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## Foreign direct investment and trade in transition countries: Tracing links – A sequel

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# Kiel Working Papers

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**FOREIGN DIRECT INVESTMENT AND TRADE  
IN TRANSITION COUNTRIES: TRACING LINKS  
— A SEQUEL —**

by  
Petra Naujoks and Klaus-Dieter Schmidt

August 1995



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## **Abstract**

This paper deals with the interactions between outward investments of western multinationals and export performance of their affiliates in transition countries. It argues that multinationals make an important contribution to increasing, diversifying and up-grading trade, because they are able to open the access to advanced technologies and, thereby, to international markets. The paper reviews the theoretical arguments, presents and extracts some stylized facts and discusses the policy implications of our research (JEL-Classification F14, F21, F23).

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## I Introduction<sup>1</sup>

In recent years the links between corporate restructuring and trade re-orientation in transition countries have been subject to many empirical investigations (Landesmann, 1991; Hughes and Hare, 1991; Halpern, 1994; Lemoine, 1994; Landesmann and Székely, 1995). The underlying theoretical framework is usually the orthodox trade theory of Heckscher-Ohlin type which considers trade as transactions among unrelated companies in different countries and explains it by different local advantages in terms of different factor endowments. However, a remarkable and steady share of trade consists of transactions among companies which are more or less inter-related — either by equity involvements or by contractual arrangements. In this case orthodox models can be crucial for explaining international trade flows.

The shortcomings of orthodox trade analysis in dealing with so-called intra-firm trade relations (IFT) of transnational corporations (TNC) have been recognized for a long time. It has been argued that the H-O model is misspecified by treating

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capital as internationally immobile (Ethier, Svensson, 1986; Wood, 1994). If capital principally flows around the world, it cannot imply a locational characteristic and, hence, affect the factor content of trade. From this it has been concluded that generally capital flows rather than capital endowment can explain the pattern of international production and international trade. A poor country with a relatively low capital endowment, e.g., is not necessarily bound to produce and to export land- and labour-intensive goods. It can move towards a more capital-intensive structure, if it is able to attract adequate resource flows from abroad. This has been impressively demonstrated by the four „Asian Tigers“ over the last two decades.

Conventional theories regarding capital flows state that investors in richer countries simply tend to channel their capital to poorer countries as they have a higher rate of return. However, this is only true in efficient markets with respect to establishing the link between international savers and investors, as well as with respect to risk sharing and appropriate incentives for investment undertakings. Markets for international capital are far from being perfect and, hence, from being internationally integrated. Especially in less developed countries one finds a picture that deviates substantially from the ideal of an efficient market. In recent years, therefore, theories explaining international capital flows have rapidly advanced, including elements from both new trade theory and industrial organiza-

tion literature. It has been recognized that market imperfections can be overcome at best by internalizing external market transactions. That is what TNCs are doing by investing abroad. Internalizing advantages originating from market imperfections, often being coupled to ownership advantages, are the missing link in explaining intra-firm trade transactions. Both, FDI and trade, must be understood as a package — and, hence, must be analyzed in a unified and comprehensive framework (Dunning, 1977; Dunning, Norman, 1985).

This paper deals with the possible links between international capital flows and internal trade flows under the conditions of market inefficiencies. The focus is directed at those transition countries which were able to attract sizeable inflows of foreign capital. It argues that western TNCs investing in transition countries can make an important contribution to increasing, diversifying and up-grading trade, because they are able to open the access to advanced technologies and, thereby, to international markets. The first section reviews the theoretical framework, the second section presents and extracts some stylized facts which may support our arguments. In the final section it discusses possible policy implications of our research.

Although the paper is concerned with an important issue, it is just of a limited scope. It suffers from the lack of empirical information. IFT is usually not documented in the statistics. Nevertheless, the paper may give some food for further



research which requires a much more complete treatment of theoretical considerations and information than have been incorporated in those studies on this subject which have been undertaken so far.

## **II Theoretical Framework: Towards Integrated International Production**

One of the most striking findings emerging from recent studies of international trade is the growing international integration of production by cross-border value-adding activities of transnational corporations (UN, 1993). The traditional form of integration through international trade in goods and services has been more and more complemented as well as substituted by international movements in capital. In recent years foreign direct investment has grown faster than trade, and so have activities of TNCs. International trade flows are therefore increasingly being influenced by IFT. According to a recent study by Bonturi and Fukasaka (1993) two fifths of US and Japanese exports were shipped from parent companies to foreign affiliates (Table 1). But one can assume that the share of all IFT in total trade is much higher. The figures only include IFT activities via ownership relations, not those of other means of control such as licensing or contracting. A remarkable share of international trade stems from outward processing activities which are frequently organized within the network of firms, too.

Table 1 – US and Japanese Transnationals' Intra-Firm Trade<sup>a</sup> in Manufacturing Industries 1989

	Exports shipped to foreign affiliates		Imports shipped from foreign affiliates	
	by US parents	by Japanese parents	by US parents	by Japanese parents
Manufactures	44.5	41.1	58.9	30.9
Chemicals	48.0	21.9	34.1	9.8
Food and beverages	16.2	19.0	28.0	14.7
Electrical and electronic equipment	36.9	50.9 <sup>b</sup>	41.2	35.8 <sup>b</sup>
Machinery excluding electrical machinery	61.3	43.8 <sup>c</sup>	75.1	33.7 <sup>c</sup>
Transportation equipment	48.3	41.1	70.3	36.0
Wholesale and retail trade	9.2	24.4	9.8	28.3

<sup>a</sup>Intra-firm trade ratio, defined as the share of exports (imports) shipped to (from) affiliates in total exports (imports) of parents. – <sup>b</sup>Electrical engineering equipment. – <sup>c</sup>General engineering equipment.

Source: Bonturi, Fukasaka (1993).

A further examination of US and Japanese TNCs' trade with their foreign affiliates supports the hypothesis that complex integration occurs mainly in R&D and skill-intensive industries where internalization advantages are potentially high. In these industries the production process frequently requires internal handling of firm-specific assets such as basic R&D. This can be achieved more easily within an organization than via markets. However, there are pronounced differences in the trade pattern between US and Japanese companies. The most conspicuous difference is the IFT ratio for US parents being higher in import than in export whereas for Japanese parents the opposite is true. This can be explained by the different strategies of production sharing: US companies obviously rely more on

global sourcing from their foreign affiliates while Japanese companies rely more on shipping parts and components for assembling and refining to their affiliates (Bonturi, Fukasaka, 1993).

The nature of FDI/IFT linkages, however, differs from sector to sector. Primary resources and manufactured goods are better tradable than services, and consequently, they are better suited for IFT. TNCs operating in the raw materials sector and the manufacturing sector have more opportunities to build up cross-border intra-firm networks than those in the service sector. Accordingly, also the types of linkages differ: TNCs operating in resource extraction, e.g., usually prefer low equity forms such as joint ventures or strategic alliances. In manufacturing, the links with foreign partners can be organized in different ways ranging from full ownership to minority joint ventures, licensing and subcontract arrangements — all of which gives them the possibility of running the company without taking the risks. In services, in which TNCs cannot split their activities in the same way as in industry, other forms are common. While in finance- and trade-related activities TNCs mostly establish fully-owned affiliates, in air transportation or telecommunications they prefer to form minority equity holdings or strategic alliances. In other services specific forms of subcontracting such as franchising, catering or professional partnership have evolved. Service affiliates are often miniature versions of their affiliates; they often involve complementary activities along the same value chain (UN, 1993).

Table 2 – US-Transnationals' Trade Linkages with their Foreign Affiliates<sup>a</sup>  
1989

	1989		
	Raw materials	Manufacturing	Services
Parents			
Total exports	2.6	11.6	2.8
Exports to affiliates	0.8	5.3	0.4
Imports from affiliates	2.2	4.2	0.4
Affiliates			
Total exports	25.5	37.8	27.2
Exports to parents	8.4	12.2	5.4
Imports from parents	2.2	25.3	9.4

<sup>a</sup>Non-bank United States parent firm with majority-owned non-bank affiliates; in percentage of total sales.

Source: UN, 1993.

However, as strong as the linkages among the parent company and their affiliates may be, there is still much scope for arm's-length trade activities. In 1989, e.g., foreign affiliates of US-TNCs in manufacturing shipped on average nearly 38 percent of total sales to foreign countries, but only 12 percent to their parent firms (Table 2). It may be that a considerable part of differences involves IFT transactions, too, such as deliveries to other related affiliates. Nevertheless, the figures indicate that foreign production is increasingly being viewed not only for sales within the local market or the intra-firm sourcing system but also in international markets.

### *1 Integration and Internalization as a Strategy*

Strategies for organizing cross-border activities often involve several options. Principally, enterprises can opt for serving foreign markets from their production base at home, for establishing a production base abroad or they can choose an intermediate form by establishing substantial links with foreign suppliers or sub-contractors. The choice of strategy depends on the enterprise's assessment of the potential gains to be made from certain competitive advantages, especially from ownership, locational and internalization advantages (OLI paradigm; Dunning, 1977; Schmidt, Naujoks, 1993).

As mentioned above, under conditions of mobile capital TNCs tend to move production to wherever it is profitable in order to exploit locational advantages. And under conditions of imperfect markets they tend to establish IFT structures that foster to gain from ownership and internalization advantages. There is a large number of studies which examine the behaviour of TNCs in international markets. Helleiner (1979), one of the pioneers in analysing intra-firm activities, listed typical situations in which TNCs seek to internalize cross-border trade relations. This is most likely if there are

- intermediate inputs specific to the firms (e.g., in terms of quality, specification technology);

- risks of intermediate input supply disruptions or price alterations;
- substantial marketing and after-sales requirements for finished products;
- weak tax or exchange control administrations which increase the potential for global after-tax profit maximization by means of transfer pricing.

In these cases the costs of market contracts are expected to be so excessive that firms tend to avoid or to reduce them by resorting to internal transactions.

Casson (1979) also emphasized the high costs of contracts at arm's-length trade as a strong incentive for internalization. He distinguished two cases: if the goods traded

- are produced by multi-stage processes requiring intertemporal co-ordination and
- comprise proprietary information requiring safeguard regulations.

In both cases the reasons for internalization are imperfections in the information markets which raise the cost of sales in open markets. As Lall (1978) pointed out, failures in information markets are often closely related to failures in commodity markets. This is usually the case when commodities which should be produced

abroad embody new information, but also when the foreign production base requires technical assistance or technical information, e.g., for ensuring adequate quality or strict delivery times. Technological leadership is one of the most important reasons for investing abroad as well as for internalizing trade.

Lall (1978) tested several hypotheses which he considered relevant to internalization:

- Marketing requirements: the need for controlling distribution facilities, the need for a great deal of specialized after-sales services, maintenance and updating, the need for transferring information to and from consumers, and the need for keeping direct contact to governments in order to influence policy or win large orders.
- Product specificity: the need for safeguarding uniqueness, high quality standards and suitability to demanding requirements.
- Divisibility of production processes: the need for relocating parts of production towards low wage areas in order to cut costs.

- Risk and uncertainty: the need for avoiding disruptions in production, quality changes and other events which may influence sources of supply such as price changes.
- Underutilized capacity and scale economies: the need for exhausting own facilities by supplying related affiliates.
- Government policy at home as well as in host countries: the need for overcoming trade barriers such as tariffs, quotas and local content regulations.
- Transfer pricing: the desire to evade high tax rates and to remit profits.

Lall came to the conclusion that the main factors which affect IFT are the need to provide technological assistance, the need to remove unprofitable production lines, and the need to guarantee after-sales services.

Internalization has important implications. It means that any affiliate in any foreign country becomes a member of a network which has to operate in close co-operation with the parent company or other affiliates on the basis of a sophisticated intra-firm division of labour. The affiliate becomes a link of a value-added chain under the common governance of the parent company. This way, cross-



border activities tend to move from shallow trade-based linkages to deep production-based linkages.

## 2 *Forms of Integrated Cross-Border Activities*

Integrated international production can occur at almost any point on the value-added chain. Many TNCs have incorporated their affiliates in networks serving as component producers or as assemblers of final goods. These networks can be organized along regional lines for serving the major markets in the same region, or they can be organized globally for serving certain segments of the global market. However, often the regional and the global approach are mixed. Sourcing of raw materials and components is usually organized on a regional basis. Sales activities, in contrast, usually take place on a global scale. A prominent example for complex integrated strategies is the joint venture between Volkswagen and Škoda. The aim of Volkswagen is to develop Škoda into a fully fledged fourth nameplate next to the well-established nameplates of VW, Audi and Seat. The Czech producer shall represent the Central European counterpart to the Mediterranean character of Seat. Škoda cars are sold on both national and international markets through the Volkswagen sales organization. Component suppliers are mainly located in the Czech and the Slovak Republics, but comprehensively integrated in the sourcing system of the Volkswagen group. They all receive technical

assistance in order to guarantee just-in-time deliveries and top product quality. On research and development, staffs in Wolfsburg and Mladá Boleslav are working side by side (Sander, 1994).

It is important to note once more that the strategies for organizing cross-border transactions are different with respect to the international economic, technological and policy environment. They range from arm's-length transactions among stand-alone enterprises to fully integrated production lines under the strict governance of the parent company. But frequently intermediate forms of links are preferred such as licensing and subcontracting. Subcontractors, e.g., often do not operate alone nor are they subject to ownership relations. Rather, they are integrated into a TNC's value-added chain by functional linkages (Figure 1).

From theoretical considerations and empirical studies we would expect that complex integration strategies are mainly adopted by high-tech industries like mechanical engineering, electrical engineering, electronics and transport equipment (Lall, 1978; Zejan, 1989; Siddharthan, Kumar, 1990; Bonturi, Fukasaka, 1993). Technical links are probably the most important determinants for all IFT (Lall, 1980). Other links like input specification and quality control assistance are probably weaker. Frequently, technology transfer may be small in scale, but its strategic value may be very large.

Figure 1 – Strategies of Transnational Corporations in Integrated Production

Form	Degree of Integration	Type of Transactions	Forms of Mechanism of Co-ordination	Type of Linkages	Forms of Comparative Advantages
stand-alone	weak	inter-firm trade	inter-firm negotiations, price mechanism	no linkages	locational advantages according to factor endowment
simple integration	strong in some stages of the value-added chain, weak in some others		licensing and sub-contracting, price mechanism	flows of materials, technology, capital and management	
complex integration	strong	intra-firm trade	intra-firm hierarchies, transfer pricing	all functions	OLI advantages

Source: Based on Dunning, Norman (1984); UN (1993, 1994).

As a rough guideline Nunnenkamp, Gundlach and Agarwal (1994) suggested distinguishing three categories of industries with different trade patterns:

- For highly complex manufactures where transactions involve intangible assets or R&D intensive goods and services, an equity arrangement and, as a consequence, a high share in intra-firm trade is likely to occur.

- For less complex manufactures the form of international co-operation is open, and hence a high share both in intra-firm trade and in arm's-length trade is possible.
- For manufacturers of standardized goods a non-equity involvement can be expected. The resulting trade flows are more likely to be of an inter-industry type than intra-firm type.

This classification comes close to earlier findings by Caves (1971). Caves approached the question of the appropriate strategy from the perspective of horizontal and vertical integration. He argued that the TNC's choice between arm's-length trade and foreign production is determined by comparative advantages, transport costs, tariffs, and risk aversion to supply uncertainty on the part of customers in the foreign countries. The choice between production at foreign affiliates' sites or at unrelated firms' locations depends on the nature of the technology, the size of the firms and the importance of research and development in the industry. Very profitable, new technology is mostly reserved for affiliates, whereas marginally profitable, older technology is often made available via contractual arrangements to unrelated firms (Cheng, 1984).

### 3 *Implications for Transition Countries*

Integrated international production is a package of complex technology, modern management and organization methods and, last but not least, fresh equity capital that can make an important contribution to corporate restructuring and, hence, trade re-orientation in transition countries. It also gives western TNCs a better chance to exploit the locational advantages of enterprises in these countries. Frequently, only specific functions (those for which no sophisticated know-how is required), rather than complete production processes can be relocated. Other functions will be performed by affiliates in other countries or by the parent company itself. Thus, a specific pattern of labour division is designed to exactly fit the TNC's corporate system.

An open question is, however, in which direction and to what extent integrated international production is affecting trade activities. Foreign direct investment and trade can be linked in several ways. If the relation is complementary, then FDI can either follow or precede trade. Both can be substitutes or complements for each other, and each can either follow or precede. It is often argued that the main motives for transnational corporations for investing abroad are market access and market exploitation (Kravis, Lipsey, 1982; Culem, 1988; Wheeler, Mody, 1992). Even if a TNC starts its foreign activities immediately in the field of production, trading activities in the local markets will be its main objective. However,

Rowthorn (1992) showed that usually the host country's market size is a critical issue: there may be considerable diseconomies of scale when the production units are too decentralized. Therefore, many transnational companies tend to organize complex integrated production along regional lines serving as suppliers or assemblers not regionally but nationally or even globally. The increasing significance of IFT widens the geographic scope of trade and strengthens the investment-trade nexus.

The tendency of TNCs to integrate their foreign activities has far-reaching consequences which may not only be beneficial for their partners in the host countries. It is argued that integrated international production would usually lead to a downgrading of operations in the host countries rather than an upgrading. In many cases the partners would be „flattened“ to a simple subdelivery base or an assembly unit. This way, they would often become net importers of semiproducts from their parent company. However, this objection should be investigated carefully. For instance, a high share of imported semi-products frequently reflects the low competitiveness of many of the alternative supplies of local provenance. But as time goes by most of the affiliates will gain from integrating their activities into the entire value-added chain of a TNC. A TNC is usually very interested in fully integrating host countries' suppliers into its group networks. The competitiveness of foreign production within TNCs crucially depends on a sound purchasing

policy, namely on cheap supplies. In this respect the joint venture between the German Volkswagen company and the Czech Škoda company is perhaps a good example. Presently, Škoda purchases around 80 percent of its supply in the Czech and Slovak Republics, but also some German firms started to build up supply bases there (Table 3). Local suppliers receive assistance from Volkswagen to meet Škoda's increasing demand — especially to keep pace with rising quality standards. „Creating an efficient national supplier industry which shall be fully integrated into the Volkswagen Group is meant to secure long-term competitive advantages for Škoda and, above this, to gradually develop into low-cost high-quality sources of supply for all members of the Volkswagen Group“ (Sander, 1994).

Table 3 – Structure of Škoda's Supply Relations 1993

	Number of suppliers	Volume of turnover (bill. CZK)
Czech suppliers	210	14
Slovak suppliers	25	3
Foreign suppliers	105	4

Source: Volkswagen AG, unpublished data.

The only true problem of integrated production is that it provides opportunities for transfer-pricing, which occurs when the accounting prices for deliveries from and to the parent company differ from the price that would prevail in arm's-length trade (Lall, 1973, 1979; Plasschaert, 1979). Transfer pricing might be used as a „shunting track“ for manipulating the profit-and-loss account. However, this is

legitimate and quite usual in normal business. In a world of perfect capital markets ruled by the „law of one price“ this problem would not exist. Insofar, transfer pricing always indicates that markets and their regulations are imperfect. For instance, low transfer prices paid for subsidiaries' deliveries are often the result of existing restrictions on repatriation of profits from host to source countries. Governments in transition countries are very interested in „internalizing“ profits derived from local subsidiaries themselves. However, this will only happen if governments create a favourable investment climate, last but not least by deregulating national capital markets.

### **III Stylized Facts: Investment–Trade Linkages in Transition Countries**

#### *1 Global Trends*

Since 1989 the former socialist countries have opened up their economies to cross-border activities. They have liberalized the markets for goods and services and, albeit in varying degrees, also for capital. As a consequence, FDI has been dynamically increasing over recent years, starting from an almost zero base: at the end of 1989 only about 2,500 projects were registered. Meanwhile their number



has skyrocketed — to about 100,000 in mid 1994 (Table 4).<sup>2</sup> Needless to say that the large number of projects overstates the dynamism of FDI: only an estimated average of no more than 50 percent of all projects are virtually in operation (OECD, 1993; UN, 1994), the others are just an accommodation address. And only a minority of investors have made substantial investments. The average size of equity involvement is small — less than \$ 20,000 in 1993. At the end of 1993 the cumulated total flow amounted to less than \$ 20 billion. For comparison: at the same time global FDI stocks reached nearly \$ 500 billion in developing countries and approximately \$ 2.1 trillion world-wide (UN, 1994).

Until now the regional distribution of FDI has been very uneven. Hungary, the Czech Republic and Poland accounted for almost 60 percent of total FDI stocks in transition countries. Although Russia and the other successor states of the Soviet Union are making up mightily, they are far away from becoming an attractive place for FDI.

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<sup>2</sup> Accounting for FDI is still a puzzle. Not all countries made data available which adequately relate to the issue, and even these data frequently report on different subjects. The differences in criteria used and the time span applied in the compilation of data may result in considerable differences. Therefore, all FDI statistics must be treated with caution.

Table 4 – Registered Projects and Stocks of FDI<sup>a</sup> in Transition Countries  
1990–1994

	Registrations (number)			Stocks of FDI (mill. \$)		
	1990	1993	1994 <sup>b</sup>	1990	1993	1994 <sup>c</sup>
Central Eastern Europe	15,640	77,500	93,000	6,365	14,600	..
Albania	..	85	..	..	58	82
Bulgaria	140	1,500	..	110	320	388
ex-Czechoslovakia	1,600	–	–	436	–	–
Czech Republic	–	12,300	..	–	2,520	2,820
Slovak Republic	–	3,250	..	–	366	390
Hungary	5,700	18,500	..	1,450	5,780	6,316
Poland	2,800	14,300	..	352	2,100	..
Romania	1,500	23,500	..	113	700	..
ex-Yugoslavia	3,900	–	–	3,900	–	–
Slovenia	–	2,400	..	–	263	292
CIS	2,710	10,800	..	1,238	3,412	4,116
Belorussia	40	1,490	..	101	268	..
Kazakhstan	100	..	..	..	500	..
Russian Federation	1,500	5,200	..	959	2,958	3,558
Ukraine	70	1,800	..	52	398	498
Baltic States	190	8,350	..	90	350	519
Estonia	100	3,500	..	48	218	337
Latvia	50	1,750	..	27	82	112
Lithuania	40	3,100	..	15	50	70
<b>Total above</b>	<b>18,540</b>	<b>96,650</b>	<b>..</b>	<b>7,693</b>	<b>18,230</b>	<b>..</b>
Note:						
Developing Countries <sup>d</sup>	..	..	..	330	490	525
World <sup>d</sup>	..	..	..	1,650	2,125	2,300

<sup>a</sup>Cash basis; cumulated total, end of year. – <sup>b</sup>January–June. – <sup>c</sup>End of June. – <sup>d</sup>Bill. \$.

Source: UN; UNCTAD; OECD; national statistics; own calculation.

The lion's share of investment went into commerce, transport, banking and other services reflecting not only the growing importance of those sectors in transition countries but also the normal pattern of sequencing and timing in developing economies: FDI started everywhere in service industries. On average, less than one fourth of registered projects and less than half of investments went into manufacturing. In addition, investments in manufacturing have often been dominated by a large-scale project of a few big companies such as Volkswagen and

Philip Morris in the Czech Republic, Fiat and General Motors in Poland or Electrolux and General Electric in Hungary. Therefore it is still difficult to draw conclusions on the industrial composition of FDI which hold in general. Until now the industrial pattern has more or less been accidental in nature.

Although there is presumably no simple correlation between firm size and degree of integration, one can assume that successfully organized production in an internally integrated manner occurs mainly in large-scale TNCs. However, available data suggest that their role in transition countries is still relatively small on average. In German FDI statistics (which completely report all large-scale investments) at the end of 1992, e.g., just 700 affiliates of German parents were reported to display activities in transformation countries (300 of them in Hungary). Their total FDI stock amounted to 1.8 billion \$, and their world-wide sales to 5 billion \$. For comparison: German imports of goods from transition countries reached approximately 20 billion \$ in 1992 (Table 5). Since Germany accounted for a considerable share of FDI stocks in transition countries, these figures may provide a reasonable approximation of the general trends.

Table 5 – German Stock of FDI and Sales of German TNCs' Affiliates in Transition Countries<sup>a</sup> 1989–1993

	Year	Stock of FDI <sup>b</sup>		Sales of Affiliates		Note:
		mill. \$ <sup>c</sup>	1989=100	mill. \$ <sup>c</sup>	1989=100	Number of Affiliates
Total	1989	182	100	418	100	78
	1990	600	330	1,856	444	181
	1991	1,086	597	3,832	929	379
	1992	3,183	1,749	5,689	1,361	720
	1993	4,099	2,252	8,333	1,993	951
of which: Poland	1989	6	100	60	100	11
	1990	16	260	60	100	26
	1991	51	860	240	400	69
	1992	174	2,900	660	1,100	140
	1993	366	6,100	1,320	2,200	175
ex-Czechoslovakia	1989	..	..	..	..	..
	1990	..	..	..	..	..
	1991	322	..	540	..	38
	1992	819	..	1,980	..	167
	1993	1,174	..	2,820	..	294
Hungary	1989	44	100	240	100	35
	1990	159	364	780	325	99
	1991	293	666	1,440	600	199
	1992	678	1,541	2,040	850	312
	1993	1,323	3,007	2,750	1,145	365

<sup>a</sup>Including reinvested funds (or consolidated losses) and changes in the net asset value. – <sup>b</sup>FDI of German enterprises only, if the balance of foreign objects exceeds 500,000 DM and the German share in the object exceeds 20 percent of total capital. – <sup>c</sup>Exchange rate \$/DM (1989–1991) = 1.67.

Source: Deutsche Bundesbank.

The presently small amount of large-scale investments presumably understates the impact of western TNCs on corporate restructuring and trade re-orientation in transition countries. An important share of FDI has been made in key industries such as automotive production or electrical engineering. This type of FDI often involves not only technology transfer to foreign affiliates of TNCs but also spillovers to related local suppliers thus lifting the quality of their products to interna-

tional standards. In addition, there has also been a substantial rise of non-equity cross-border linkages such as subcontracting relations which have enabled local companies — typically with technology from western TNCs — to find their way into globally integrated production and distribution networks (Naujoks, Schmidt, 1994).

Modelling and calculating the linkages between FDI and trade is a crucial task. From a theoretical point of view, FDI and trade can be both — either complementary or substitutive, depending, e.g., on the characteristics of the industry, the degree of vertical or horizontal integration among related firms or the trade regime of the country. With respect to transition countries there is a greater plausibility that the relations are complementary rather than substitutive: if the difference in factor endowment between the source country and the host country is large enough to attract FDI, then it is likely that investments are much more geared towards production for export markets than for local markets. This was observed in many developing countries, especially in resource-intensive and labour-intensive industries (Hiemenz, 1987). Just as much we can expect FDI to raise imports resulting from firm-specific inputs such as capital goods or intermediate goods for local processing.

In fact, there is evidence that FDI and trade are positively related: the shares of transition countries in both OECD-total FDI stock and in two-way trade have

been rising significantly in recent years (Table 6). Because of its small initial basis, FDI has been rising faster than trade. However, data available does not allow to draw far-reaching conclusions. The time period under observation is too short — both FDI and trade re-orientation in transition countries are just at a humble beginning and there are still too many loopholes in the data.

Table 6 – Share of Central East European Transition Countries in OECD-Total Outward Stock in FDI<sup>a</sup> and in OECD-Two-Ways Trade 1990 and 1992 (percent)

	Stock of FDI		Two-ways trade	
	1990	1992	1990	1992
Total	0.15	0.61	0.90	1.28
of which:				
Poland	0.02	0.11	0.33	0.46
ex-Czechoslovakia	0.03	0.14	0.20	0.37
Hungary	0.09	0.30	0.22	0.28
Bulgaria	0.01	0.02	0.05	0.07
Romania	0.01	0.04	0.10	0.10

<sup>a</sup>Cash basis; cumulated total, end of year.

Source: OECD; UN; own calculations.

Another indication of strong FDI–trade linkages may be the regional clusters of cross-border activities. Although in general FDI can be expected to be regionally less highly concentrated than trade,<sup>3</sup> there is obviously a positive association between bilateral investment and trade intensities. This is evident for countries such

<sup>3</sup> This can be explained by the fact that locational decisions of TNCs with respect to FDI are influenced by more factors than those with respect to trade.

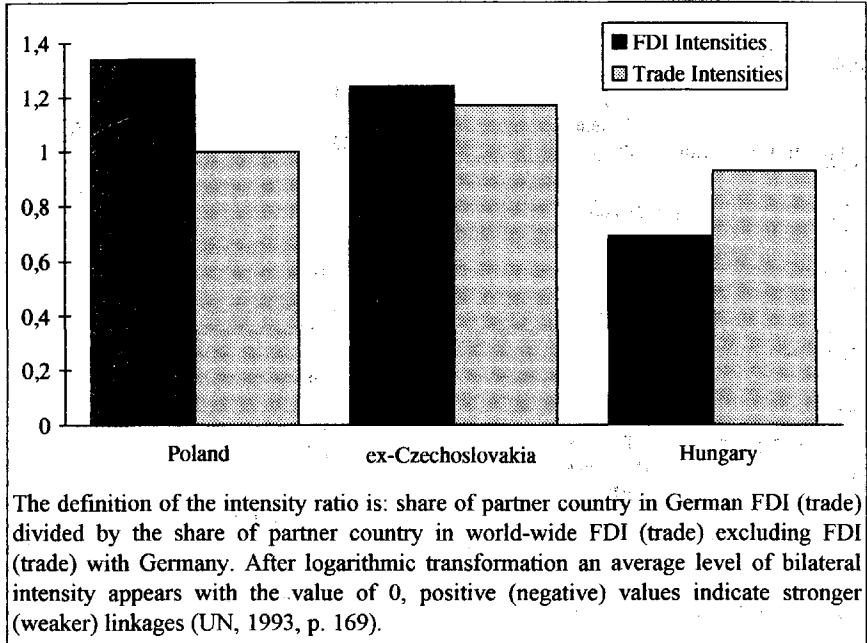
as Poland, the former Czechoslovakia and Hungary which share a common borderline with two western countries, Germany and Austria. Despite increasing globalization, geographical nearness obviously still matters. Hungary, as a consequence of its former leadership in the reform process, shows a more corresponding FDI-trade relation than Poland and the former Czechoslovakia. The latter is, however, making up mightily.

In order to take a closer look on FDI-trade relations the intensities of German FDI and trade with respect to these three countries were calculated (Graph 1). The results indicate that the strongest German linkages are those with its two neighbours Poland and ex-Czechoslovakia. This may reflect the fact that transaction costs of FDI as well as transport costs of trade are positively correlated to distance. Interestingly, FDI intensities are generally not significantly lower than trade intensities. This result needs further investigation. Normally, one would expect that transaction costs of FDI are more important than transport costs of trade. The high barriers to trade, especially the discriminatory protection of the EC with respect to „sensitive products“, may be a possible explanation.

However, apart from geographic proximity there are further reasons explaining this pattern: Poland, ex-Czechoslovakia and Hungary are the most advanced countries and leading the transformation process. Similarly, in developing coun-

tries, FDI and trade are concentrated in some ten countries which, as it were, are the leaders in catching up.

Graph 1 – Germany's FDI and Trade Intensities by Selected Partner Countries 1992



Source: Own calculations.

## 2 Ownership Structure and Trade Intensity

Undoubtedly, TNCs are emerging as a major vehicle for conducting cross-border operations in the form of international production activities and international trade in transition countries, too. Much of these activities take place in the form of in-



tra-firm shipments between the parent company and its foreign affiliates. The conclusion which can be drawn from this is that companies integrated in international production networks should be more trade intensive than those companies operating outside of them.

The main obstacle for tracing the links between FDI and IFT is the poor data base. For this type of research we should have among others trade data at corporate level. However, such data usually does not differentiate between IFT and arm's-length trade. It is available only for a few countries (USA, Japan, Sweden), and its interpretation poses serious problems, such as the definition of IFT, the classification of traded goods or the under- or over-voicing of transactions by transfer pricing.

Because of these limitations we can only focus on the overall trade activities of TNCs with foreign affiliates in transition countries, both in external as well as in internal markets. The topic explored in the following is the trade performance of companies with respect to their ownership structure. For this we use data for Hungary which offers the widest range of research facilities:<sup>4</sup> Hungary is the

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<sup>4</sup> In a previous version of our paper (Naujoks, Schmidt, 1995) we used data for Hungarian companies provided by Kopintdatorg (Hamar, 1993). For this paper the data were provided by GKI GAZDASÁGKUTATÓ RT (Lakatos, Papanek, 1995; partly unpublished). This data base includes total sales and exports of companies by ownership structure, but not the respective imports.

transition country in which foreign-owned companies have already become an important sector of the economy. It has received the highest share of FDI in the manufacturing sector in which the majority of companies with foreign capital participation is in operation. Some companies which are fully or partly foreign-owned such as Styl Ruhagyár, Electrolux (the new owner of Lehel), Schlumberger Industries (the buyer of Ganz Árammérő) or Phylaxia-Sanofi are the largest ones in their industries and account for a significant share of the country's export.

a) Export Performance of Foreign-Owned Companies

The relatively high standard of internalization reached by the Hungarian economy can best be described by the ownership structure of its operating companies: in 1993 nearly 15 percent of them were fully or partly in foreign ownership (Table 7). The highest ratio was reached in wholesale trade (30 percent), followed by some manufacturing industries such as the chemical industry (25 percent) or the motor vehicle industry (26 percent). 60 percent of total companies with foreign capital participation were fully or predominantly in foreign ownership, 40 percent were held by a Hungarian majority. The share of companies with foreign capital participation in total sales of all companies was 30 percent.

Table 7 – Number of Hungarian Companies by Industries and Ownership 1993

	Companies with foreign participation	Breakdown by ownership			Note: All companies
		Companies with Hungarian majority	Companies with foreign majority	Companies with 100 % foreign capital	
Total	20,856	7,776	5,728	7,307	141,807
of which					
Construction	1,090	511	285	294	12,675
Food products	487	200	178	105	3,124
Chemical industry	152	53	51	48	614
Fabricated metal products	395	173	118	102	3,226
Mechanical engineering	454	193	143	118	3,486
Equipment, apparatus	137	37	42	57	1,039
Motor vehicles	61	18	22	20	232
Sale of motor vehicles, retail sale for fuel	725	302	261	162	4,641
Textiles, clothing	403	128	120	142	2,620
Post and telecommunications	47	23	19	4	328
Wholesale trade	7,489	2,419	1,879	3,184	25,632
Retail trade	1,884	724	425	734	18,712
Note:					
Total in %	14.7	5.4	4.0	5.2	100.0

Source: Lakatos, Papanek, 1995; unpublished data; own calculations.

The perhaps most important difference of foreign-owned companies against national companies is their higher foreign trade re-orientation (Table 8). In 1993, foreign-owned companies accounted for 50 percent of total exports, in some industries such as machinery and equipment, post and telecommunications or motor vehicles the share was even higher. With respect to total sales exports by foreign-owned companies were approximately twice as high as exports by locally-owned companies (Table 9). It is likely that this is mainly due to the strong linkages

between Hungarian companies and their foreign partners. Frequently, host countries' companies can use the internal structure of TNCs for shipment of raw materials, intermediate and finished products. The outstanding experience of TNCs in serving export markets is usually very helpful to their eastern European partners. Access to western markets is mostly crucial for them to survive.

Having a look at the industries, the export performance of foreign-owned companies is above average in most manufacturing industries such as fabricated metal products, mechanical engineering, machinery and equipment, and textiles and clothing. Export sales in these categories include to a great extent processed parts having been sent by parent companies to their affiliates in a more crude state in order to be refined and sent back as components. On average, the share of exports in total sales is somewhat higher for companies with local majority than for companies with foreign majority, and it is significantly higher for joint venture companies than for fully foreign-owned companies. However, on the industry level the picture is less clear. The export shares differ widely with respect to ownership structure and industries. Obviously, it seems to be less important for TNCs to hold the majority in a foreign company. More important is to be actually able to run it, which is also often possible in a minority-owned affiliate.

Table 8 – Exports of Hungarian Companies by Industries and Ownership 1993

	Companies with foreign participation	Breakdown by ownership			Note: All companies
		Companies with Hungarian majority	Companies with foreign majority	Companies with 100 % foreign capital	
			mill. Ft.		
Total	433,895	187,285	154,552	77,230	874,826
of which					
Construction	12,195	5,694	3,712	2,790	35,366
Food products	45,419	17,094	22,298	3,336	77,472
Chemical industry	38,069	21,554	14,631	1,884	80,463
Fabricated metal products	19,537	3,188	12,227	3,976	31,149
Mechanical engineering	19,227	6,669	9,698	2,860	41,548
Equipment, apparatus	28,450	148	23,577	3,911	30,803
Motor vehicles	32,077	20,470	2,126	1,079	47,418
Sale of motor vehicles, retail sale for fuel	4,891	371	2,985	1,536	7,263
Textiles, clothing	22,415	5,332	11,197	5,349	51,556
Post and telecommunications	7,186	7,186	0	0	7,754
Wholesale trade	86,825	37,657	22,536	25,462	172,386
Retail trade	2,454	1,138	634	682	7,337
		Share in total exports of the product group			
Total	49.6	21.4	17.7	8.8	100
of which					
Construction	34.5	16.1	10.5	7.9	100
Food products	58.6	22.1	28.8	4.3	100
Chemical industry	47.3	26.8	18.2	2.3	100
Fabricated metal products	62.7	10.2	39.3	12.8	100
Mechanical engineering	46.3	16.1	23.3	6.9	100
Equipment, apparatus	92.4	0.5	76.5	12.7	100
Motor vehicles	67.7	43.2	4.5	2.3	100
Sale of motor vehicles, retail sale for fuel	67.3	5.1	41.1	21.2	100
Textiles, clothing	43.5	10.3	21.7	11.0	100
Post and telecommunications	92.7	92.7	0.0	0.0	100
Wholesale trade	50.4	21.8	13.1	14.8	100
Retail trade	33.5	15.5	8.6	9.3	100

Source: Lakatos, Papanek, 1995; unpublished data; own calculations.

Table 9 – Share of Exports of Hungarian Companies in Total Sales by Industries and Ownership 1993

	Companies with foreign participation	Breakdown by ownership			Note: All companies
		Companies with Hungarian majority	Companies with foreign majority	Companies with 100 % foreign capital	
Total	20.5	24.2	20.8	13.9	12.7
of which					
Construction	12.9	25.4	9.4	8.4	9.2
Food products	16.9	20.8	15.9	8.1	13.6
Chemical industry	36.7	44.2	44.0	8.6	36.6
Fabricated metal products	38.8	23.3	53.4	30.3	25.2
Mechanical engineering	43.0	40.1	49.1	34.2	28.3
Equipment, apparatus	61.2	12.0	61.8	62.8	46.2
Motor vehicles	52.6	78.4	16.7	56.6	49.8
Sale of motor vehicles, retail sale for fuel	4.4	2.7	9.3	2.4	3.2
Textiles, clothing	56.9	52.4	51.1	79.4	48.8
Post and telecommunications	9.0	9.1	0.0	0.0	6.1
Wholesale trade	17.2	20.7	16.6	13.9	12.1
Retail trade	1.6	2.0	1.1	1.8	1.0

Source: Lakatos, Papanek, 1995; unpublished data; own calculations.

These findings once again confirm the hypothesis of a positive correlation between FDI and trade. However, the strong export performance of locally-owned companies in some industries clearly shows that one should not overstate the FDI-trade nexus. There are numerous non-equity business activities which might generate similar or even better results.

b) Integrated International Production and Technology Transfer

It has already been pointed out that both FDI and trade are a vehicle for technology transfer. Producing for foreign markets, in line with customer's requirements, needs a lot of R&D inputs in the form of materials, machinery and know-how. Frequently, these inputs must be protected against potential competitors. This can best be done by keeping in-house as much production as possible. In order to avoid bad experiences with subcontractors trying to establish themselves as rival suppliers, TNCs in high-tech industries are interested in getting equity control over a foreign company. This can explain why TNCs usually invest more money in high-tech than in low-tech industries.

From the industrialization process that has taken place in the most highly advanced third world countries we have learnt that FDI flows have not been in full accordance with factor endowments. A large share of FDI has taken place in qualified labour-intensive industries such as electrical engineering rather than in unqualified labour-intensive industries. This technology transfer was equally beneficial to industrialization and trade expansion. A similar pattern is obviously emerging in Hungary: the highest export-intensities are not observed in low-tech, but in high-tech industries, especially in foreign-owned companies (Table 10). This is a strong indication that the transfer of technology from TNCs to their for-

ign affiliates can make an important contribution to the development of internationally competitive industries in transition countries.

Table 10 – Share of Exports of Hungarian Companies in Total Sales by Technology-Intensity of Products<sup>a</sup> and Ownership 1993

	Companies with foreign participation	Breakdown by ownership			Note: All companies
		Companies with Hungarian majority	Companies with foreign majority	Companies with 100 % foreign capital	
High technology products	43.6	29.2	51.2	38.4	27.8
Intermediate technology products	30.5	40.2	24.7	13.4	27.8
Standard technology products	25.1	26.5	23.6	24.7	20.7

<sup>a</sup>Classification according to Fodors, 1995, and own groupings.

Source: Lakatos, Papanek, 1995; unpublished data; own calculations.

### 3 *Outward-Processing and Intra-Firm Integration*

Nevertheless, until now cross-border activities of transnational corporations have been dominated by weaker or simpler forms of international integration such as contracting. They give rise to building up international production networks without equity engagement. In this case the contractors provide inputs mainly in the form of materials and production technologies required in order to fulfil the contracts with regard to quantity and quality. Contracting is responsible for a large amount of east-west-trade. It can be achieved by licensing, management-contracts



or outward-processing. In the following we take a look at outward processing (OP) as one of the most important element in emerging international networks.<sup>5</sup>

OP is a special form of international co-operation between unrelated enterprises. One of them, the contractor, delivers mainly semi-processed goods to a foreign partner, the subcontractor, for refining, assembling or finishing in order to be incorporated into a product to be sold by the contractor. Thus the subcontractor is integrated into a transnational value-added chain by functional and institutional linkages. In contrast to complex integration strategies, production in OP networks

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<sup>5</sup> The data of OP trade was taken from the Eurostat CD-ROM. It contains figures collected and updated by the statistical office of the EC. The classification used is the combined nomenclature (CN, combining tariff and statistical nomenclature). The period of investigation runs from 1989 to 1993. All reporting countries — those which act as contractors — were EC member states. As partner countries — the sub-contractors — Poland, the Czech Republic, Slovakia, Hungary, Romania, Bulgaria and Albania were regarded as the representatives of Eastern Europe.

Notwithstanding the favourable opportunity to gain and convert data from the Eurostat CD-ROM, there are some restrictions to be considered. One essential limitation is that all figures put down are recorded on the basis of customs declarations. This means that there is no possibility to obtain trade figures for those transactions which are free of duty or of variable export and import levies and excises (except value added taxes on imports). The same holds in the case of OP if the contractors relinquish tariff privileges (customs are only to be paid on the added value when the products return to the country of the contractors). So it will become more and more difficult to analyze the development of OP in Eastern Europe considering the fact that tariffs and thus customs declarations will be reduced step by step within the next few years when the Interim Agreement which is the trade component of the Europe Agreements will come into effect. Furthermore, transactions of goods with weight or value below the statistical threshold fixed by the reporting member states are excluded.

remains quite fragmented, although each element of the chain is highly dependent on all others.

The increasing importance of trade flows effected by OP traffic is reflected by their growing share in total trade. In 1993 the EC exports for OP to Eastern Europe plus the EC imports after OP from Eastern Europe contributed 14.3 percent to two-way trade between the EC and Eastern Europe; in 1989 the share was 8.6 percent. Regarding only the EC imports after OP,<sup>6</sup> which are identical to the exports of the eastern European countries to the EC, the growing impact of OP on the current account becomes even clearer (Table 11): almost 18 percent of the EC's total imports from Eastern Europe in 1993 were due to OP (one tenth in 1989). The higher share in total imports (compared to two-ways trade) can be mainly explained by the value adding activities in the form of assembling or refining products. By definition EC imports after OP should significantly exceed EC exports for OP although for several reasons the two figures are not strictly comparable.

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<sup>6</sup> For further investigations one could use data either on EC exports for OP or on EC imports after OP. We decided to use imports for the following reason: exports for OP concern many different industries and give no evidence about the branches involved in the participating eastern European countries. They describe the components needed rather than the actual production. Imports after OP give clearer evidence about the industry concerned and are normally concentrated on fewer branches, which facilitates interpretation.

Table 11 – EC Imports after Outward Processing from Central and Eastern European Countries by Commodity Groups 1989–1993

CN- No.	Commodity Group	Mill. ECU					Share in total imports (p. c.)				
		1989	1990	1991	1992	1993	1989	1990	1991	1992	1993
	Total	1,252	1,549	2,190	3,004	3,604	10.3	11.9	13.5	15.8	17.8
	of which:										
16	Meat, fish, crustaceans	11	26	22	39	40	11.7	20.9	14.8	26.2	29.8
42	Leather	22	32	35	40	28	28.6	34.2	30.5	30.9	24.1
61–	Clothing,										
66	footwear	891	1,127	1,611	2,143	2,699	61.6	64.1	66.5	66.0	68.7
84	Machinery	47	51	107	106	81	8.3	7.0	10.6	9.2	6.7
85	Electrical engineering	33	44	115	235	284	8.4	8.7	18.6	27.3	23.0
87	Road vehicles	51	42	44	93	60	14.0	13.4	9.0	10.4	5.6
94	Furniture	152	160	130	139	167	26.5	27.1	16.4	13.7	13.9

Source: Eurostat (CD-Rom); own calculations.

The significance of OP for central and eastern European countries as a means to participate in integrated international production becomes obvious by taking a look at the shares of the EC imports due to OP to total EC imports from respective countries (Table 12). In 1993 the shares of each of the countries under review were in the range from one tenth up to almost one third. For Romania, e.g., OP has become a decisive factor for extending trade relations with the EC: almost 30 percent of the country's total exports to the EC stemmed from OP activities. But also in Poland, the country with the largest amount of OP in 1993, exports due to processing turned out to reach almost 20 percent. For all the respective countries this share has risen notably since 1989.

Table 12 – Share of Imports after Outward Processing in Total EC Imports from Central Eastern European Countries 1989 and 1993

Countries	1989	1993
Poland	9.0	18.5
Czech Republic	5.5 <sup>a</sup>	12.3
Slovakia		13.4
Hungary	16.3	20.2
Romania	12.8	29.8
Bulgaria	4.4	13.6
Albania	3.8	24.8
<sup>a</sup> 1989 Czechoslovakia.		

Source: Eurostat (CD-ROM); own calculations.

According to an earlier suggestion (UNIDO, 1974) OP can be sub-divided into three categories: capacity OP, cost saving OP, specialized OP.

In the first category, the contractor intends to use the capacities of the subcontractor as a buffer. Subcontractors are considered as „stand-by capacity“. For instance, seasonal fashion changes require extremely fast producer responses. However, although increased market volatility is a strong incentive for OP, it is obviously by far not the major factor in the reasons for contracting. Given the huge wage differentials it is more likely that contractors are, above all, interested in cheap labour. It is not surprising that most of the OP is undertaken in labour-intensive industries, especially in clothing and footwear (Table 11). These two branches still account for almost 70 percent of total OP for the EC countries in Eastern Europe. The extreme pressure which western European producers are facing by third world exporters put them into a position where the decision for OP

was a decision for survival. OP is a way of cross-subsidization of expensive domestic production by cheap foreign production.

However, during recent years also an increase in OP has been observed in capital- and research-intensive industries. Especially affected are machinery and electrical engineering as well as road vehicles. Besides accelerated technical change, these branches have experienced increased international pressure, too. By and large, OP in these industries still concerns those types of goods where the production process is already standardized and where research work is not necessarily linked to production. Probably, most of these projects are undertaken to assemble parts and components. Frequently, OP in these fields is also influenced by cost considerations. The main criteria is to put to outside supply those parts and components which are too expensive to be made in-house but which a specialist supplier can produce more cheaply (Thoburn, Takashima, 1992). Specialists are not only operating with lower overhead costs. As against generalists, they are also better prepared to improve their skills. It is remarkable enough that in recent years a rapidly growing number of companies in transition countries, formerly mostly subcontractors for western producers of low-price clothing, footwear, furniture and other consumer goods, have found their way into the sourcing networks of producers of sophisticated goods. This indicates that they have been

able to make progress in improving product quality according to the high requirements of their western contractors.

Among the transition countries especially the „borderline countries“ Poland, the Czech Republic, Slovakia and Hungary have been participating in OP (Table 13). However, in recent years the Balkan States have been catching up. From this we can conclude that the international integration into OP proceeds stepwise in a double sense: on the one hand from „borderline countries“ to more distant ones and on the other hand from labour-intensive forms of production to capital- and research-intensive forms. Furthermore, there is a clear pattern with respect to sequencing and timing: initially, the less distant countries became a base for removing production, almost exclusively for labour-intensive goods as clothing, footwear and furniture. In recent years, just these countries have been starting as subcontractors for capital- and research-intensive goods as machinery, electrical engineering and road vehicles. The more distant countries, too, became integrated in OP. They also started with labour-intensive forms of production but are not yet integrated in processing more „sophisticated“ goods.

Table 13 – EC Imports after Outward Processing from Central and Eastern European Countries 1989 and 1993 by Commodity Groups (Mill. ECU)

CN- No.	Commodity Group	Poland		CSFR	Czech Rep.	Slo- vakia	Hungary		Romania		Bulgaria		Albania	
		1989	1993	1989	1993	1993	1989	1993	1989	1993	1989	1993	1989	1993
	Total	348	1,398	142	598	156	423	796	326	502	23	129	4	26
16	of which: Meat, fish, crustaceans	11	34	0	0	0	0	0	0	3	0	3	0	0
42	Leather	5	10	3	5	1	13	8	1	3	0	2	0	0
61-66	Clothing, footwear	269	1,106	57	290	121	314	589	226	455	22	114	4	25
84	Machinery	7	10	6	51	2	29	19	4	1	0	0	0	0
85	Electrical engineering	3	31	3	113	5	27	122	0	7	0	6	0	0
87	Road vehicles	2	14	40	21	15	8	8	0	3	0	0	0	0
94	Furniture	38	106	7	21	6	13	11	92	22	0	0	0	0

Source: Eurostat (CD-ROM); own calculations.

The growing importance of OP in machinery, electrical engineering and automobile industries is also the result of technological change which has pushed the fragmentation of the production process and the standardization of inputs. This helps potential subcontractors in these industries to establish themselves as typical „screw-driver companies“, producing components and assembling parts. However, often relocation of such types of production is the first step in exploring new areas for further engagements such as undertaking a joint venture or other equity commitments. A good example is the Škoda-Volkswagen joint venture in the Czech Republic, which has been a forerunner for those activities (Sander, 1994). The same probably holds for OP in Poland, where FIAT has established important co-operations.

Interesting, if not to say counter-intuitive, is the shift in OP of furniture from Romania to Poland. Whereas in 1989 Romania was the main processor of furniture, in 1993 it was Poland. Romania's furniture exports declined dramatically while its clothing and footwear exports increased significantly. So far, there is no convincing explanation for this development.

Another interesting phenomenon catches the eye when looking at OP activities from the perspective of the deeper divided CN 4-digit-level (Table 14). Whereas within the labour-intensive industries such as clothing and footwear the processing of the single product-subgroups (e.g. overcoats or jackets) is quite



evenly distributed among central and eastern European countries, the capital- and research-intensive industries display a pronounced country-specific specialization pattern, where one country effects the bulk of OP for one single product group. The Czech Republic, e.g., is the only processor for typewriters (CN 8469) and for records and tapes (CN 8524), and virtually the only processor for sewing machines (CN 8452), for microphones (CN 8518) and for electrical capacitors (CN 8532). Hungary is almost the only processor for air and vacuum pumps (CN 8414) as well as for moulding boxes for metal foundry (CN 8480). Poland is more or less EC's only partner to process special purpose motor vehicles such as lorry-mounted cranes, fire fighting vehicles or road sweepers (CN 8705), while Slovakia is virtually the only processor for motor cars (CN 8703). This extreme country-specific specialization can hardly be explained by comparative advantages. Frequently, the heritage of the historical specialization pattern among the Comecon may account for this structure. There may be also historical links between several eastern and western European enterprises which have been expanded nowadays. In some cases the existence of single large-scale projects of foreign investors may be responsible for being a subcontractor as in the case of Volkswagen's engagement in Slovakia.

Table 14 – EC Imports after Outward Processing from Central and Eastern European Countries by Selected Commodity Groups 1993 (1,000 ECU)

CN-No.	Commodity Groups	Poland	Czech Rep.	Slovakia	Hungary	Romania	Bulgaria	Albania	Total
84	Machinery of which	6,078	49,052	1,243	12,036	185	713	0	69,307
8406	Steam turbines	317	4,454	0	0	0	0	0	4,771
8414	Air or vacuum pumps	12	163	0	4,096	0	0	0	4,271
8448	Special auxiliary machines	13	1,237	273	0	0	80	0	1,603
8452	Sewing machines	19	12,875	6	303	100	0	0	13,303
8469	Typewriters	0	4,446	0	0	0	0	0	4,446
8473	Parts for a special type of machine	40	14,289	6	68	0	140	0	14,543
8480	Moulding boxes for metal foundry	24	665	0	3,000	0	0	0	3,689
85	Electrical machinery of which	21,531	96,560	5,342	101,249	6,561	5,653	0	236,896
8507	El. accumulators	12	2,761	9	4	0	0	0	2,786
8509	El.-mech. domestic appliances	0	5,915	80	815	0	0	0	6,810
8518	Microphones	257	1,460	50	40	0	0	0	1,807
8524	Records, tapes	0	3,825	0	0	0	0	0	3,825
8529	Parts for use in radio-telephony	1,675	56	53	6,031	1	3	0	7,819
8532	Electrical capacitors	0	16,371	0	1,171	0	0	0	17,542
8544	Wires and cables	1,539	14,379	654	62,072	4,754	2,607	0	86,005
87	Road vehicles	13,167	20,124	14,582	7,548	8	9	0	55,438
8703	Motor cars	789	3,067	14,065	112	4	5	0	18,042
8705	Special purpose motor vehicles	5,053	558	0	158	0	0	0	5,769
8708	Parts for cars	1,506	10,623	95	5,078	0	4	0	17,306
8712	Bicycles	480	4,119	0	56	0	0	0	4,655

Source: Eurostat (CD-ROM).

#### **IV Policy Conclusions**

Generally speaking, transition countries see their best chance for prosperity in corporate restructuring and trade re-orientation. In this respect local companies have to make enormous efforts. They have to improve in terms of product quality and product design, marketing and sales promotion, delivery and guaranty times; they have to raise productivity by installing new machinery, reducing and re-designing product lines, introducing new organizational concepts such as lean production and just-in-time production, implementing more flexible production units and cutting overstaff; and, most important, they have to find new customers in both domestic and foreign markets. Given their lack of technological know-how, financial resources and management capacities, they are bound to face a lot of difficulties in achieving these targets. Therefore, many enterprises do rely on strong partners from western countries who can offer what they need to eliminate their deficits: capital, technology, market access, and management skills.

Companies in search of a co-operator basically have two options: they can opt for a stand-alone strategy which allows to operate largely independently, linked to a foreign partner only by contractual arrangements. Or they can choose a strategy which implies a substantial sub-ordination under the governance of a foreign partner. In that case it has to accept that the partner will buy an equity stake in the enterprise. Needless to say that there are manifold forms in between these two

basic ones: e.g., a company can stand alone, but is integrated as subcontractor in the partner's value chain.

Frequently, a stand-alone or a simple integration strategy by contractual arrangements is a promising form of co-operation, because it opens the entry into competitive sourcing and distribution networks of mighty TNCs (Naujoks, Schmidt, 1994). Given the factors determining subcontracting — wage cost differentials, transportation costs, proximity to western markets — enterprises in transformation countries are encouraged to establish such production sharing arrangements. However, there are obviously limits to subcontracting arrangements. Statistics suggest that they concentrate on standardized, less skill-intensive product groups, namely textiles and clothing on the one side and parts and components of machinery and transport equipment on the other side. They are less common in the field of skill-intensive and R&D-intensive products — because of the need to sustain high quality standards, to maintain an uninterrupted flow of supply and to keep firm-specific knowledge under ownership control. In that case an equity engagement is the appropriate form of co-operation.

Literature suggests that equity engagements mainly occur in order to internalize the gains arising from certain monopolistic advantages. One of the most important advantages of TNCs from developed countries is technological superiority. It provides them with a powerful edge on their potential partners in less developed

countries. According to the product cycle hypothesis this edge is best exploited by exports first and later, when standardization takes place, by allocating production internationally (Dunning, 1977). However, the form of technology transfer largely depends on the type of technology. In general, TNCs in high-tech sectors tend to exploit commercially valuable technologies mainly internally by FDI. In high-tech sectors foreign production is often linked to other operations of the TNCs such as applied research activities, procurement production, sourcing, or marketing and sales promotion.

Enterprises in transition countries should recognize that the major route for international technology transfer is IFT — trade within the networks of TNCs. Therefore, frequently only a JV with a western company might give access to advanced technologies.

This paper provides some evidence that western TNCs operating in transition countries make an important contribution towards increasing and diversifying trade. The FDI-IFT nexus seems to be relatively strong in R&D- and skill-intensive industries. These industries are more export- than import-intensive, and the value added content of their exports is high compared to labour-intensive industries. Insofar, the benefits from the operations of western TNCs for the transition countries are evident.

Becoming members in global internal networks of TNCs should therefore be central to the developing strategies of enterprises in transition countries:

- In the traditional open market economy the competitiveness of an enterprise has been determined by their own strength depending on locational advantages.
- In the emerging integrated production economy the competitiveness of an enterprise stems from the common strength of partners resulting from combined locational-, ownership and internalization advantages.

More generally, in the integrated production economy only those companies can survive which are able to organize production internally.

In-depth international integration, however, has important implications for national policy. As far as the international economic order is based on the existence of sovereign states, national sovereignty can give rise to severe conflicts. The most crucial issue is probably the parent-affiliate rivalry in respect to the distribution of gains. TNCs operating in different countries throughout the world are concerned to maximize their rates of return at global level. National governments and local enterprises, on the other hand, are concerned to maximize gains within their own boundaries. The crux of the matter is that there is no satisfactory solution to this conflict. In a world of perfect capital markets ruled by the „law of one price“

a problem such as this would not exist. In this respect internalizing gains by transfer pricing always indicates that markets are far from being perfect. Especially markets in transition countries are often regulated to a great extent, namely by restrictions on profit repatriation. Streamlining capital market regulations, customs duties and tax rates can be the guidelines for a constructive policy.

**Annex:**

**Case Study: The Styl Clothing Factory Ltd. — A Hungarian Joint Venture Firm<sup>1</sup>**

Styl Clothing Factory, Hungary's leading producer of ladies' and men's clothing, was founded in 1952 as a co-operative. In 1989 it was transformed into a corporation and afterwards privatized step by step to a consortium of several foreign clothing producers as well as institutional and private shareholders. Some of today's investors have been commissioning partners of Styl already since the early 1980s. The largest shareholder is the Hans Bäumler GmbH, a German producer of outerwear, who runs several production units in Germany and other countries (Table A1).

The initial equity capital of the company in 1989 was 245 mill. HUF. It was raised mainly by investments and re-invested profits of the foreign owners up to 1,180 mill. HUF by the end of 1993.

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<sup>1</sup> The material was taken from a case study by Belá Lakatos and Gábor Papanek (1994).



Table A1 –Ownership Structure of the Styl Clothing Factory Ltd., May 1994

	Percentage of Shares
Hans Bäumlér GmbH (Germany)	43.5
Österreichischer Kreditverein (Austria)	25.2
Rösner GmbH (Germany)	11.4
Hans Bäumlér private (Germany)	8.5
Others	11.4
Note:	
Total foreign owners	97.4
Total Hungarian owners	2.6

The intention of the new owners, especially of those from the clothing industry (besides Bäumlér and Rösner the British Maitland Ltd. holds a small minority of shares), has been to relocate parts of their domestic production to foreign factories operating at lower costs. For this they modernized and extended production capacities, introduced new production procedures, improved product quality and re-organized marketing and sales activities. And they changed and upgraded the product structure: the leading products are now men's jackets and ladies' blazers, one of the most complex clothing operations.

Styl is now fully integrated in the production and sales networks of Bäumlér, Rösner and Maitland. 80 p.c. of the company's total production are exported, only 20 p.c. are sold in the domestic market (Table A2). Deliveries to the three producing partners account for about 60 p.c. of overall exports. Interestingly, export sales are almost completely based on commission work (1993/1994: 99 p.c.).

Besides Bäumlér, Rösner and Maitland, who hold a share of 50 p.c. in total contract work, there are some smaller customers from the USA, Italy and France (Table A3). However, there is an obvious tendency towards internalizing Styl's activities: the share of the owner firms in total contract work is rising.

Table A2 – Sales Structure of the Styl Clothing Factory Ltd. 1989–1994  
(mill. HUF)

	1989	1990	1991	1992	1993	1994 <sup>a</sup>
Total sales	1,043	1,246	1,570	2,046	2,211	1,200
of which:						
Domestic sales	79	140	143	298	358	182
Exports	628	761	1,163	1,532	1,501	745
of which:						
Contract work	379	605	982	1,194	1,483	735
Other activities <sup>b</sup>	336	345	264	215	352	273
Note:						
Profits in p.c. of total sales	13.1	19.5	23.4	22.6	11.3	8.5

<sup>a</sup>1st half year. – <sup>b</sup>E.g. sales of finished products imported from Asian countries.

Table A3 – Contracting Partners of the Styl Clothing Factory Ltd., 1st Half Year 1994

	Percent
Hans Bäumlér GmbH (Germany)	35.4
Maitland Ltd. (UK)	7.3
Liz Clayborn (USA)	6.1
Rösner GmbH (Germany)	6.1
Mast (USA)	3.8
Escadà GmbH (Germany)	3.6
Globe (Italy)	3.9
Max Man (Italy)	2.9
Patrice (France)	1.7
C & A (Germany)	1.1
Note:	
10 largest customers	71.0

At first glance, the high share of contract work in total sales seems to be surprising. It is, however, the result of the EC's outward processing relief arrangements which allow EC goods to be temporarily exported from the EC customs territory for the purpose of further processing or assembling. Even though, contract work seems to be beneficial to both parties:

- The benefits accruing to Styl are that capacities are contracted and sales are guaranteed. There are no risks and costs of modelling and storage. The base materials required for production are delivered by the partners, who also provide modern technology. The products can be sold under brand names which are well established in the markets.
  
- The benefits that accrue to the producing partners are that they together hold the majority of the company. As investors, they are interested in long-term profitability of the entire company. Their interests — good quality products at low costs — are efficiently enforced. Identical technical standards in all production units of the partners ensure identical high quality of all outputs.

However, there are also some risks for Styl. The company has become completely dependent on its foreign partners. Its local managers are afraid that the company will lose its own profile. Important functions such as research and development, logistics, marketing, sourcing and financing have already disappeared.

Until now Styl has operated in the black. The investments provided by the foreign partners facilitated further development in the already high technological standard of the company. It has been able to make huge investments, partially financed by profits (Table A4). Styl now belongs to the leading enterprises in the world's ready-to-wear clothing industry.

Table A4 – Investments by the Styl Clothing Factory Ltd. 1991–1994  
(mill. HUF)

	1991	1992	1993	1994 <sup>a</sup>
Total investment	206	240	316	189
of which:				
Machinery	130	150	256	99
Note:				
Investment				
in percent of				
total sales	13.1	11.7	14.2	
total profits	55.9	51.7	126.4	
<sup>a</sup> Planned.				

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