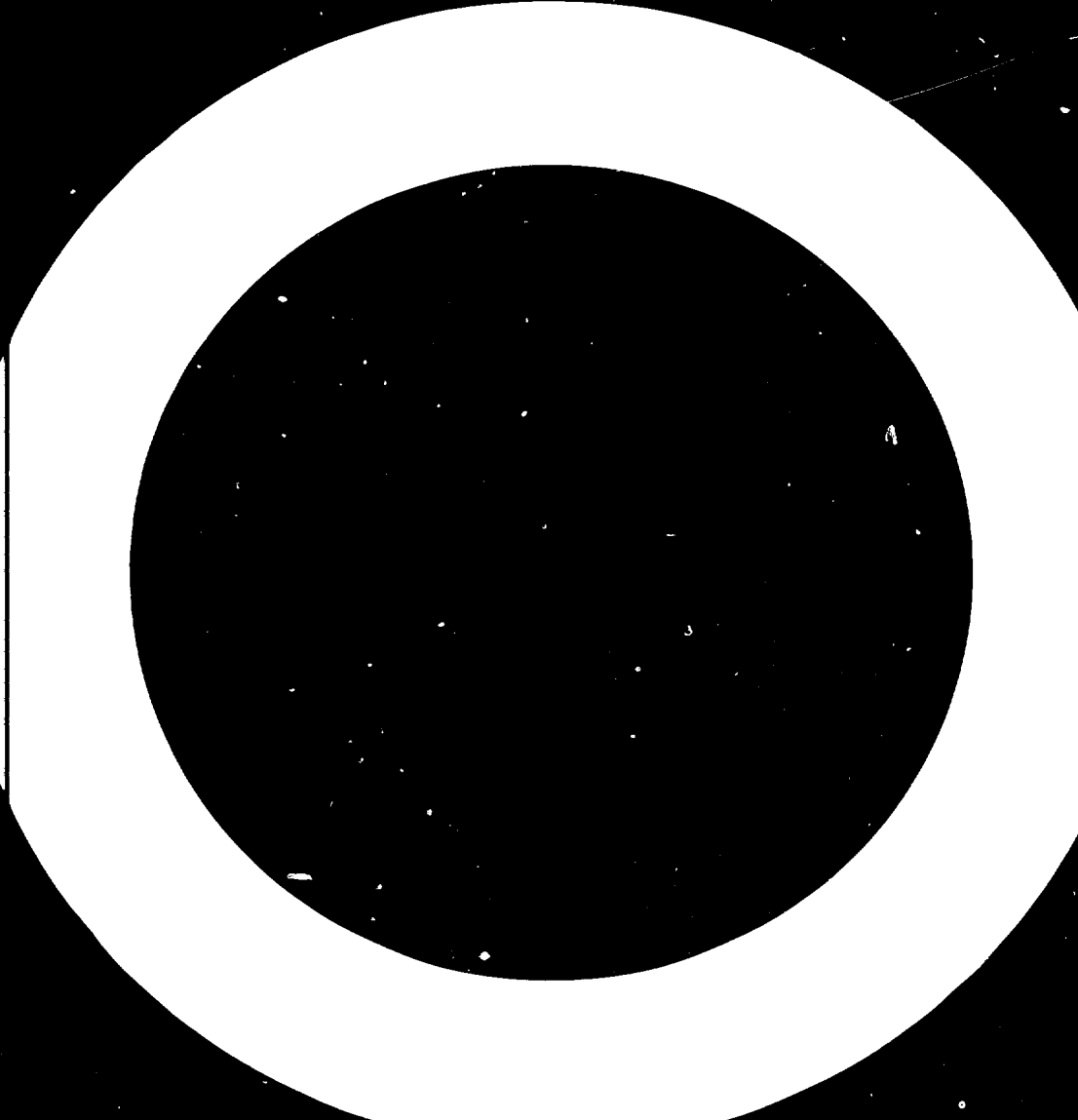
2. Intra-industry trade, especially among developed nations, was found to be significant and growing. Product differentiation was suggested as its main cause. Government policies have also promoted the growth of this type of trade.

3. Intra-firm trade among developed nations is mainly to distribute finished manufactured goods while that between the developed nations and the developing nations is largely to integrate the further processing of manufactured goods. The latter activities are largely undertaken by TNCs.

4. Intra-firm trade from the developing countries is concentrated in relatively technology-intensive or capital-intensive industries rather than in traditional labour-intensive areas, as is generally believed. The major causes of inter-industry variations in intra-firm trade seem to be due to differences in technology intensity, firm size, and scale economies.

5. Intra-firm trade varies significantly among the developed nations on the one hand and between the developing countries and developed countries on the other. In the future structure of imports from developing nations, it is likely that an important role will be played by the extent of IFT due to TNCs in the different industries.

6. Given the limitations of available data, further research is recommended before any concrete policy recommendations are possible. A research project on the international reorganization of a single industry would do much to clarify the role of multinational corporations in the redeployment process and to specify the impact of change in an internationally integrated industry on developed and developing nations. The automobile industry appears to be the most logical subject for such a study.



APPENDIX: STATISTICAL DATA

TABLE A-1

U.S. Related-Party Imports as Percentage of Total Imports, by Category, from Third World and OECD Sources, 1977.

Related Party Share

		Related Party Share			Import Value	
		OECD	3W	Total	3W	Total
		%	%	%	$m	$m
51	Chemical elements and compounds	44.0	40.7	43.3	367	3,178
52	Mineral tar and chemicals from coal, petroleum and natural gas	34.3	-	33.7	-	11
53	Dyeing, tanning and colouring materials	73.4	15.7	69.8	11	209
54	Medicinal and pharmaceutical products	46.7	60.3	46.9	42	318
55	Essential oils and perfumes, etc.	41.3	2.1	26.7	82	239
56	Fertilizers, manufactured	20.6	75.1	23.4	19	353
57	Explosives and pyrotechnic products	14.0	4.5	8.9	9	39
58	Plastic materials, etc.	57.6	14.4	54.9	25	402
59	Chemical materials and products n.e.s.	53.2	5.9	48.9	22	329
61	Leather and leather manufactures	7.0	5.0	5.8	145	256
62	Rubber manufactures, n.e.s.	78.0	31.6	73.3	96	999
63	Wood and Cork manufactures	22.6	9.4	15.1	576	1,034
64	Paper, paperboard, etc.	20.0	39.8	20.6	81	2,404
65	Textile yarn, fabrics, made-up articles	35.1	7.8	22.6	736	1.776
66	Non-metallic mineral manufactures	18.0	10.4	16.4	479	2,802
67	Iron and Steel	65.9	20.4	61.8	483	5,982
68	Non-ferrous metals	43.7	16.7	33.7	1,289	3,938
69	Manufactures of metal, n.e.s.	28.0	12.4	24.9	455	2,499
71	Machinery other than electric	60.3	63.5	60.3	658	9,777
72	Electrical machinery, apparatus, appliances	55.2	75.2	63.4	3,541	8,451
73	Transport equipment	84.7	32.6	83.9	304	18,229
81	Sanitary and other figures	17.3	14.2	15.8	47	109
82	Furniture	34.0	13.6	26.3	169	666
83	Travel goods, handbags, etc.	28.4	10.3	13.4	254	309
84	Clothing	12.0	11.5	11.3	3,221	4,049
85	Footwear	11.7	4.4	7.3	1,013	1,890
86	Professional and scientific instruments, etc.	50.9	51.2	50.9	488	2,316
89	Miscellaneous manufactures	33.4	17.1	27.6	1,825	5,394

SOURCE: Helleiner and Lavergne (1979).

TABLE A-2

PERCENTAGE OF TRADE INTERNALIZATION IN U.S. MANUFACTURED IMPORTS FROM NEWLY INDUSTRIALIZING DEVELOPING COUNTRIES (NICs), 1977

STANDARD INTERNATIONAL TRADE CODE .....*	51	53	54	55	56	57	58	59	61	62	63	64	65	66	67	69	71
Israel	24.0	0.0	31.1	23.9	0.0	0.0	3.5	17.1	22.1	2.7	7.4	11.0	18.9	15.6	0.7	26.8	32.8
Portugal	0.6	0.0	4.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	1.2	2.3	7.2	8.0	10.3	24.7
Greece	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	29.4	0.7	0.0	3.7	0.2	0.0	88.1	52.2
Ireland	72.1	0.0	3.3	4.8	0.0	0.0	11.5	1.7	73.5	52.0	47.3	17.6	36.3	76.4	9.7	69.7	78.5
Spain	5.4	52.8	0.1	11.7	75.8	0.0	53.5	18.8	0.0	76.6	4.4	0.4	1.5	18.6	14.4	40.7	36.3
Yugoslavia	2.0	0.0	0.6	0.9	0.0	7.2	42.7	0.0	0.9	6.7	0.0	68.4	0.1	1.2	3.9	0.6	14.0
Argentina	15.1	1.6	26.6	4.6	0.0	0.0	41.6	0.0	0.3	1.0	0.0	0.0	0.5	1.2	19.0	45.9	39.1
Brazil	3.2	6.1	85.0	0.7	4.4	0.0	3.7	1.6	0.1	91.5	45.7	2.7	9.2	8.3	24.8	4.5	59.9
Colombia	20.6	0.0	0.0	99.8	0.0	0.0	2.5	13.0	0.1	0.0	1.3	8.5	1.5	37.9	5.9	23.1	16.8
Mexico	40.3	62.4	95.2	3.5	72.0	38.0	41.7	9.4	11.4	65.0	36.7	90.8	9.6	25.0	44.9	31.1	87.8
Taiwan	24.6	58.4	0.0	3.8	0.0	0.0	11.9	0.0	0.4	24.0	2.0	0.9	13.1	4.6	4.6	2.3	19.3
Hong Kong	2.9	0.0	7.8	10.0	0.0	1.2	8.0	4.7	39.3	8.7	4.5	3.3	4.9	5.7	33.5	3.0	68.5
Republic of Korea	10.3	46.7	5.9	0.1	0.0	12.0	18.8	0.0	0.5	31.5	1.6	4.2	5.5	4.9	18.8	15.0	64.2
Malaysia	0.3	100.0	0.0	0.0	0.0	0.0	3.7	0.0	95.6	41.4	0.8	0.0	0.2	5.8	0.0	15.9	83.2
Phillippines	1.5	0.0	0.0	47.7	0.0	0.0	0.8	0.0	10.0	96.0	30.5	1.4	28.9	16.8	0.0	4.3	69.7
Singapore	62.2	0.0	0.2	0.0	0.0	0.0	80.1	100.0	27.9	100.0	33.0	42.5	4.3	44.0	0.0	60.3	90.5
TOTAL - Developing World (%)	40.7	15.7	60.3	2.1	75.1	4.5	14.4	5.9	5.0	31.6	9.4	39.8	7.8	10.4	20.4	12.4	63.5
Total - Developing World VALUE ($m.)	367	11	42	82	19	9	25	22	145	96	576	81	736	479	483	455	658
Country Frequency** Ind. Rank of Trade Int.	1	4	2	3	1	1	3	1	4	4	1	2	1	2	1	6	6 3rd

* Excluding 68 (Non-ferrous metals) and 52 (Mineral Tar and Chemicals from coal, petroleum and natural gas) which did not have an entry in U.S. Related-Party Imports.

** Country Frequency of above-average internalization relative to the Developing World total and individual country's total manufacturing.

SOURCE: Calculated from U.S. Commerce Department data supplied by R. Lavergne.

TABLE A-2 (Continued)

SITC	72	73	81	82	83	84	85	86	Total Mfg.	Value of Total Mfg. Imp. $Mil.
Israel	62.9	0.7	0.5	5.4	0.0	14.0	0.0	13.0	18.2	168
Portugal	78.4	0.1	0.1	0.4	20.4	0.4	0.2	82.5	12.5	101
Greece	99.1	89.3	0.0	0.0	10.3	5.0	0.8	2.2	7.8	58
Ireland	77.8	66.6	97.7	19.8	0.0	8.3	42.2	91.7	59.0	140
Spain	32.6	53.4	0.1	2.7	13.4	3.7	10.1	7.8	24.1	696
Yugoslavia	2.0	27.4	0.3	13.2	0.9	2.3	2.2	3.6	4.9	207
Argentina	76.1	85.4	0.0	0.0	0.0	2.9	0.8	10.0	9.2	167
Brazil	95.3	63.0	4.7	2.8	0.0	18.0	0.5	38.4	38.4	755
Colombia	3.9	26.8	1.5	2.9	9.9	15.7	81.2	87.8	14.1	60
Mexico	95.6	37.7	15.0	34.8	96.9	68.0	60.9	93.6	71.0	1798
Taiwan	58.1	4.6	0.2	9.6	1.8	1.2	3.1	67.1	20.5	3354
Hong Kong	43.4	10.0	17.9	7.5	4.0	3.4	3.6	30.4	18.1	2618
Republic of Korea	67.3	3.1	0.5	15.6	4.2	7.1	1.8	12.1	19.7	2328
Malaysia	97.0	0.0	70.8	11.2	40.6	1.9	0.0	91.9	87.9	385
Phillipines	31.7	3.0	0.0	11.8	0.2	53.4	0.0	27.0	47.5	352
Singapore	97.0	33.0	59.8	57.9	85.8	0.5	0.0	85.3	83.3	630
TOTAL - Developing World (%)	75.2	32.6	14.2	13.6	10.3	11.5	4.4	51.2	3.7	
Total - Developing World VALUE($m.)	3541	304	47	169	254	3221	1013	488		
Country Frequency**	8	5	1	-	3	2	1	7		
Industry Rank of Trade Internalization	1st	4th						2nd		

TABLE A-3 a

TRADE OF U.S. WHOLESALE TRADE, BY AFFILIATES OF FOREIGN PARENTS, 1974 ($ million)

By Industry

	U.S. EXPORTS BY U.S. AFFILIATES							IMPORTS BY U.S. AFFILIATES		
	TOTAL	AS A PERCENT OF TOTAL						TOTAL	AS A PERCENT OF TOTAL	
		INTERNAL			ARMS-LENGTH				INTERNAL	ARMS-LENGTH
		1	2	3	1	2	3			
Food, Beverage, Tobacco	11314	43.1	4.3	38.8	56.9	D	D	2479	31.9	68.1
Inedible Crude Mats.	3331	68.7	5.5	63.2	31.3	1.5	29.8	1642	45.6	54.4
Petroleum and Products	227	50.2	0	50.2	49.8	0	49.8	56	33.9	66.1
Chemicals	539	32.8	0.4	32.4	67.2	1.5	65.7	651	59.6	40.4
Machinery	1009	42.9	2.1	40.8	57.1	3.7	53.4	2258	90.6	9.4
Motor Vehicles and Parts	17	70.6	5.9	64.7	29.4	**	23.5	6988	D	D
Other Transport Equipment	89	79.8	NA	D	20.2	D	D	255	95.7	4.3
Metal Manufactures	605	32.1	D	D	67.9	4.0	63.9	4206	68.9	31.1
Other Manufactures	344	63.1	4.7	58.4	36.9	4.4	32.6	2178	78.6	21.4
Items N. E. C.	1698	36.5	D	D	63.5	3.1	60.4	1623	D	D
TOTAL:	19173	46.9	4.0	42.9	53.1	21.2	31.9	22334	72.0	28.0

1 - Total

2 - Own Products

3 - Others' Products

D - Suppressed by source

** - Too small to record

SOURCE: U.S. Department of Commerce, Foreign Direct Investment in the United States, Volume 1, U.S. G.P.O., Washington, 1976, page 40.

TABLE A-3 b

TRADE OF U.S. WHOLESALE TRADE, BY AFFILIATES OF FOREIGN PARENTS, 1974 ($ million)

By Country and Region

	U.S. EXPORTS BY U.S. AFFILIATES							IMPORTS BY U.S. AFFILIATES		
	TOTAL	AS A PERCENT OF TOTAL						TOTAL	AS A PERCENT OF TOTAL	
		INTERNAL			ARMS-LENGTH				INTERNAL	ARMS-LENGTH
		1	2	3	1	2	3			
Canada	225	49.8	D	D	50.7	15.6	35.1	1585	82.9	17.1
France	145	26.9	3.4	22.8	73.1	D	D	659	81.6	18.4
Germany	1638	D	D	D	D	D	10.7	3720	89.2	10.8
Netherlands	1084	D	D	D	D	D	18.6	233	75.1	24.9
U. K.	443	69.5	35.4	34.1	30.5	5.4	24.8	885	85.5	14.5
Other EEC	513	19.3	1.6	17.5	80.7	26.5	54.2	1289	80.5	19.5
EEC	3822	53.0	5.1	47.9	47.0	24.9	22.1	6785	85.9	14.1
Switzerland	61	44.3	D	D	55.7	3.3	52.5	252	67.9	32.1
Other	1886	10.1	D	D	89.9	62.9	26.9	939	69.8	30.2
Other Europe	1947	11.2	0.5	10.7	88.8	61.0	27.8	1191	69.4	30.6
Europe	5769	38.9	3.5	35.4	61.1	37.1	24.0	7976	83.4	16.6
Japan	8526	69.7	4.9	64.8	30.3	3.4	26.9	9283	78.2	21.8
Australia, New Zealand, and South Africa	157	15.3	D	D	84.7	18.5	66.2	449	58.1	41.9
DEVELOPED COUNTRIES	14678	56.7	4.9	51.8	43.3	17.0	26.3	19293	80.3	19.7
LATIN AMERICA	1455	13.7	0.8	12.9	86.3	28.9	57.4	1401	D	D
MIDDLE EAST	430	37.9	**	37.9	62.1	20.0	42.1	82	D	D
Other	2610	11.9	1.6	10.3	88.1	41.0	47.1	1588	18.2	81.8
DEVELOPING COUNTRIES	4495	15.0	1.2	13.8	85.0	35.1	50.0	3041	19.2	80.8

TABLE A-4 a

TRADE OF U.S. MANUFACTURING AFFILIATES OF FOREIGN PARENTS, 1974 ($m.)

	U.S. EXPORTS BY U.S. AFFILIATES							IMPORTS BY U.S. AFFILIATES		
	TOTAL	AS A PERCENT OF TOTAL						TOTAL	AS A PERCENTAGE OF TOTAL	
		INTERNAL			ARMS-LENGTH				INTERNAL	ARMS-LENGTH
		1	2	3	1	2	3			
Food, Beverage, Tobacco	97	32.0	29.9	2.1	68.0	D	D	356	77.0	23.0
Inedible Crude Mats.	64	D	D	*	D	67.2	D	178	33.1	66.9
Petroleum and Products	D	0	0	0	0	D	0	22	86.4	13.6
Chemicals	377	50.9	43.5	7.4	49.3	45.1	4.0	425	85.2	14.8
Machinery	442	33.3	29.4	3.6	66.7	62.7	4.1	617	85.4	14.6
Motor Vehicles and Parts	D	D	D	0	0	D	0	40	92.5	7.5
Other Transport Equipment	27	3.7	3.7	*	96.3	D	D			
Metal Manufactures	366	18.3	D	D	81.7	D	D	833	69.0	31.0
Other Manufactures	465	40.4	38.3	2.2	59.6	48.0	11.6	433	80.8	19.2
Items N. E. C.	170	17.6	D	D	18.9	D	D	155	53.2	56.8
TOTAL:	2,026	36.1	29.6	6.5	63.9	52.9	11.0	3,059	74.2	25.8

1 - Total

2 - Own Products

3 - Others' Products

* - Too small to register D - Suppressed by Source

SOURCE: U.S. Department of Commerce, Foreign Direct Investment in the United States, Volume II, U.S., G.P.O., Washington, 1976, Tables E-4, E-7

TABLE A-4 b

TRADE OF U.S. MANUFACTURING AFFILIATES OF FOREIGN PARENTS, 1974 ($m.)

	U.S. EXPORTS BY U.S. AFFILIATES							IMPORTS BY U.S. AFFILIATES		
	TOTAL	AS A PERCENT OF TOTAL						TOTAL	AS A PERCENT OF TOTAL	
		INTERNAL			ARMS-LENGTH				INTERNAL	ARMS-LENGTH
		1	2	3	1	2	3			
Canada	394	47.5	41.6	5.8	52.5	48.5	4.1	872	92.3	7.7
Europe	783	35.6	28.1	7.7	64.4	46.5	17.9	1,576	74.2	25.8
EEC	650	35.7	27.1	8.6	64.2	43.7	20.5	1,302	77.7	22.3
France	100	56.0	D	D	44.0	D	D	178	80.3	19.7
Germany	115	40.9	D	D	60.0	D	D	446	83.4	16.6
Netherlands	45	40.0	D	D	60.0	60.0	*	D	D	D
U.K.	306	25.5	19.9	5.2	74.8	D	D	470	67.9	32.1
Other	84	39.3	D	D	60.7	54.8	5.9	D	D	D
Other Europe	133	35.3	33.1	2.3	64.7	60.2	5.3	274	57.3	42.7
Switzerland	37	73.0	73.0	*	24.3	24.3	2.7	115	73.9	26.1
Other	97	20.6	17.5	2.1	79.4	72.2	7.2	97	35.1	64.9
Japan	203	61.6	60.1	1.5	38.4	D	D	192	51.0	49.0
Australia, New Zealand and South Africa	99	28.3	18.2	9.1	71.7	D	D	135	79.3	20.7
DEVELOPING COUNTRIES	547	20.6	14.1	6.8	79.3	70.4	9.0	283	32.2	67.8
LATIN AMERICA	342	19.6	11.7	7.9	80.4	70.2	10.2	148	25.7	74.3
MIDDLE EAST	55	D	D	*	D	61.8	D	8	37.5	62.5
OTHER	150	D	D	6.0	D	73.3	D	128	38.3	61.7
DEVELOPED COUNTRIES	1,478	41.8	35.4	6.4	58.2	46.5	11.7	2,775	78.5	21.5

TABLE A-5

SHARE OF TRANSNATIONAL CORPORATION-RELATED IMPORTS INTO THE U.S. IN TOTAL U.S. IMPORTS, 1974

	TOTAL U.S. IMPORTS	EXPORT SALES TO THE U.S. BY MAJORITY-OWNED FOREIGN AFFILIATES OF U.S. FIRMS*	
	$ m.	$ m.	%
CANADA	21,800	11,411	52.3
EUROPE	22,990	3,077	13.4
JAPAN	12,930	127	1.0
OTHER	1,970	215	10.9
DEVELOPED MARKET ECONOMIES	59,690	14,830	24.8
LATIN AMERICA	18,390	6,415	34.9
ASIA AND AFRICA	21,080	8,348	39.6
DEVELOPING COUNTRIES	39,470	14,763	37.4
WORLD	99,160	31,801	32.1

Foreign firm of which at least 50% of the equity is held directly or indirectly by a U.S. company.

SOURCE: United Nations (1978), page 220.

TABLE A-6

RELATED-PARTY SALES AS A SHARE OF TOTAL SALES OF MAJORITY-OWNED FOREIGN AFFILIATES OF U.S.-BASED FIRMS

	SHARE OF AFFILIATE EXPORTS TO PARENT IN ITS TOTAL EXPORTS TO THE UNITED STATES		SHARE OF AFFILIATE EXPORTS TO OTHER AFFILIATES IN ITS TOTAL EXPORTS TO THIRD COUNTRIES	
	1971	1975	1971	1975
WORLD	74	74	53	42
DEVELOPED MARKET ECONOMIES	76	65	60	60
CANADA	74	61	45	33
EUROPE	85	87	62	64
OTHERS	62	97	37	32
DEVELOPING COUNTRIES	69	82	42	30
LATIN AMERICA	69	85	56	73
AFRICA	79	95	73	74
MIDDLE EAST	59	43	23	14
ASIA	93	100	74	65

SOURCE: United Nations (1978), page 221.

TABLE A-7

THE ROLE OF MULTINATIONAL CORPORATIONS IN U.S. CF MANUFACTURES, 1970 (in $ millions)

	TOTAL U.S. EXPORTS (1)	TOTAL U.S. MNC EXPORTS (2)	(2)*100 / (1) (3)	U.S. MNC EXPORTS TO MOFAs (4)	(4)*100 / (2) (5)	(4)*100 / (1) (6)
FOOD PRODUCTS	2,578	1,062	41	362	34	14
GRAIN MILL PRODUCTS	578	227	39	106	47	18
BEVERAGES	87	58	67		19	13
COMBINATIONS	0	40	NA	7	23	NA
OTHER	1,913	737	41	236	32	12
PAPER AND ALLIED PRODUCTS	1,109	609	55	150	25	14
CHEMICALS AND ALLIED PRODUCTS	4,012	2,342	58	845	36	21
DRUGS	511	361	71	138	38	27
SOAPS AND COSMETICS	154	130	85	70	54	45
INDUSTRIAL CHEMICALS	1,702	1,198	70	181	15	11
PLASTICS MATERIALS	941	318	34	279	88	30
COMBINATIONS	0	114	NA	114	100	NA
OTHER	704	221	48	63	29	9
RUBBER	344	383	111	148	39	43
PRIMARY AND FABRICATED METALS	3,749	2,237	60	278	12	7
PRIMARY	1,700	976	58	51	5	3
FABRICATED EXC. ALUMINIUM, COPPER AND BRASS	1,356	554	41	131	24	10
ALUMINIUM	336	627	187	56	9	17
OTHER	358	80	22	40	50	11
MACHINERY, EXCEPT ELECTRICAL	7,917	3,795	48	1,674	44	21
FARM MACHINERY AND EQUIPMENT	372	392	105	192	49	52
INDUSTRIAL MACHINERY	4,181	1,694	41	457	27	11
OFFICE MACHINES	358	576	161	431	75	120
ELECTRONIC COMPUTING EQUIPMENT	1,243	399	32	298	75	24
OTHER	1,763	734	42	296	40	17
ELECTRICAL MACHINERY	3,007	2,060	69	575	28	19
HOUSEHOLD APPLIANCES	172	157	91	39	25	23
ELECTRICAL EQUIPMENT	729	978	134	151	15	21
ELECTRONIC COMPONENTS' RADIO AND TV	1,623	734	45	210	29	13
OTHER	478	191	40	175	92	37
TRANSPORTATION EQUIPMENT	6,539	6,750	103	2,748	41	42
TEXTILES AND APPAREL	724	244	34	97	40	13
TIMBER, WOOD AND FURNITURE	741	352	48	40	11	5
PRINTING AND PUBLISHING	335	144	43	36	25	11
STONE, CLAY AND GLASS PRODUCTS	477	267	56	86	32	18
INSTRUMENTS	1,315	848	65	522	62	40
OTHER MANUFACTURING	2,121	625	30	146	23	7
TOTAL MANUFACTURES	34,969	21,718	62 (65)*	7,707+	35 (32)**	22 (21)**+

* Customs classifications not identical to industry classifications of MNC exports; thus, (3) and (6) can equal more than 100.

** Bracketed figure is the percentage in 1966.

\+ Compare to 7,079 as given in Leonard A. Lupo, "Sales by U.S. Multinational companies", S.C.B., January, 1973.

SOURCE: Helleiner (1979); originally from U.S. Senate, Committee on Finance, Implications of Multinational Firms for World Trade and Investment and for U.S. Trade and Labor, Washington, 1973, pp. 367, 372.

TABLE A-8

INTERNALIZED TRADE OF 298 U.S. MULTINATIONAL CORPORATIONS AND THEIR MOFAs, 1970 (in $millions)

	WORLD		DEVELOPED COUNTRIES		CANADA		EEC(6) + U.K.		DEVELOPING COUNTRIES		LATIN AMERICA		OTHER LDCs		INT'L TRADING FIRMS	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
TOTAL INTERNAL TRADE	29490	15770	18360	14370	7000	6240	10070	7610	8540	1330	3380	940	5160	390	2590	70
PARENT EXPORTS TO MOFAs	8620	7070	7120	5980	3160	3090	3770	2840	1360	1020	1010	820	350	200	140	70
% FOR RESALE	49.3	39.8	52.2	41.8	40.6	38.3	52.3	45.7	34.6	24.6	33.2	25.6	39.7	17.5	NA	NA
% CAPITAL EQUIPMENT	6.7	5.6	5.1	4.1	3.5	4.3	7.4	5.9	16.2	9.7	14.3	10.2	20.3	7.5	NA	NA
% INTERMEDIATES	44.0	54.8	42.7	54.1	55.9	57.4	40.3	48.4	49.2	65.7	52.5	64.2	40.0	75.0	NA	NA
INTERNAL EXPORTS OF MOFAs	20870	8770	11240	8390	3840	3180	6300	4770	7180	310	2370	120	4810	190	2450	0
MOFA (EXPORTS/SALES)*100	29.5	23.7	21.7	26.0	23.9	30.0	21.8	29.0	46.7	8.4	27.1	4.7	65.1	32.4	NA	NA
% MOFA EXPORTS INTERNAL	61.5	69.3	61.6	71.2	75.4	82.2	69.2	67.0	56.9	53.3	65.6	42.1	53.1	64.7	NA	NA
% INTERNAL EXPORTS TO PARENT	29.7	41.8	37.8	41.7	91.1	93.0	9.5	9.4	22.5	49.1	44.0	50.1	12.0	47.9	NA	NA

1-All Industries, total

2-Manufacturing Industries, total

SOURCE: UNCTAD Secretariat, "Dominant Positions of Market Power: Use of the Transfer Pricing Mechanism," UNCTAD/ST/MD/6, unpublished paper, July, 1977, pp. 23-24; originally from U.S. Department of Commerce, Bureau of Economic Analysis, Special Survey of U.S. Multinational Companies, 1970-BEA-SUP72-03, November, 1972.

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