

Foreign Direct Investment and Central Europe's Reintegration into Global Economy^{•/}

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Summary: FDI have dramatically impacted trade patterns of Central Europe and mode of integrating into global markets. Thanks to FDI, CEEC-10 have moved from inter-industry trade, characteristic of their central planning era, to intra-industry or intra-product trade, as network trade is often referred to. FDI have helped close the initial gap between endowments in high skilled labor and export baskets driven by unskilled labor intensive products. They have also been instrumental in incorporating several Central European economies into a new global division of labor based on production fragmentation and organized around large multinational corporations' supply networks ('MNC-driven' network trade). Countries with larger stock of FDI in manufacturing have also been more involved in network trade.

Although the issue is not directly addressed, trade analysis (the fall in import intensity of MNC-driven network trade) suggests that FDI inflows have produced positive spillover effects through backward linkages. Efficiency-seeking investments, dominant during the later stages of transition, have not only triggered 'sequential investments' but also have been increasingly incorporating domestic firms into their supply chains.

Key terms: production disintegration, networks of production and distribution, transition economies, industrial restructuring

JEL: F1, F14, F15, F19

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1. Introduction

Following the collapse of central planning in 1989-91 in Central Europe (hereafter CEEC-10¹), the prevailing commentary about the economic prospects of Central Europe was that of gloom. Some feared that CEEC-10 would be transformed into periphery of Western Europe, locked in a “North-South” inter-industry type division of labor. The region would specialize in low processed natural resource and unskilled labor-intensive products (see for instance Guerrieri 1995). In consequence, the prospect of a rapidly emerging and prosperous Central Europe would be doomed to failure (e.g., Berend 1995). Few saw their prospects brighter colors, albeit there were exceptions. Hamilton’s and Winter’s study published in 1992 pointing to CEEC-10 likely specialization in intra-industry trade and higher technology goods stood out almost alone. This paper argues that their prediction came true mainly thanks to multinational corporations and foreign direct investments, although, clearly, there were many intervening variables responsible for this outcome.

Reintegration of former centrally planned economies into global markets and their accession to the EU offers a unique vantage point to study the multiple impacts of FDI as well as conditions indispensable for tapping benefits offered by globalization. Central European countries’ successful reintegration into the world economy illustrates the benefits stemming from North-South type of regional policy-induced integration together with regulatory reforms in line with the relevant provisions of the *acquis communautaire*.

The CEEC-10 experience allows for an assessment of the importance of ‘as it should be plugging-in’ into globalization, i.e., based on liberalization of access to domestic markets for goods, services and capital combined with unfettered access to foreign markets. Significant inflows of FDI, i.e., above the ten percent of domestic gross capital formation, followed dramatic liberalization of foreign trade policies and coincided with serious effort to implement structural, second-generation reforms. The EU accession has assured that commitment to liberalization and higher quality business climate was not only credible but implied its irreversibility. Liberalization of foreign trade was the result of Europe Association Agreements, hereafter referred to as the “EU factor,” rather than strong domestic push for liberalization. While the extent of multilateral liberalization varied among CEEC-10, with Estonia and Czech and Slovak customs union pursuing very liberal Most Favored Nation tariff policies, the bottom line was liberalization of

¹ They include new members of the EU—Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, Slovenia—as well as two EU candidate countries—Bulgaria and Romania—scheduled to accede the EU in 2007.

tariffs with the EU accounting on average for around three fourths of CEEC-10 trade in industrial products.

Regional liberalization of trade was not confined to bilateral interaction with the EU. In fact, one of the most significant factors enhancing the region's attractiveness to foreign investment was the transition to a Pan-European market for industrial products organized around the EU. Preferential trade arrangements subsequently expanded into a single Pan-European market for industrial products based on the Pan-European Agreement on Cumulation of Rules of Origin have provided strong incentive to MNCs to establish production facilities in CEEC-10.² The prospect of duty-free access to the future EU-25 and several other European economies combined with the policy framework allowing unfettered distribution of production capacities in the territory of each signatory of the Pan-European Agreement, without worrying about meeting the rules of origin requirements, has created a very attractive environment for MNCs. In a nutshell, the size of domestic market has inescapably lost its relevance.

In consequence, foreign firms knew that conditions in conducting business would continue improving. So would contestability of domestic markets as well as improved access to a Pan-European free trade area for industrial products due to the progressive elimination of tariffs on industrial products by 2002.

While the combination of credible commitment to economic reforms designed to bring domestic regimes in line with the *acquis communautaire* and opportunity to operate in the largest free market for industrial product in the world would be sufficient to attract attention of multinational corporations, cultural and geographical proximity as well as privatization unprecedented in its scope and pent-up demand for consumer goods added to region's attractiveness. Each of CEEC-10 did receive sizable amounts of FDI, albeit the scope and timing has varied significantly with one important qualification. There was a considerable surge in FDI inflows in 1998-2002—this time period coincides with a growth of certainty concerning the outcome of the EU accession process and the entry in force of the Pan-European agreement on the cumulation of the rules of origin. The latter removed previous barriers to production sharing among countries that previously were not subject to diagonal cumulation of the rules of origin and set the stage for the emergence of the European free trade area for industrial products.

² The so-called pan-European cumulation program—adopted by the EU Council in July 1996—linked twenty nine countries including CEEC-10, Turkey and European Economic Area (EU and EFTA) countries through a system of diagonal cumulation allowing imports in these countries to be treated as local inputs. The Agreement, which went into effect on January 1, 1997, has set the stage for formation of a single European trading bloc as of January 1, 2002.

The removal of trade barriers to production sharing across the Pan-European area thanks to the possibility of using inputs sourced from other Pan-European economies have created environment attractive not only for efficiency-seeking investments but also for more complex network-type integrated production. The latter are driven by international fragmentation of production. In contrast to ‘traditional motivation’ for natural resources or market access seeking investments, these are usually high quality investments by large multinational corporations in automotive and electronic sectors. They create demand for highly skilled labor and often boost local research and development capacities. They are highly sensitive to the quality of business climate and trade facilitation infrastructure including customs procedures.

The remainder of the paper is organized as follows. Section 2 documents the extent and nature of FDI inflows into CEEC-10. Section 4 briefly examines links between technology transfers, FDI and factor content of trade with the EU. Section 5 discusses “MNC-driven” trade resulting from production fragmentation with a special focus on integration into the EU-15 and among CEEC-10 economies. Section 6 concludes.

2. FDI Inflows: who, when and why?

Transition economies received on average more capital inflows in terms of per capita than most developing countries (Garibaldi et al. 2002). Within transition economies there was, however, a significant difference in favor of CEEC-10 over CIS (Commonwealth of Independent States) and Balkan transition economies excluding more recently Croatia. While over 1989-03 all transition economies received US\$ 252 billion in FDI, US\$ 172 billion (or 68 percent of the total) went to CEEC-10.³ Considering that CEEC-10 account for less than half (47 percent) of aggregate GDP of all transition economies and one-fourth of aggregate population, the difference is startling. It can only be attributable to the “EU-factor” and geographical proximity.

The total for CEEC-10 conceals diversity among them in terms of timing and scope of FDI inflows. Three countries dramatically outperformed other CEEC-10 economies during the initial stages of the transition—Estonia and Hungary joined by Latvia in 1994. In terms of FDI inflows as percent of the GDP, its performance in 1992-95 was superior to that of Hungary (Table 1). The share of FDI inflows to Hungary in total FDI to CEEC-10 was between 3-4 times larger than Hungary’s share in total GDP of CEEC-10. So was this ratio for Estonia, although slightly lower at between 2.7 and 3.5. Latvia also attracted more FDI relative to other CEEC economies than its share in regional GDP might indicate.

³ Derived from the IMF Balance of Payments database.

But, because of its size and a large number of entries by foreign companies, Hungary's performance in 1990 -95 overshadowed that of all other economies. Hungary surged ahead of other former centrally planned economies in attracting large inflows of FDI during the early stages of the transition. It was the only recipient of FDI among CEEC-10 in 1990 and it accounted for 80 percent of FDI flows in 1991. Hungary's share in total FDI stock (cumulative net FDI annual flows over 1990-97) in CEEC-10 in 1997 was 36 percent ahead of Poland (34 percent), with the GDP more than twice as high and the Czech Republic (14 percent).

Table 1: *Net FDI inflows in terms of GDP in 1991-2003 (in percent)*

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Bulgaria	0.6	0.4	0.3	0.9	0.6	1.2	4.2	4.2	6.1	8.0	4.7	2.8	4.5
Czech R.	2.4	3.4	1.7	1.8	4.8	2.2	2.4	6.3	11.3	9.6	9.6	11.8	2.7
Estonia	n/a	7.3	9.5	9.2	5.6	2.6	2.8	11.0	4.3	6.3	6.1	2.8	8.9
Hungary	4.0	3.8	6.0	3.2	11.7	7.9	8.1	7.2	7.3	5.1	7.4	4.1	0.6
Latvia	n/a	n/a	2.3	7.6	5.5	7.4	9.2	5.0	5.0	5.6	1.5	3.0	2.7
Lithuania	n/a	n/a	1.1	0.7	1.2	1.9	3.4	8.5	4.5	3.4	3.7	5.0	0.8
Poland	0.5	1.0	2.5	2.3	3.5	3.9	4.0	5.0	6.4	8.3	4.8	3.0	1.9
Romania	0.1	0.4	0.4	1.2	1.2	0.8	3.6	4.8	2.9	2.8	2.9	2.5	3.0
Slovak R.	0.7	0.9	0.8	1.7	1.2	1.5	0.4	1.9	3.6	10.3	7.1	17.4	1.7
Slovenia	n/a	0.9	0.9	0.9	0.9	0.9	1.7	1.1	0.3	0.4	1.9	7.0	-0.5
CEEC-10	1.3	1.8	2.5	2.1	4.1	3.3	4.0	5.2	6.3	6.8	5.6	5.7	2.0

Source: Sources: IMF Balance of Payments Statistics, World Bank WDI database and for the Czech Republic and Slovakia in 1991 and 1992 from *Economic Survey of Europe*, No. 1, United Nations Economic Commission for Europe, New York and Geneva, 1998.

The pace of moving away from central planning and macroeconomic stability alone fails to provide an explanation of Hungary's success. After all, other CEEC-10, except Bulgaria and Romania, had many similar features including the speed of liberalization, endowments of production factors and proximity to EU markets. Why, for instance, did the Czech Republic attract less FDI in 1990-97 despite lower inflation, debt stock and more advantageous geographical location? Or, why did Poland with much stronger GDP growth performance and GDP two-three times larger attract less FDI than Hungary?

The short answer is that Hungary was immensely successful in turning its liabilities into assets. First, Hungary was saddled with a huge international debt at the outset of its full-fledged transition to competitive markets, but in contrast to Poland, it had never sought rescheduling nor had it defaulted in its payments to private or public creditors. Earlier dealings with international financial community helped Hungarians develop considerable financial management and negotiating skills. Therefore, despite heavy indebtedness, Hungary was perceived as a reliable and creditworthy partner as well as a country that moved farthest away from central planning before its collapse. Since perceptions matter, albeit not alone, it emerged as the first post-communist country attractive to foreign direct investors.

Second, high indebtedness combined with a policy decision not to reschedule the debt brought about a quick change in policy attitudes towards FDI and gave an extra incentive to establish a relatively transparent legal system, with the privatization policies favoring sales to the highest bidder, no matter whether domestic or foreign. There were no lengthy national debates over alleged dangers of foreign penetration (as in the Czech Republic or Poland), and Hungary was the first to open the so-called strategic sectors (banking, telecommunications, energy and utilities) to foreign investors (Kalotay and Hunya 2000). Hungary not only began moving earlier in large scale privatization but its Hungarian Privatization and State Holding Corporation had consistently sought foreign strategic investors. By 1995 almost 50 percent of large state-owned companies were bought by foreign investors (Sass 2004). The choice of privatization method gave Hungary huge competitive edge over two other fast reformers—Czech Republic and Poland, who chose different approaches.⁴

As other CEEC-10 began catching up with second generation reforms and saw privatization as an opportunity to attract FDI, the 1998-2002 period witnessed significant increase of FDI flows across CEEC-10 with a notable exception of Slovenia.⁵ The surge coincided with two major events in EU-CEEC-10 relations. First, the Luxembourg EU Council meeting in 1996 invited five among CEEC-10—Czech Republic, Estonia, Hungary, Poland, and Slovenia—to begin accession negotiations. Second, the Pan-European Cumulation of Origin Agreement, which promised to establish by 2002 a single European free trading bloc for industrial products, entered into force in 1997. While prior to the Agreement there were several free trade areas in Europe organized around the EU, the Agreement has established a common relationship fostering trade between these free trade areas through common set of rules of origin. Both events made Central Europe an attractive area for foreign investment. In addition, Bulgaria and Poland successfully completed negotiations with London Club private creditors, which opened their access to international private financial markets.

The prospect of accession contributed to the change in domestic policies as well as acceleration in structural, second generation reforms, leading to significant convergence in domestic business climate. Some countries excluded from the first groups of invitees to launch accession negotiations in 1996, most notably Slovakia, Bulgaria and Romania significantly revised their privatization programs and returned on the reform path. Hungary's opening of so-

⁴ The Czech Republic chose mass privatization based on vouchers that kept out foreign investors. Poland, in turn, opted for hybrid solutions and moved slowly in privatization of large state-owned enterprises.

⁵ While the discussion of deeper reasons of Slovenia's poor performance in terms of attracting FDI goes beyond the scope of this paper, the bottom line is that its privatization program had favored insiders, and foreign buyouts were only exceptional during the first phase of privatization.

called strategic sectors, banking and telecommunications, in 1995 to foreign investments prompted similar moves in other CEEC-10 economies. In consequence, the variation in progress in transition significantly declined, as other countries were catching up with leaders in structural reforms.

The combination of these developments has led to the increase in FDI, with the achieved progress in economic reforms emerging as a major variable explaining the variation in flows to CEEC-10 economies. Consider that while in 1993-95 the value of correlation coefficient between cumulative inflows of FDI per capita and the progress in economic transition as reported in Transition Reports annually published by the European Bank for Reconstruction and Development was 60 percent, it rose to 82 percent for 1993-2000 and 86 percent in 1993-2003. Considering differences in GDP per capita and the size of economies in terms of population, this is a surprisingly strong positive correlation between reforms and FDI inflows. Its lower value for 1993-95 can be explained by relatively low FDI inflows to three initial radical reformers: Poland due to the unresolved servicing of its private foreign debt, the Czech Republic and Slovakia due to the choice of the mode of large scale privatization that deliberately excluded foreign investors. Poland's agreement with the London Club, the change of government in Slovakia in 1998 and of policies towards foreign investors in the Czech Republic in response to negative GDP growth in 1997-99, they all appear to have contributed to even larger correspondence between FDI inflows and steps forward in transitioning to a modern market economy. Furthermore, Bulgaria and Romania, after almost a decade of aborted reforms, have undertaken serious effort prior and after the EU decision to begin accession negotiations with these countries in December 1999.

In consequence, the positive link between progress in economic reforms and FDI flows has become even stronger corroborating findings of empirical research showing that liberal reforms provide a more powerful explanation of variation in FDI flows to former centrally-planned economies than to other developing countries,⁶ although there are many other factors involved as the early success of Hungary illustrates. Positive correlation between cumulative FDI inflows per capita over 1993-2003 and the aggregate progress in reforms over this period of 86 percent is astonishingly high.

To sum up, three observations can be made. First, during the early stages of transition, only a few among CEEC-10 economies attracted FDI flows. Hungary stood out among them. In 1997-2003, other CEEC-10 economies began catching up. Poland, accounting for around one

⁶ See, for instance, Garibaldi et al. (2002), Broadman et al. (2004).

third of an aggregate CEEC-10 GDP, became the largest recipient of FDI taking about one third of FDI flows to CEEC-10.

Second, with the prospect of accession and a pan-European free trade area for industrial goods looming large on the horizon and larger progress in economic transition across CEEC-10, there was a significant increase in FDI inflows. The FDI stock doubled between 2001 and 2004 in new EU member states reaching around US\$ 250 billion or 36 percent of the GDP (Hunya and Sass 2005).

Third, the variation in FDI flows significantly declined and increasingly reflected differences in the size of countries in terms of the GDP. The shares of individual countries in regional FDI annual flows have moved closer to their respective shares in regional GDP, albeit with some exceptions. Slovenia, saddled with legacies of Yugoslav workers self-management model, has not reformed its corporate law to make investing in Slovenian equities attractive to foreigners and its share in FDI was on average at 28 percent of its share in regional GDP, albeit it grew to 38 percent in 2002-03. In these terms, Romania also significantly underperformed, whereas Estonia, Czech Republic and Hungary were receiving significantly larger FDI than their respective shares in regional GDP would imply. Relative to the GDP, Czech Republic and Slovakia were most successful in attracting FDI in 1999-2003, with an average FDI in terms of GDP of 8 percent and 6 percent respectively.

3. From market-seeking to efficiency-seeking and network-type integrated FDI

Market seeking was the dominant motive of FDI in most CEEC-10 in the aftermath of the collapse of central planning. Coca Cola and Philips Morris were usually among the first entrants taking advantage of pent-up demand for their goods. Several studies have demonstrated that local market size was the primary motive of foreign investors and factor costs played only a secondary role at the beginning of the transition process.⁷ There was little natural-resource seeking FDI, given the relative lack of natural resources in these countries. In the second half of the 1990s, beginning with a 'Big Privatization' of 1995 in Hungary, market-seeking investments focused on services whereas investments in manufacturing were increasingly efficiency-seeking. In contrast to market-seeking FDI, these do not substitute trade but stimulate it.

More than a half of total inward FDI in CEEC-10 went to the services sectors; the remainder went to the manufacturing, while FDI in extractive sector and in agricultural activities was negligible. FDI flows to services sectors increased in the late 1990s. According to the figures from national central banks and investment promotion agencies, services share in FDI stock

⁷ See Lankes and Venables (1996) and Lankes and Stern (1998).

ranged from 51 percent in Hungary to 78 percent in Estonia. FDI inflows in manufacturing varied from a minimum of 17-18 percent in Latvia and Estonia to a maximum of around 50 percent in Hungary and Slovakia.

Large inflows into service sectors have been a result of privatization of the financial sector, telecommunications and utilities. Around 20-30 percent of FDI went to two sectors—banking, and transport and telecommunications. The financial intermediation sector was the largest recipient of foreign direct investment in Estonia, Slovenia and Slovakia. This sector attracted about 23 percent of total FDI inward in Slovakia, 25 percent in Slovenia, and 28 percent in Estonia. Similarly, financial intermediation and real estate and other business activities accounted for 10 and 13 percent of FDI stock in Hungary, respectively, and for 14 and 16 percent in the Czech Republic. Another distinctive feature of FDI distribution in the group was the relatively high share of investment in the wholesale and retail trade sector and in transport and telecommunications. Except for Slovenia, where FDI in transport and telecommunications was negligible, their shares ranged from 10 to 17 per cent of the total in other CEEC-10. Retail and wholesale trade combined constituted on average 12 percent of the total. FDI in electricity, gas and water supply sector was much smaller, with the exception of Slovakia where this sector constituted 12 percent of the total stock of inwards FDI in 2003. In Latvia around 80 percent went infrastructure and services, with the modernization of transportation, ports, customs, and so forth having had attracted such large MNCs as Danzas, Statoil, SAS, and Gazprom.

FDI inflows going into service sectors—a natural development and a positive phenomenon—have positively impacted investment climate in CEEC-10. Thanks to the EU accession process, governments' usual temptation to lure investors through granting them monopoly rights or other measures drastically reducing competition has been controlled or addressed in CEEC-10. Bank and insurance companies not only follow their clients to foreign countries, they also attract them. The presence of multinational corporations offering banking, insurance, real estate, and business services has a positive impact on a country's attractiveness for subsequent FDI inflows.

The largest number of investment projects in manufacturing has been attracted to foods, chemicals, motor vehicles, machinery, textiles and electronics or information technology (IT). These six sectors accounted for about 55 per cent of the total number of recorded initiatives in the manufacturing sector. In Baltic States, however, most of the manufacturing FDI was directed to wood processing, paper and furniture sectors.

While the nature of FDI varied across CEEC-10, the dominant motive of a growing number of FDI was efficiency-seeking. While some forms of outsourcing do not require capital or

complex technologies (e.g., clothing value chains or some services), others cannot take place without direct involvement of MNCs.⁸ The latter can take two forms: simple efficiency-seeking and vertical integration into global production and distribution networks. The observed phenomenon of production fragmentation has been largely taking place within vertically integrated manufacturing industries, with the automotive industry and electrical industries appearing to have developed the most elaborate global production and distribution networks (Szanyi 2004).

Despite huge differences, both IT and automotive sectors share an important characteristic boiling down to the fact that with the arrival of Information Revolution “one stop shop” industrial structures have practically disappeared. Miniaturization, exponential growth in information processing and storage capacities combined with integration of Internet and imaging technologies have been the major driving forces behind transformation of both auto industry and IT (information and communication technology) sectors worldwide over the last two decades. While several large MNCs coordinating production and marketing activities across the globe have traditionally dominated both sectors, MNCs in both of them have undergone dramatic change over the past two decades. Their common denominator has been either the disappearance or dramatic restructuring of global and vertically integrated firms. Thanks to new technologies making possible to trace parts and components moving through chains of production spread over several countries and continents, vertically integrated firms have been replaced by supply chain structures connected through complex and borderless supply chains. These chains include not only product manufacturing but also the front-end customer contact and support services. They usually consist of several layers including parent companies, subsidiaries and subcontractors.

With liberalization of foreign trade and the removal of barriers to FDI following the collapse of central planning, the indigenous IT and automotive sectors developed earlier had no chance of withstanding pressure from import competition unless taken over and restructured by foreign investors. But the critical part was liberalization and opening up to FDI inflows. Turning previously captive markets into open ones was probably the most important factor. IT sectors in Estonia and Lithuania, on the one hand, and Latvia, on the other hand, offers two contrasting developments showing the importance of FDI. Both countries inherited from the Soviet era a relatively well developed IT industry that used to work for both civilian and also military sector. But while the Latvian electronic sector has practically eclipsed, electronic products have been

⁸ Some East-Asian economies, e.g., South Korea, are an exception to the general rule.

among the best Estonian and Lithuanian export performers, as their firms have successfully integrated into global IT networks (FIAS 2003).

The evidence that success in the IT sector hinges critically on the presence of multinationals has been overwhelming. Firms such as Nokia, Thomson, Siemens, Philips, IBM, General Electric and their suppliers have been present in CEEC-10 that have attracted sizable FDI inflows. Szanyi (2004) provides a compelling evidence of the importance of FDI in the electrical equipment sector, whose products and parts are partly covered by the IT network. The shares of the electrical sector in total manufacturing output were roughly similar in Bulgaria and Hungary at around 8 percent in 1989. In 2001 the share of this sector in Hungarian total manufacturing output rose to 24 percent, while that in Bulgarian output fell to 4.3 percent (Szanyi 2004). The explanation lies in FDI.

Developments in the automotive sector also show that without MNCs' involvement, local firms were doomed to failure. Only those that MNCs took over have managed not only to survive but also to prosper, with the Czech Republic, Hungary, Poland and Slovakia emerging as regional powerhouses (Meyer 2000; Richet 2004).

Furthermore, the entry of large automotive producers has acted as magnet prompting supplying firms to either relocate or establish production facilities locally. This phenomenon often referred to as "sequential investment," can be observed in several CEEC-10 that attracted automotive MNCs. The most compelling is the case of the automotive sector in the Czech Republic and Slovakia, as many suppliers moved to be closer to their customers in both countries as well as in nearby Germany. Volkswagen Slovakia has attracted many foreign investors stimulating production of electrical equipment, machinery, metallurgical products and industrial chemicals. SAS Automotive, a fully-owned subsidiary of SAS Autosystemtechnik GmbH (a joint-venture of Siemens Automotive and Sommer Allibert Industrie AG) established in Bratislava in 2000, is closely integrated with Volkswagen supplying the German manufacturer with complete assembled cockpits consisting of dashboards, electronic components, air-conditioning, airbags, steering rods and pedals (Javorcik and Kaminski 2005). The 2.6 billion VW investments in Skoda Auto in the Czech Republic, following the 1991 privatization, has attracted both other global motor vehicle producers (PSA Peugeot, Toyota) and large international firms specializing in automotive parts and components. They have quickly followed either through purchasing and modernizing local firms to perform multiple operations or

undertaking Greenfield investments. More than half of the Top 100 World suppliers of automotive parts and components are present in the Czech Republic and Slovakia.⁹

Geographical proximity to Germany, Hungary and Slovakia meant that auto part producers operating in the Czech Republic became suppliers to auto manufacturers in many European countries. The proximity and links to the German automotive industry also explain the largest presence of German-based firms in the sector. Such brand names in automotive components as Robert Bosch or Siemens continue expanding their activities not only in the Czech Republic or Slovakia but also in Poland and Romania. So do firms not only from other EU countries (especially Italy and France) but also from other countries including the U.S., Canada, Republic of Korea and, more recently, from Japan.

Since efficiency-seeking implies relocation as a driving force of FDI, i.e., movement of capital in search of locations assuring highest profits, the question is whether manufacturing operations have been moving away from CEEC-10. The answer clearly depends on the extent to which FDI firms have developed strong linkages to the host country economy. Since this requires time and effort, these firms would be less likely to leave as the move would be associated with the cost of building new supplier networks. The experience of Hungary seems to suggest that FDI firms are well domestically integrated. Hunya and Sass (2005) collected press information for the period between July 2003 and September 2003 about announced corporate decisions to move out part or whole operations from Hungary. They have identified eight clear-cut cases of re-location from Hungary of which six were to other CEEC-10—Romania (3 cases) and Latvia, Poland and Slovakia. The remaining two involve re-location to Austria and Ukraine. Assuming that the experience of Hungary can be generalized, one suspects that re-location is not as yet the problem that Central Europe would have to confront.

4. Shift to skilled labor and capital intensive exports

The fundamental reason for a foreign firm to establish presence in a country is an assessment as to its ability to take better advantage of resources available locally thanks to its superior technology and know-how. CEEC-10 share similar features in terms of endowment in factors of production: they all have temperate climate, available land for agricultural production and relatively highly educated labor force. By the same token, one expects that FDI would focus on activities with potential comparative advantage, that is, skilled labor intensive manufacturing. The analysis conducted solely through factor intensities as revealed in foreign trade corroborates

⁹ For more details, see *The Auto Parts Market*, U.S. & Foreign Commercial Service and U.S. Department of State, Washington, D.C., 2002.

results of firms' surveys pointing to the creation of highly skilled jobs in CEEC-10 (See for instance, Marin 2004).

Foreign-owned firms shape exports in most CEEC-10 economies. Considering prolonged periods of time with annual inflows of FDI in the range of between 5 and 30 percent of gross capital formation as well as increasing presence of efficiency-seeking FDI, this should come as no surprise. While this ratio, average for 1990-96, exceeded 10 percent only in Hungary (23 percent), Latvia (15 percent) and Estonia (11 percent), the minimum value for averages over 1996-2003 was 15 percent (Hungary and Poland) and the maximum was 30 percent (Bulgaria and Czech Republic). Similar inflows over a five-year period led to dramatic changes in the composition and magnitude of exports from Hungary in 1996-97 (Kaminski and Riboud 2000) and more recently from Poland in 1999-2000 (Kaminski and Smarzynska 2001). The evidence available indicates that a considerable share of FDI went to export-oriented operations, with foreign-owned firms accounting in many countries for well over half of total exports thus determining to a large extent countries' factor intensities revealed in their exports.

Table 2 presents the change in factor intensities—natural resource, unskilled labor, skilled labor, capital¹⁰—in Hungarian exports to the EU in 1989-97. Two observations are noteworthy. First, in defiance to Hungary's endowment in production factors, the main drivers of Hungarian EU-oriented exports in 1989-93 were unskilled labor intensive products. Considering Hungary's endowment in highly skilled and relatively cheap labor force—one would expect an expansion based on skilled labor intensive. The difference between the 1989 and 1993 export baskets was significant, with labor intensive products growing from 32 percent to 42 percent. But contrary to expectations, unskilled labor drove the change. Thus, some distortions inherited from the 'socialist' past disappeared,¹¹ but other emerged

Second, the shift in drivers of EU-destined exports was rather astounding. The share of unskilled labor intensive products was consistently falling in 1994, while that of capital intensive products followed by skilled labor intensive products were dramatically expanding. Note that the value of exports more than doubled between 1993 and 1997 while that of capital and skilled labor

¹⁰ Natural resource and unskilled labor intensive groups represent lines of production largely characterized by low value added, high natural resource-intensity and simple technologies. For countries at the lower end of the industrial scale such products account for a dominant share of exports. While the line dividing the skilled labor- and capital-intensive groups is fuzzy, they both contain products requiring more sophisticated inputs than found in the first two groups. We use EU import statistics, because of low quality of foreign trade data before and aftermath of the collapse of central planning. For a definition of products in terms of factor content and more detailed analysis, see Kaminski (2000).

¹¹ Despite low wages, labor intensive products accounted for barely 32 percent in 1989. Low value added natural resource intensive products and unskilled labor intensive products accounted for two-thirds of EU-directed exports in 1989.

intensive products almost quadrupled (3.8 times) during that period. Their aggregate share in EU-destined exports increased from 40 percent in 1993 to 66 percent in 1997.

Table 2: *The Composition of Hungarian Exports to the EU According to Factor Intensities, 1989-97 (in percent and millions of US dollars)*

Factor Intensity	1989	1990	1991	1992	1993	1994	1995	1996	1997	A*/	B**/
Natural Resource	46.2	41.5	39.3	34.1	30.8	28.9	25.1	21.9	16.5	-33	-46
Unskilled Labor	18.8	21.1	22.6	24.8	26.5	23.0	19.2	19.3	17.1	41	-35
Skilled labor	12.9	14.2	13.3	15.7	15.1	17.0	19.1	20.1	22.2	17	47
Capital	19.3	21.1	22.5	23.0	25.3	28.9	34.6	36.9	44.1	31	74
Memorandum:											
EU-oriented exports (million of US dollars)	3,705	4,834	5,799	6,537	5,773	7,260	9,974	11,231	13,398	56	132
Skilled labor and capital	32.2	35.3	35.8	38.7	40.4	45.9	53.7	57.0	66.3	25	64

* / Percent change between 1989 and 1993

** / Percent change during the second phase, i.e., between 1993 and 1997.

Note: the product shares do not sum to 100 because some SITC. four digit categories (all SITC. 9) cannot be classified in terms of factor intensities.

Source: Derived from the UN COMTRADE database as reported by the EU.

The dramatic shift in factor content towards capital and skilled labor intensive products can be easily attributable to FDI. First, abundance of capital implied by the shift was not part of Hungary's endowment in factors of production, while that of skilled labor was. The key to this puzzling development were massive inflows of FDI, as foreign firms brought capital to take advantage of relatively inexpensive pool of skilled labor available in Hungary. Around 40 percent of total FDI cumulative inflows over 1990-96 went to manufacturing (Kaminski, Riboud 2001). FDI accounted on average for 26 percent of gross capital formation in 1991-93 (WDI databank). By 1997, foreign firms accounted for almost two-thirds of total investment and employed around 40 percent of the Hungarian workforce.

Second, the striking acceleration over 1994-97 of exports of engineering products, machinery and capital equipment, responsible for this change, came from foreign owned firms. Second, while Hungarian statistics do not provide data on intra-firm trade, this trade had to be quite significant judging by the presence of large MNCs and a rapidly progressing incorporation of manufacturing capacities located in Hungary into global production networks. The list of top 100 Hungarian companies in 1997 was awash with easily recognizable subsidiaries of MNCs.¹² Among twenty largest firms in terms of sales there were at least six companies that are parts of large MNCs. These include IBM Storage Products (#2); Volkswagen's Audi Hungaria Motor (#6); General Motor's Opel Hungary (7); Philips (#12); General Electric Lightning (#15); and

¹² See the top 100 list in *The Wall Street Journal Europe's Central European Economic Review* (July & August 1998, Vol. VI, Number 6). Compiled by Dun & Bradstreet Hungaria Inc.

Japan's Magyar Suzuki (#16). Many companies are majority owned by MNCs (e.g., a white-goods producer Lehel Hutogepgyar (#39), which is owned by Sweden's Electrolux).

With a delay of around five years, similar patterns of foreign trade could be increasingly observed in other CEEC-10, albeit not in all of them. Unskilled labor intensive products, mainly textiles and clothing, drove their exports directed almost exclusively to the EU during the initial stages of transition. Textiles and clothing have been the quintessential engines of growth for most CEEC-10 in the early 1990s accounting for significant shares of value added and manufacturing employment. Except for Czech Republic, Slovakia and Slovenia, textiles and clothing accounted for more than one fifth of total manufacturing exports in respective peak years (Table 3).

Table 3: *Shift away from clothing: the share of clothing in exports of manufactured goods in peak years and 2004 (in percent and million of US dollars)*

Country	Peak Year	Clothing Share (%) in Peak Year	Clothing Share (%) in 2004	Exports (\$ million) 2004	Index Peak=100 2004	Least Square Growth (%) 1995-04
Bulgaria	2001	37.7	31.2	1,616	83	5.1
Czech Republic	1993	7.4	2.0	858	26	-11.1
Estonia	1993	27.5	7.0	279	25	-10.5
Hungary	1992	20.8	3.1	1,134	15	-15.8
Latvia	1994	22.7	14.6	271	64	-1.5
Lithuania	1999	34.8	19.3	678	56	-4.0
Poland	1993	21.4	4.3	1,834	20	-15.4
Romania	1999	37.1	29.5	5,276	80	0.7
Slovak Republic	1994	8.9	3.3	668	37	-8.7
Slovenia	1992	15.6	3.7	368	24	-12.2

Note: Manufactured goods excluding chemicals.

Source: Computations based on world import data from UN COMTRADE Statistics.

The subsequent fall in significance of textiles and clothing in exports occurred earlier in countries that moved fast in implementing reforms and attracted FDI. For reform laggards—Bulgaria and Romania—textiles and clothing continued driving exports till 2001 and 1999 respectively. While Lithuania's record in transition progress was better, it failed to attract sizable FDI inflows till 1997 textiles and clothing peaked in 1999. With labor cost going up across CEEC-10, many of outward processing operations in the clothing sector moved to other countries in South and Eastern Europe through the 1990s.

The pace of convergence in factor content intensities of trade picked up after around 1996-97. The region as a whole appears to have been moving away from natural resource and unskilled labor intensive products. The share of these products in total exports of CEEC-10 fell from 48 percent in 1996 to 38 percent in 2003.

The shift away from natural resource and unskilled labor intensive production activities was taking place at different pace in CEEC-10 economies that can be indirectly linked to FDI

inflows. Take, for instance, an extreme case of export baskets of Bulgaria and Lithuania moving in opposite direction in 1996-2000 (Table 4). This movement was reversed in 2000-03. While the coincidence does not necessarily point to causation, this change preceded the surge of FDI in 1998-2002 to both countries.

Latvia's performance, similar to that of Bulgaria and Lithuania, is noteworthy, begs an explanation. First, there is an important difference: The fall in the share of skilled labor and capital intensive products in Latvia's exports was due to a larger increase in the share of resource intensive products than the fall in the share of unskilled labor intensive products while the reverse hold for both Bulgaria and Lithuania. Yet, Latvia did not suffer from the paucity of FDI. To the contrary, Latvia began receiving significant FDI inflows already in 1994, with the stock of FDI subsequently doubling every 3-4 years to reach US\$2.6 billion by 2001, a level roughly comparable to that of Estonia.¹³ But in contrast to Estonia, a very small portion of around 17 percent went to the manufacturing sector; and a large portion (at least 42 percent of total FDI over 1994-2001) came from 'other' sources outside OECD and Russia, which often indicates money laundering.

Table 4: Factor content of CEEC-10 exports and imports in 1996 and 2003(in percent)

	Natural resource		Unskilled labor		Capital intensive		Skilled labor		Index: aggregate share of capital and skilled labor intensive products		
	1996	2003	1996	2003	1996	2003	1996	2003	2000		2003
									1996=100	2000=100	1996=100
Bulgaria	34	32	16	30	26	18	15	14	75	103	78
Czech R.	21	13	18	15	30	37	31	36	112	107	120
Estonia	35	33	24	19	21	28	17	19	132	94	124
Hungary	29	13	18	10	28	53	18	22	158	103	163
Latvia	44	51	24	22	14	12	16	14	80	109	88
Lithuania	43	40	20	28	22	18	15	13	83	103	86
Poland	30	21	28	23	19	24	22	30	126	103	130
Romania	21	23	36	40	18	19	17	18	95	108	103
Slovak R.	17	15	15	14	23	22	26	49	135	107	144
Slovenia	16	15	22	18	25	30	36	37	106	104	110
TOTAL	26	19	22	19	24	32	24	30	123	104	128
Exports in percent of imports											
Bulgaria	65	115	162	123	112	46	111	46	48	85	41
Czech R.	68	61	123	126	59	82	99	127	125	107	133
Estonia	94	96	101	119	49	59	42	45	133	86	115
Hungary	86	78	107	94	66	96	67	90	135	105	142
Latvia	107	100	116	86	32	22	46	28	66	99	65
Lithuania	83	94	145	133	64	47	45	41	85	95	80
Poland	77	78	140	132	34	51	64	88	116	126	146
Romania	42	59	170	146	43	45	82	62	98	95	94
Slovak R.	54	63	148	119	62	61	94	158	139	101	140
Slovenia	56	53	138	135	70	81	113	122	102	108	110
TOTAL	70	73	135	125	53	70	80	98	117	108	127

Source: Computations based on UN COMTRADE Statistics.

¹³ FDI amounted on average to six percent of Latvia's GDP in 1993-99, while only 2.5 percent and 3 percent of Bulgaria's and Lithuania's GDP, respectively. For 1998-2002, these averages were 4 percent (Latvia) and 5 percent for Bulgaria and Lithuania (based on data in Table 1).

Despite a significant shift towards higher value-added, capital and skilled labor intensive products, CEEC-10 economies continue to be net exporters of unskilled labor intensive products except for Hungary and Latvia in 2003. Two among CEEC-10 economies—Czech Republic and Slovakia—joined Slovenia by , the highest developed economy, and acquired the status of net exporters of skilled labor intensive products. Furthermore, most of them reduced the gap between imports and exports of capital intensive products.

Taking into account expanded presence and export-orientation of foreign owned firms, their impact on trade patterns has been decisive. One may thus conclude that they tend to employ skilled labor and engage in capital intensive activities in most CEEC-10. These, in turn, are critical to moving up the technology level and catching up with higher developed parts of the EU (Welfens and Borbly 2006).

5. ‘MNC-driven’ network trade and backward linkages

FDI or MNCs have been responsible for incorporating firms located in CEEC-10 into a new global division of labor based on product fragmentation and built around MNC-driven networks. As argued earlier, two vertically integrated sectors representative of this new trend that have led to the disappearance of “one stop shop” industrial structures are automotive and IT. Both appear to have attracted sizable FDI inflows to CEEC-10. Production fragmentation leads to two-way flows of parts and components for further processing and development across firms located in various countries. Historical example of production fragmentation at a regional level is the Canada-United States Automotive Products Agreement of 1965, which, followed by the significant reduction in trade barriers, led to an expansion of trade in auto parts (Jones et al. 2005). This section addresses two questions: the first concerns the links between FDI and network trade; and the second is about the extent to which local sourcing replaced imports of parts and components.

Participation in the division of labor based on production fragmentation in these two sectors hinges critically on the presence of foreign owned firms (see earlier discussion in Section 3 of this paper). As can be seen from data in Table 5, countries with larger FDI stocks in manufacturing sectors tend to specialize and export more of ‘MNC-driven’ network products than countries with lower FDI stock in manufacturing sectors.¹⁴ The value of the coefficient of correlation between FDI stock in manufacturing per capita and network exports per capita was positive and high amounting to 88 percent in 2003. Hungary followed by the Czech Republic had

¹⁴ For identification of product categories in Standard International Trade Classification of automotive and IT networks, see Kaminski and Ng 2005.

both the largest FDI stock per capita as well as the largest network exports per capita (accounting for more than half of network exports of CEEC-10) while Bulgaria and Latvia scored the lowest on two counts.

The delayed privatization and reliance on links to then unreformed economies of Commonwealth of Independent State prior to the Russian financial crisis have been responsible for atypical patterns displayed by Bulgaria and Latvia—two countries with lowest FDI stock in manufacturing per capita. —in terms of value was precipitous in 1996-99. In 1999 the values of their network exports stood respectively at 61 percent and 50 percent of their 1996 levels. Network exports from both Bulgaria and Latvia appear to have been recovering since 1999, although in 2003 the value of their exports was only 12 percent (Bulgaria) and 1 percent (Latvia) above the level in 1996 and 1995 respectively. It appears that capacities inherited from the Soviet era had not attracted foreign capital until the late 1990s. Both countries were quite dependent on former Soviet markets until around mid-1990s (Kaminski and Ng 2005).

Table 5: ‘MNC-driven’ network trade of CEEC-10 and FDI in manufacturing in 1995 and 2003 (in US dollars and percent)

	FDI stock in manufacturing per capita (US\$)	Networks' exports per capita	Share in CEEC-10 networks' exports	Share of network products and parts in manufactured imports	Index 2003 (value of exports)	Share of networks in exports of manufactured goods (chemicals excluded)			Import intensity	
	2003	2003	2003	2003	1995=100	1995	1999	2003	1999	2003
Bulgaria	428	22	0.3%	25.2	112	7.6	4.9	3.9	197	226
Czech R.	1,338	1,391	25.3%	31.3	579	15.5	24.3	34.4	46	43
Estonia	548	844	2.0%	31.5	442	25.1	27.8	29.9	67	54
Hungary	1,694	1,847	33.2%	41.8	1,463	18.1	52.2	53.8	56	49
Latvia	230	32	0.1%	25.4	101	10.9	3.3	4.9	432	261
Lithuania	314	220	1.3%	26.5	349	18.5	13.8	19.1	75	42
Poland	547	275	18.7%	30.2	608	11.9	19.5	26.2	117	52
Romania	262	59	2.3%	18.8	609	4.1	5.7	9.7	149	90
Slovakia	624	1,339	12.9%	34.7	1,102	11.2	30.5	40.5	59	49
Slovenia	824	1,094	3.9%	28.0	165	19.7	21.5	22.0	56	48

Source: Trade figures—UN COMTRADE Statistics. FDI figures—cumulative net FDI inflows 1990-2003 calculated based on data from IMF International Financial Statistics combined with information on the shares of FDI in manufacturing sector taken from various national sources.

The dynamics of this trade has been, however, spectacular by world standards.¹⁵ ‘MNC-driven’ network trade has been the lever of CEEC-10 integration into global markets. Its share in CEEC-10 manufactures (excluding chemicals) exports increased from 19 percent in 1995 to 39 percent in 2003 and in imports from 25 percent to 31 percent. On average around 80 percent of MNC-driven network exports went to the EU-15, with their share in EU-15 external imports of network products rising from 5 percent in 1995 to 17 percent in 2003. The value of aggregate

¹⁵ The share of CEEC-10 in world exports of IT products and parts increased from 0.3 percent in 1995 to 2.4 percent in 2003 and in imports from 1 percent to 2.1 percent; and their share in automotive exports grew from 1.2 percent to 3.9 percent and in imports from 1.9 percent to 3.4 percent.

CEEC-10 network exports increased from US\$ 8 billion in 1995 to US\$ 25 billion in 1999 and US\$ 56 billion in 2003. CEEC-10 as a region has also moved from the status of a net importer to that of a net exporter of network products and parts in 2003 recording a surplus of US\$ 15 billion.

Although there are significant differences in the extent to which individual CEEC-10 have become incorporated into MNC-driven networks, the variation in the shares of network products in manufactured product exports of CEEC-10 economies slightly fell between 1999 and 2003 indicating that other economies are moving in the same direction in a geese-like pattern (Damijan and Rojec 2004). The simple average of shares of networks in total exports increased from 20 percent to 24 percent over this period, with the coefficient of variation falling from 73 percent to 66 percent. While in 1995 the share of network products in manufactured exports exceeded 25 percent only for Estonia, this share was larger than 25 percent in 2003 for four other countries—Czech Republic, Hungary, Poland, and Slovakia (Table 5 above). Countries with a higher share of network exports in manufactured exports also tend to import relatively more of network products and parts in relation to other imported products. This appears to indicate growing reliance on imports in export activities.

However, import intensity of network trade, defined as imports of parts as percent of network exports of both final products and parts, has been falling for most CEEC-10 and in both automotive and IT networks, as exports have been outpacing imports of parts (see Table 6). The decline in import intensity indicates replacement of imports of parts by local production. The apparent shift towards local sourcing can be attributable to the earlier discussed phenomenon of ‘sequential investments,’ i.e., major investor being followed by its suppliers, and the development of backward linkages also to locally owned firms. The international experience shows that availability of local skills and technological progress to adapt techniques used elsewhere are critical to the materialization of significant positive spillovers but only in so far as there is (Lall 1992). It appears that some CEEC-10 had met these requirements.

The international experience, confirmed in firms-level studies in Central Europe, suggests that foreign affiliates increase local sourcing over time, although, not surprisingly, they purchase locally a lower share of their inputs than domestic firms (UNCTAD 2001, p. 134). In Hungary, the supply contribution of Hungarian-registered firms to the production of foreign owned firms rose from 16 percent in 1997 to 21 percent in 1998. In Poland, a sample of some 30 foreign affiliates responding to a 1997 survey reported that three quarters of their inputs were then sourced from local firms, as compared to 65 percent at the time of their establishment in the early 1990s. In the Czech Republic, Volkswagen-Skoda in the mid-1990s was sourcing roughly three-quarters of its inputs from suppliers based in the country. Of Skoda’s 279 registered suppliers,

174 (62 percent) were Czech-owned, 19 were Slovak-owned and 86 were foreign affiliates and joint ventures with firms from the US, UK, Germany, Italy and France. Volkswagen Slovakia has been successful at increasing its sourcing from firms operating in the country, albeit not all of them domestically owned. While in 1997, Volkswagen had only 4 direct and 9 indirect suppliers, this number increased to 30 and 35, respectively, in 2000, with the value of inputs sourced locally rising 36 times during this period (Javorcik and Kaminski 2004). Last but not least, the evidence consistent with the presence of spillovers taking place through contact between multinationals and their local suppliers has been also found in Lithuania.¹⁶

Table 6: *Developments in (A) automotive network and (B) information technology network trade in 1995, 1999 and 2003 (in million of US dollars and percent)*

6. A. Automotive Network								
	Total exports (million of US dollars)			Index 2004 1999=100	Import intensity			Index, 2003 1999=100
	1995	1999	2003		1995	1999	2003	
Bulgaria	0	68	62	91	43	151	284	189
Czech Republic	1,966	4,631	9,049	195	44	35	36	103
Estonia	119	100	319	319	40	70	53	76
Hungary	737	4,979	7,928	159	56	53	47	88
Latvia	50	12	29	240	27	506	370	73
Lithuania	102	96	447	464	24	97	38	39
Poland	1,325	2,660	8,213	309	30	120	42	35
Romania	203	206	753	365	35	93	66	71
Slovak Republic	546	2,031	6,365	313	74	51	44	86
Slovenia	1,161	1,329	1,899	143	35	50	42	84
6. B. Information Network								
	Total exports (million of US dollars)			Index 2003 1999=100	Import intensity			Index, 2003 1999=100
	1995	1999	2003		1995	1999	2003	
Bulgaria	0	27	112	417	124	315	194	62
Czech Republic	485	691	5,144	744	150	123	56	46
Estonia	138	409	820	201	117	66	54	81
Hungary	540	5,414	10,760	199	82	59	50	85
Latvia	23	16	45	276	136	378	191	50
Lithuania	115	129	313	242	45	59	49	83
Poland	405	1,126	2,306	205	168	110	90	82
Romania	14	148	567	382	2124	225	121	54
Slovak Republic	108	333	840	253	191	104	85	81
Slovenia	139	129	250	194	108	118	91	77

Source: Derived from UN COMTRADE Database.

Linkages between foreign and local firms benefit the host country in two ways. First, they make FDU less footloose, as the development of backward linkages with domestic firms entails costs and effort on the part of affiliates and therefore make it more difficult for them to

¹⁶ Javorcik (2004) finds that the magnitude of the effect is economically meaningful as a one-standard-deviation increase in the foreign presence in the sourcing sectors is associated with a 15 percent rise in output of each Lithuanian firm in the supplying industry

divest. Second, there is evidence that the linkages boost the productivity of domestic firms through knowledge spillovers.

To sum up, both information technology (IT) and automotive sectors are at the very core of the new division of labor. Both, as the evidence shows, are clearly 'MNC-driven' networks. Building from scratch a competitive sector in either IT or automotive without external involvement is virtually impossible. Countries that have become significant participants in these networks are also those that have attracted larger FDI inflows.

6. Conclusion

To review the main points of this paper, one can make the following observations. First, FDI have dramatically impacted trade patterns of Central Europe and mode of integrating into global markets. There is a strong positive relationship between accumulated stocks of FDI in manufacturing indicating presence of MNCs and trade performance. Countries that succeeded in attracting FDI have become part of a new division of labor based on production fragmentation. Firms located in several of CEEC-10 have become parts of global production and distribution networks.

Second, FDI have helped close the gap that had emerged during the initial stages between endowments in high skilled labor and export baskets shifting towards unskilled labor intensive products. Earlier recipients of FDI witnessed the disappearance of this dissonance faster than slow reformers. Factor content of CEEC-10 exports has been moving towards skilled labor and capital intensive products.

Third, FDI inflows have not created enclaves within domestic economies. Motives driving FDI inflows have evolved over time from market-seeking and privatization-driven to efficiency-seeking including its higher stage of more complex network-type integrated investments. The pace of moving to more complex forms has depended on the scope of reforms, attitudes to foreign capital and the chosen mode of privatization. Efficiency-seeking investments in particular have not only triggered 'sequential investments' but also have been increasingly incorporating domestic firms into their supply chains.

Last but not least, the developments in their trade appear to have confirmed the opinion that positive impact of FDI hinges critically on high quality of domestic business climate combined with unfettered access to large regional markets. Their experience shows that taking advantage of globalization through FDI depends on liberalization of access to domestic markets for goods, services and capital combined with unfettered access to foreign markets. Participation in network trade often based on just-in-time production and inventory management requires high quality trade facilitation environment and the absence of trade barriers to production sharing. The

EU accession process has paved the way to introduce ingredients necessary for 'just-in-time' production and inventory management, i.e., customs reforms, telecommunications, etc., without which local firms have no chance of participating in MNC-driven network trade as well as led to the emergence of a Pan-European free trade area for industrial products with cumulation of the rules of origin.

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