Globalisation, FDI and Modernising Management Practices

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Introduction: Rethinking the Inevitability of Globalisation

Today's global economy is going through two sets of great changes. The first has been extremely rapid but incremental: the increasingly common expectations of investors, managers, and even consumers in countries and regions with widely varied economic and cultural histories. The forces driving this phenomenon have been the impulse to open new markets or to produce goods cheaper for traditional markets on the supply side of the equation, and new, world-wide media and advertising on the demand side. The mechanism used is foreign direct investment (FDI), which injects capital, a certain amount of managerial and technical know-how, and a certain amount of forced change into a foreign environment.

The second great change is more exceptional and less easy to predict: it is the reaction to the first change and the religion of uniform global capitalism. In Russia and in a number of countries in South East Asia there is now a questioning of whether one path of economic development is indeed right for all. This questioning is the result of the massive failure of market reforms and private investments alone to secure the minimum that is required for social peace and order. Much of this failure, especially in Russia, is the result of domestic institutions repudiating the expectations that international capital brought with it, much as the human body can occasionally reject a transplanted organ.

A number of important lessons learned can be culled from the painful and costly social and economic experimentation performed on Russian society over the past years. First, the faith which conventional economists such as Jeffery Sachs, Anders Aslund, and the entire cabal of multilateral lenders placed on the ability of isolated islands of modern, market-oriented economic activity to reform and 're-incentivise' other parts of society was clearly exaggerated. There was no shortage of mobile telephones and excitement for playing the bourse, and yet vitally important areas such as the rule of law and tax collection could not keep pace with the more superficial changes.

Secondly, the more simplistic variants of the convergence theory of capitalist development, promulgated so heavily recently, seem to have missed the mark with a vèngeance. Russia failed to achieve the benefits of the Polish model, which was prescribed for it throughout the 1990s by any number of $2,000 a day western consultants.

The financial and social crisis in Russia speaks to our lack of understanding of the ability or desire of indigenous actors and institutions to adapt fundamental change on the macro level. Relying solely on the macro level, we would not be able to begin to explain why the transformation processes in Central and Eastern Europe (CEE) have been judged to be more or less successful, while the Russian variant has been proven a painful failure. Reliance on vague cultural explanations is not helpful.

To gain a deeper understanding of the transformation process, we feel that a focus on the firm-level and an examination of FDI in particular, holds the most promise in revealing prospects – and potential indigenous barriers – to the adaptation of modern, international systems.

In this chapter, we utilise the CEE region, and Hungary in particular, as a case study to demonstrate some of the possibilities and limitations of FDI as an engine of growth and modernisation.

Foreign Direct Investments: Short Overview and Hypothesis

Although there are a number of perspectives on globalisation, we would agree with Martin (1998) when he suggests that it is 'multi-faceted and continuing, not an outcome; the process is advanced in some facets, and retarded in others. This globalisation process is countered by a contrary process of fragmentation and localisation' (p.9).

When Porter (1990) in his well known book on the competitiveness of national economies intended to explain specific national features of competitive advantage, he included several examples showing how successful industrial sectors were actually regionally embedded. As the authors of a recent EU Report on Regional Innovation System also noticed in regards to his work: 'What is now termed "new regional science" recognizes this and has demonstrated the growing salience of regional economies as key nodes in the increasingly globalised arena of production' (Cooke, Boekholt and Todtling, 1998:2).

The transformation-related modernisation in the post-socialist countries of CEE would be unimaginable without significant FDI and the related privatisation efforts – in spite of the occasional anti-foreign rhetoric of the populist-nationalist forces in these countries. For instance, in the Hungarian case, foreign-owned firms are now producing more than 70 per cent of manufactured exports, up from 50 per cent in 1993. The strongest labour productivity increases experienced in the last five years have been at foreign-owned joint ventures (Hamori, 1996:10).[1]

There is a commonly shared hypothesis, see for example, Soulsby and Clark (1996), that among the foreign-owned firms, MNCs are playing the key role in modernizing managerial organisation and methods of the privatised former large state firms. Moreover, these firms have become not only the 'engines' of export performance but have also accelerated the introduction of new technology and of new managerial practices in the post-socialist economies (for example, TQM, team-working, flatter hierarchy, outsourcing, benchmarking etc.). As a consequence of the important facilitation role of FDI in shaping the patterns of skill and manpower use, it is worthwhile offering a short survey of FDI in the CEE region.

Among the post-socialist countries of CEE, Hungary received the largest portion of the FDI until the middle of 1996, as Table 1 below indicates. The composition of FDI within the country is very unequally distributed however, reinforcing the existing inequalities in Hungary. If we are using a three-point scale to characterise the level of economic development, the following three types of regions can be distinguished:

- Strong regions
- Intermediary regions
- Weak or peripheral regions.

The so-called 'strong-regions' (for example, the country's capital and its environs) received almost as much as three quarters (73.5 per cent) of the country's FDI. The 'intermediary region' (for example, the Great Hungarian Plain in the southeast) and the 'weak and peripheral' regions (for example, northeast Hungary and the southern portion of western Hungary) have similar share (13-13.5 per cent) of FDI (Csefalvay, 1993). Since the middle of 1990s, this pattern of FDI distribution in the country has remained largely the same.

Table 1: FDI in the CEE Region

Countries	1995	1996
	in US $ per capita	
Czech Republic	563	660.19
Hungary	1.410	1.505
Poland	177	240.21
Slovakia	138	369.81

Source: *Business Central Europe* (1996: 39); Árva (1997: 1008).

Within the broad range of FDI, it is necessary to distinguish between 'greenfield' and 'brownfield' investment sites. Greenfield investments were established by such MNCs as Suzuki, IBM, TDK, Sony and Ford. Brownfield investments were made by such MNCs as NOKIA, Siemens, G.E. and Audi. These two distinctive forms of FDI have different impact on the restructuring or modernizing business organisations in the transformation economies of the CEE region.

Greenfield investment has attracted by far the most attention from both the business and academic observers. However, according to our hypothesis, a more balanced distribution of greenfield and brownfield investments represent a greater potential to speed-up the diffusion of modern managerial knowledge and organisation. The diffusion of new technology and leading-edge management practices will create stronger multiplier or homogenizing effects in organizing economic activities in comparison to domination one form over another. In other words, the strong presence of foreign owned firms, especially in the form of greenfield sites, does not automatically significantly speed up the diffusion of state of art technology and management methods in the FDI receiving country.

In the following sections, we intend to verify – among other things – the involvement of the Hungarian economy in the globalisation process and to outline the potentials of modernising management and technology of the country. Empirical data analysed were collected from a survey carried out in one of the strong regions of the country (Székesfehérvár) whwre the amount of FDI (In the form of direct capital investment) surpassed $1 billion. In the first half of the 1990s, this city became one of the most dynamic in the world, transforming itself from heavy industry crisis to prosperous local economy.

The Role of Strong Regions in Reorganizing Economic Activities: The Case of Székesfehérvár

The core interest of the EU supported 'Regional Innovation System' (REGIS) project was to identify the existence or absence of a regional innovation system in eleven European regions.[2] In this section we intend to present the results of the Hungarian survey connected to the role of FDI. Firm level interviews were conducted at 75 firms in the Székesfehérvár region, using a standardised questionnaire accepted by the all REGIS Project participants. The categories for the data analysis were selected on the basis of ownership structure (private ownership, joint-private/state ownership, and state-ownership), on the basis of firm age (greenfield sites and brownfield sites), and on the basis of nationality of ownership (domestically-owned and foreign-owned firms). Table 2 illustrates the breakdown of the categories which will be used for comparison.

Table 2: Categories utilised for comparison

Hungarian Firms	% of total	% in Hungarian category	No.
Privately owned	41.3	63.3	31
Private/State ownership	10.7	16.3	8
State owned	12.0	18.3	9
Greenfield site	12.7	19.1	9
Brownfield site	53.5	80.9	38
Total	64.5		49
Foreign Firms	**% of total**	**% in foreign category**	
Greenfield site	28.2	83.0	20
Brownfield site	5.6	16.7	4
Total	35.5		26

Source: Makó, Ellingstad and Kuczi (1997:2).

In our analysis, foreign firms are considered to be those with majority foreign ownership. Greenfield sites are considered those which did not exist in 1990. (Please note that for the foreign brownfield site category the sample is so small as to provide only a very limited usefulness in statistical analysis, and therefore, we shall be concentrating on results from this category. Missing data prevented the proper greenfield versus brownfield sites categorisation of two Hungarian firms, as well as two foreign-owned firms. The results from these firms will be examined only in the broader national categories)

The sample is representative of the Székesfehérvár region, where the vast majority of FDI has been directed not on privatisation projects (acquisition of the formerly state-owned companies) but rather on greenfield manufacturing sites. The region – which once was the home of such flagship socialist firms as Videoton in computer and consumer electronics and Ikarus the bus manufacturer – has a well-trained, inexpensive work-force, a relatively well-developed infrastructure, and a variety of local and national investment incentives (including incentives such as five and ten years tax holidays on profits and no local taxes for five years). These incentives have attracted such leading-edge firms as Ford, IBM and Phillips which tend to concentrate their local activities on assembly line operations.[3]

Strengths and Challenges of the Firms Operating in the Region

Most firms surveyed were relatively optimistic and gave themselves high marks with regard to their advantages over competitors. Quality (91.7 per cent), timely delivery (89.6 percent), and price (87.5 per cent) were listed as the top three advantages by Hungarian firms, with state-owned firms giving themselves generally lower scores. Hungarian firms also rated those three factors as the most important, with user-friendliness, environmentally friendly production methods and after-sales services being judged the least important.

Foreign-owned firms top-listed advantages were quality (96.3 per cent), after-sales service (85.2 per cent), and technical standard/innovation (81.5 per cent). These firms rated quality, technical standards and after sales service as the most important factors, with user friendliness and an ecological environment being judged the least important.

When asked how their firms sustain competitive advantage, noticeable differences were noted between Hungarian and foreign-owned firms on issues relating to innovation. Internal research and development activities were given as a reason for competitive advantages by

62.5 per cent at foreign-owned firms, compared to only 45.8 per cent at Hungarian-owned firms. Similarly, patent-ownership was given as a reason 62.5 per cent of foreign firms versus only 35.4 per cent for Hungarian firms. As shall be discussed in more detail later, these differences cannot be solely accounted for on the basis of on-site research and development, but rather, company-wide research and development. Larger, international corporations are able to garner more advantageous economies of scale in research and development than smaller domestic companies, and this phenomena is by no means limited to Hungary (Cooke, 1998).

Therefore, for smaller, domestic firms collaborative research undertakings may be especially important as a way to lower initial costs and share risks. In this respect, however, perhaps surprisingly given an intuitively greater need, Hungarian-owned companies seem less active than their foreign-owned counterparts. The latter category reports stronger scores not only in co-operation with EU institutions (50.0 per cent to 29.9 per cent), but also in national (62.5 per cent to 55.3 per cent) and regional (54.2 per cent to 43.8 per cent) co-operative ventures. Hungarian-owned companies also rate co-operative agreements, generically and in the regional, national and international contexts, as less important than do foreign-owned companies.

Managers were also asked what challenges they see their firms facing. Responses reveal that foreign-owned firms are slightly more pro-active, especially in regards to improving product quality, cutting personnel costs and product development. Averaging the scores for all possible challenges, foreign-owned firms responded in the affirmative 86.3 per cent, compared to 76.7 per cent for Hungarian firms. The smaller, newer Hungarian enterprises scored especially low on these questions. The follow up question, 'Does your company respond to the following challenges?', sheds further light on these Hungarian greenfield businesses, which returned the lowest scores of all categories in half of the responses listed. Of particular importance is the fact that only 33.3 per cent of Hungarian greenfield sites plan any sort of product development (compared to a Hungarian average of 55.1 per cent and a foreign-owned average 75 per cent), and only 22.2 per cent plan R & D co-operation with other firms (again, it is the smaller firms which stand to gain the most from such ventures). Here also, foreign-owned firms reported higher scores (on average 50.0 per cent versus 40.8 per cent), with particularly wide gaps being observed in responses such as increased outsourcing and product development. Of note is the fact that more Hungarian firms (61.2 per cent) plan to intensify internal R&D, compared to the foreign-owned firms (54.2 per cent). See Table 3.

It is worth noting that the relatively heavier reliance of foreign-owned firms on outsourcing, one should keep in mind that this is an example of a practice which often makes more sense in the matured market economies than it does in the emerging market economies in the CEE. It originally arose in high wage countries as a result of significant wage gaps between core production workers and peripheral support staff. By outsourcing non-essential support functions, firms could save money and utilise more flexibility. However, in Hungary and other CEE countries, there are no significant wage differences to be found between direct and indirect production personnel (wages are generally uniformly low), and therefore savings possibilities are lessened. The main reason for the reliance on outsourcing in Hungary has to do with flexibility.

Research and Development and Firms' Innovation Profiles

Questions regarding firms' individual and collaborative research and innovation efforts also reveal sizable diffrences between Hungarian and foreign-owned companies. The biggest difference noted is not in absolute R&D expenditures, but rather in R&D expenditures as a proportion of turnover. Here, foreign-owned firms spent on average 0.21 per cent, compared

Table 3: Company's responses to the challenges

Hungarian firms	Cutting costs	Organis-ational Restruc-turing	Speeding up product	Intens. Internal R&D	Out-sourcing	Sub-tracting	Market-ing co-operation	R&D co-operation
Privately owned	93.5%	74.2%	54.8%	61.3%	25.8%	38.7%	61.3%	35.5%
Private/State ownership	87.5%	87.5%	50.0%	62.5%	37.5%	12.5%	75.0%	37.5%
State owned	100.0%	88.9%	55.6%	55.6%	55.6%	33.3%	55.6%	55.6%
Greenfield site	100.0%	66.7%	33.3%	66.7%	22.2%	22.2%	44.4%	22.2%
Brownfield site	92.5%	82.5%	60.0%	60.0%	37.5%	37.5%	67.5%	45.0%
Total	93.9%	79.6%	55.1%	61.2%	34.7%	34.7%	63.3%	40.8%
Foreign firms								
Greenfield site	100.0%	84.2%	73.7%	57.9%	52.6%	42.1%	52.6%	52.6%
Brownfield site	100.0%	75.0%	75.0%	25.0%	25.0%	0.0%	25.0%	25.0%
Total	100.0%	83.3%	75.0%	54.2%	50.0%	37.5%	50.0%	50.0%

Source: Makó, Ellingstad and Kuczi (1997:12)

to 2.06 per cent for Hungarian firms. It must be noted that all these figures are very small in the international context, as can be seen in Table 4.

Of special interest is the very marked lack of R&D profile for greenfield firms: Hungarian greenfield firms in absolute and relative terms, and foreign greenfield firms in relative terms. Hungarian greenfield firms reported spending nothing on research efforts in 1995. This may have to do with the service-oriented nature of these businesses, as well as not properly associating more mundane product development efforts as R&D. Informal R&D efforts may also escape notice in this category as well. As for foreign-owned greenfield sites, it is particularly important for Hungary's future development that they begin to take on a more active

Table 4: Research and Development profiles

Hungarian Firms	R&D expendi-ture in 1990 (1000 ECU)	R&D expendi-ture in 1995 (1000 ECU)	%	R&D 1995 turnover	R&D staff, 1995	% of total staff	Planning to expand R&D
Privately owned	22.9	36.7	160	2.48 %	1.59	7.55	33.3 %
Private/State ownership	5.0	0.71	14.3	0.14 %	0.14	0.01	14.3 %
State owned	46.8	80.0	171	1.33 %	12.57	0.87	28.6 %
Greenfield site	—	0.0	—	0.00 %	0.25	1.76	25.0 %
Brownfield site	20.43	53.95	181	2.50 %	5.78	6.00 %	30.6 %
Total	29.43	38.95	132	2.06	3.14	5.06	29.5 %
Foreign Firms							
Greenfield site	—	6.25	—	0.24	2.00	0.43	15.8 %
Brownfield site	133.3	42.67	32.0	0.09	—	—	25.5 %
Total	133.3	38.95	29.2	0.21	3.30	0.56	20.0 %

Source: Makó, Ellingstad and Kuczi (1997:16).

R&D profile, for the simple fact that they are now by far the fastest growing sector of the national economy, accounting for some 70 per cent of manufactured exports. If Hungary and other CEE economies are to move up the product ladder, they must be active not only in assembly and production, but also in research and design.

One reason for Hungary's very low R&D profile is simply the general contraction which has taken place in the economy since the collapse of the state-socialist political-economic regime. All too often, in Hungary and as in most other countries, 'luxuries' such as R&D spending are the first to be sacrificed when companies are faced with tough times. Generally, foreign firms which have set up manufacturing operations in Hungary and other post-socialist countries of CEE are interested not so much in the capacities of Hungarian scientists and engineers, but rather, in the generally inexpensive across-the-board labour costs. This is perfectly understandable, as they may already possess sufficient intellectual capital to produce and market successfully.

As mentioned previously, there are temporal considerations at play here, too, however. Foreign managers who originally came with the sole intention of assembling products have slowly begun to notice that not only are Hungarian workers very capable of more flexible and diligent performance than workers in the home country (although anecdotal, such observations have been made by managers at Audi, NOKIA and General Electric for example) but also that there is a great deal of untapped intellectual capital. Thus, we see the first signs of foreign companies moving their research facilities to be closer to their production facilities.

Especially dramatic differences are noticed as to the location of main customers, suppliers and consultants between Hungarian and foreign-owned firms. See in detail Table 5.

On average, customers were located in the region and nation for a combined total of 155.6 per cent for Hungarian firms, compared to combined total of 117.2 per cent for foreign-owned firms. Differences are even more striking when looking at the arguably more important location of suppliers; and here Hungarian firms rated a regional/national combined total of 133.3 per cent, compared to a mere 73.9 per cent for foreign-owned firms. Concurrently, foreign-owned firms rely on foreign partners for main customers and suppliers much more than Hungarian firms. Differences in the consultants category, where foreign-owned firms rely over-whelmingly on foreign-consultants (104.4 per cent to 15.5 per cent for Hungarian firms), can be ascribed to both the more expensive nature of international consultancies, as well as company-wide relations built up with a given set of international consultant networks.

Table 5: Location of firms' customers, suppliers and consultants

Location of the main partner	Hungarian-owned firms	Foreign-owned firms
Customer – Region	80.0 %	52.2 %
Customer – Nation	75.6 %	65.2 %
Customer – EU	37.8 %	73.9 %
Customer – Rest of World	22.2 %	26.1 %
Suppliers – Region	64.4 %	34.8 %
Suppliers – Nation	68.9 %	39.1 %
Suppliers – EU	44.4 %	73.9 %
Suppliers – Rest of World	24.4 %	21.7 %
Consultants – Region	22.2 %	13.0 %
Consultants – Nation	37.8 %	39.1 %
Consultants – EU	13.3 %	69.6 %
Consultants – Rest of world	2.2 %	34.8 %

Source: Makó, Ellingstad and Kuczi (1997:19).

The Diffusion of 'leading edge' Managerial Practices in the Region

The REGIS Project survey was carried out with managers interviewed given a list of organisational tools from 'leading-edge' concepts in management and asked which their company had introduced. There were some rather dramatic divergences between foreign-owned and Hungarian firms. However, before we examine these, a short rhetorical detour is needed. When interpreting responses to questions such as 'Have you introduced TQM, Just-in-Time, Information Technology (IT), benchmarking, etc.?,' we must also consider the possibility of unfamiliarity with the terminology. At the core of some of these more fashionable concepts used by the business press and western management consultants, are often to be found very elementary ideas for which one does not need to read the Harvard Business Revue to become familiar. A Hungarian manager might reply 'no, we haven't instituted an IT system yet' while sitting at a desk with an integrated network computer.

Total Quality Management (TQM), for example, prescribes a set of procedures and a corporate mentality designed to make quality a given at every stage in the production and distribution process. While helpful in focusing attention on quality, it would be folly to suggest that a formalised TQM system is a prerequisite for higher quality. Group work found favour in the western business community after successful patterns were observed in Japanese and Swedish workplace practices. It is a little known fact, for example, that formalised group work initiatives (with their own cost accounting structure and extremely flexible use of manpower and skill, creating in effect, firm-internal profit centres) were institutionalised in Hungary at the early 1970's; these were the so-called 'Economic Working Associations' (VGMK) (Stark, 1985; Mako and Simonyi, 1992) Furthermore, the 'faddish' and occasionally temporary nature of some of the above-listed organisational tools or managerial concepts cause us to wonder if their implementation or lack thereof is indeed a proper measure of managerial finesse.

This said, the responses given to such questions can indeed be used as a useful tool for interpreting managerial priorities, as well as the dominant models (and sources of inspira-

Table 6: Diffusion of organisational innovations in Regis Project firms

Forms of Organisational Innovation	Hungarian-owned firms	Foreign -owned firms	Other Regis Project region's firms
Total Quality Management(TQM)	18.4 %	37.5 %	46.3 %
Group Work	55.1 %	66.7 %	47.8 5
Profit or cost centers	44.9 %	62.5 %	32.7 %
Inter-organisational networking	34.7 %	37.5 %	20.0 %
Benchmarking	4.1 %	37.5 %	24.7 %
Flat hierarchies	22.4 %	50.0 %	39.5 %
Interdisciplinary design teams	18.4 %	33.3 %	22.2 %
Just-in-Time delivery(JIT)	10.2 %	41.7 %	37.7 %
Outsourcing	8.2 %	29.2 %	22.2 %
System suppliers	10.2 %	20.8 %	n.d.
ISO 9000	34.7 %	62.5 %	52.0 %
Information technology (IT)	28.6 %	70.8 %	44.5 %
Average scores	24.1 %	45.8 %	35.4 %

Source: Makó, Ellingstad and Kuczi (1997:12); Cooke *et al.* (1998:14).

tion), present at firms in the region surveyed. Looking at the responses to all questions, foreign-owned companies returned average scores of 45.8 per cent compared to 24.1 per cent for Hungarian firms. Particularly large differences are visible under TQM, profit centers, benchmarking (ironic, as Hungarian and other CEE firms in the period of socialism generally worked under norms for decades), Flatter hierarchies, outsourcing, ISO, JIT and IT. Table 6 compares the results concerning firms operating in the Székesfehérvár region (Hungarian firms versus foreign-owned firms) to the integrated data of other region's firms located in the other Regis Project countries.

Weak Multiplier Effects of FDI: Input and Output Profiles of the Firms in Székesfehérvár Region

The product input and output profiles of firms operating in the Székesfehérvár region are important when considering not only individual firm success (dynamic, successful companies tend to have a stronger than average output or export profile), but also the shape and intensity of a wide range of existing and emerging regional networks. Firms which utilise the region for only a small portion of their product inputs are unlikely to have a strong interest in helping to develop a regionally-based set of institutions which promote inter-firm or public-private co-operation.

One of the strongest, most significant set of differences between ownership nationality categories visible in the REGIS Project survey concerns the input/output (or import/export) profiles exhibited. Managers were asked to give percentage scores for product inputs and output, differentiated by the Székesfehérvár region, Hungary, European Union and, finally, the rest of the world. Foreign-owned firms, especially foreign-owned greenfield sites, report using very few Hungarian inputs (either components or raw materials) in the production process. On average, foreign-owned firms rely on the region for only 9.3 per cent, and on the nation for only 21.8 per cent of product inputs. Together, this gives a domestic content ratio of 31.1 per cent (only 22.2 percent in the case of greenfield sites). By contrast, and not surprisingly, Hungarian firms demonstrate far heavier reliance on domestic component producers. Hungarian firms on average rely on the region for 27.8 per cent, and on the nation for 46.4 per cent of product inputs, yielding a domestic content ratio of 74.2 per cent (83.3 per cent in the case of state-owned firms). See Table 7.

Table 7: Product inputs of the firms in Székesfehérvár region

Hungarian Firms	Region	Hungary	EU	Rest of World
Privately owned	25.9 %	44.7 %	16.0 %	6.9 %
Private/State ownership	31.0 %	55.1 %	1.4 %	0.0 %
State owned	33.9 %	49.4 %	14.8 %	1.9 %
Greenfield site	30.3 %	29.2 %	13.8 %	4.4 %
Brownfield site	27.2 %	50.3 %	15.1 %	4.9 %
Total	27.8 %	46.4 %	14.8 %	4.8 %
Foreign Firms				
Greenfield site	7.1 %	15.1 %	63.5 %	14.5 %
Brownfield site	22.5 %	54.3 %	20.8 %	2.5 %
Total	9.3 %	21.8 %	54.9 %	14.0

Source: Makó, Ellingstad and Kuczi (1997:7).

In accounting for such large differences it must be noted that a great many greenfield sites were offered 'off-shore' status, which grants duty-free importation of production components. Hungarian firms, and foreign-owned brownfield sites are generally not granted duty-free importation allowances. Off-shore status creates a very powerful disincentive to search for regional or national supplier networks, especially as many of these firms have an already existing European or world-wide supplier network. In addition, when asked why domestic content rates are so low, many foreign managers cite the lack of contacts among potential Hungarian firms, as well as quality concerns. According to another study, carried out in the same period as the REGIS Project (1996-1997), out of the quality and flexibility concern, the most unfavourable features of the Hungarian suppliers concerned the 'timely delivery' and 'reliability' (Akar, 1997:6).

Such a heavy reliance on imported components does come with a price, however. Logistical concerns having to do with on-time delivery of components (especially when one considers that 41.7 per cent of foreign-firms and 44.4 per cent of foreign-owned greenfield companies rely on Just-in-Time inventory control systems) consistently rank as one of the biggest problems facing mangers at foreign-owned greenfield sites. (The reliance of the greenfield sites on JIT inventory control system especially high (55 per cent) in the automobile sectors' firms in the region surveyed.)

Multiplier effects are notoriously vague and difficult to quantify, but it is obvious that such a heavy reliance on imported components (often those with the highest value-added), makes any such effects in the Székesfehérvár region, and Hungary as a whole, relatively modest. From the perspective of innovation, technological diffusion from high-tech, greenfield plants to domestic producers is severely limited by the heavy reliance on imported components or on their own suppliers already operating in Hungary. From the ecological standpoint, such a situation is not without objections, as the distances imported components travel (most often by lorry) are much greater than domestic components.

It must be added, the temporal components associated with FDI flows should also be considered. Even at this early point in time, it is evident that the above-listed characteristics are beginning to change. Networks – whether for supply, research and development, or distribution – do not arise spontaneously. As foreign-owned companies accumulate positive experiences manufacturing in Hungary, it is hoped they will gradually begin to expand local production beyond low value-added assembly operations. Audi, GE and Nokia, for example, have begun to move some research and development facilities to Hungary to be closer to their production sites, and a number of foreign-owned companies have begun making the first moves towards building a local supplier network. Following GM's lead in Poland. Ford, for instance, is to locate a Central European components buying center in Hungary during the next few years.

Perhaps not surprisingly, given the above-listed figures, there is also a wide gulf in product outputs (exports), with Hungarian-owned firms relying heavily on the domestic market, and foreign-owned firms (again, greenfield firms in particular) being especially active exporters. Hungarian-owned firms export, on average, only 15.6 per cent of output, with state-owned firms being the strongest exporters, while foreign-owned firms export a dramatic 54.5 per cent (61.6 per cent for greenfield sites), as Table 8 illustrates.

Three observations need to be made about the survey findings regarding patterns of output or export. Firstly, is the overwhelming dominance of the EU as an export target, which while having much to do with geographic proximity and buying power, also is affected by the EU's trading regime which gives products coming from the CEE countries slightly preferential tariff status (as a result of Association Agreements). To qualify for such preferential tariffs, the products must have a domestic and/or European Union content of over 50 per cent. Many foreign-owned greenfield sites (as well as, for example, nearly all automobile manufacturers

Table 8: Product output of firms operating in Székesfehérvár region

Hungarian Firms	Region	Hungary	EU	Rest of World
Privately owned	47.2 %	40.5 %	8.6 %	3.7 %
Private/State ownership	56.8 %	34.0 %	9.3 %	0.0 %
State owned	36.4 %	39.2 %	5.9 %	18.4 %
Greenfield site	58.1 %	37.5 %	3.8 %	0.6 %
Brownfield site	43.4 %	38.9 %	11.0 %	6.8 %
Total	45.8 %	38.7 %	9.8 %	5.8 %
Foreign Firms				
Greenfield site	15.7 %	22.8 %	49.6 %	12.0 %
Brownfield site	30.0 %	47.3 %	16.3 %	6.5 %
Total	16.7 %	25.0 %	43.7 %	10.8 %

Source: Makó, Ellingstad and Kuczi (1997:9).

present in Hungary) qualify for preferential tariffs based on European Union, not domestic, content. Secondly, there is a marked collapse of any strong alternative market for Hungarian exporters. Less than ten years ago, the Soviet Union and CMEA trading bloc was the destination of the majority of Hungarian exports. The collapse of both the ruble trading system and the purchasing power of consumers in these countries, as well as the very pronounced political guidance towards western markets has hurt Hungarian producers which previosly relied on the CMEA markets. Thirdly, and perhaps most importantly, the domestic market is weak. Consumer purchasing power and real wages have dropped sharply since 1989 (with a 15 per cent drop in real earning registered in the middle of 1990s), which has hurt Hungarian companies, which by size and tradition tend to be domestically focused, much more than foreign-owned companies. While a slow improvement in purchasing power, and a general stabilisation of macro-economic indicators will have a positive effect on all sectors of the economy, this will be an especially welcome development for the Hungarian small and medium sized firms.

In relation to the composition and locations of suppliers-customers, it is worth noting the following tendencies. When asked if their company is supplying one or a few dominant suppliers, 66.0 per cent of mangers at Hungarian-owned companies replying 'yes', as compared with 76.9 per cent at foreign-owned firms (85.0 per cent at foreign-owned greenfield sites). The follow-up question, which asked what share of sales goes to the most important customer, reveals 32.4 per cent at Hungarian-owned companies and 56.8 per cent at foreign-owned companies. The relatively greater dependence of foreign-owned companies on one or a few customers may be at least partially accounted for by the fact that many of the foreign-owned greenfield operations are often processors, producers or assemblers for their company's own world-wide production chain (that is, it is part of company-wide vertically-integrated production process).

Parallel to input/output or import/export profiles are the locations of primary competitors. Foreign-owned companies viewed the European Union or the rest of the world as the location for a score of 100 per cent, compared to 60 per cent for the region and Hungary. By contrast, Hungarian-owned firms saw gave a combined external score of 41.7 per cent, and 112.5 per cent for the region and Hungary. It is apparent that Hungarian and foreign-owned firms have significantly different geographical horizons.

Conclusions

This chapter has aimed to examine the various possibilities and limitations of FDI as an engine of modernisation in the Hungarian economy. The focus in our investigation was the firm, which is a key institution in re-organizing economic activities in the emerging market economies of Central and Eastern Europe. In the focus of our investigation was the 'absorptive capacity' of the regional or national economy or in other word degree of integration of the Hungarian firms in the global economy.

Lessons from the survey in the region which has attracted the highest concentration of FDI in Hungary could be summarised in these ways. First, the types of ownership of the firms (e.g., Hungarian owned versus foreign owned, greenfield versus brownfield sites, etc.) serve as strong proxy variables for the degrees of competitiveness and the innovation capacities of the companies. Second, the multiplier effects normally associated with manufacturing facilities (many of which are high-tech and produce high value-added products) are largely missing from the Hungarian environment. Third, there is a surprisingly large gap between Hungarian owned and foreign-owned firms in the following fields; competitive strength, innovation capacities, customers-suppliers relations and product input/output profiles. Fourth, the Hungarian small and medium sized firms – or the Hungarian greenfield plants – show a strong tendency towards technological, product and process stagnation in comparison with the foreign-owned firms. In addition to spending almost nothing on R&D projects, not one Hungarian greenfield plant reporting participation in any kind of technology/innovation/training supporting programs. Fifth, the Hungarian small and medium sized firms have particularly weak innovation networks. Especially, Hungarian 'greenfield' plants characterised by the absence of formalised partner institutions (for example, government agency, subsidy providers, university etc.).

Evaluating the role played by foreign-owned firms in the technological development of host country is rather ambiguous. Technological development of the country (region) concerned involves organisational innovation/modernizing management methods. This type of technological development improves or upgrades operational procedures or the 'know-how' of a given technology. If Lall (1993:125) notes that it is MNCs which 'transmit state-of-the-art knowledge, and provide skill and equipment to make it operational', then that possibility within the region surveyed, was limited with beneficiary effects rather sporadic due to the weak multiplier effects.

Data on R&D activities clearly illustrated that, until now, MNCs operating in the region have not become involved deeper in indigenous research or in development of 'know-why' activities. Summing up our results and with reference to the point made earlier about globalisation (Martin, 1998), CEE countries' participation in the multi-national world production system is rather limited at this moment.

Endnotes

[1] The role of FDI in upgrading quality level of products, services and management is significant not only in the transformation economies of the CEE but also in the countries belonging to the matured market economies. According to the study made by McKinsey, the US management consultant firm, top management in the UK car component industry 'has...devoted itself intensely to quality, more than that of any other country in Europe', continuing by noting that the driving force behind the change in Britain has been the *influence of car plants set up by Japanese groups.* They have made 'upping quality level...a matter of survival for British suppliers' (Marsh, 1996).

[2] The REGIS Project was conducted in 1996-1997 in eleven European Regions; Baden-Wurtenberg (Germany), SE Brabant (Netherland), Styria (Austria), Tampere (Finland), Wales (U.K.), Wallonia, (Belgium), the Basque Country (Spain), Centro (Portugal), Friuli (Italy), Szekesfehervar (Hungary) and Lower Silezia (Poland). In the Western European regions 833 firms, and in the CEE regions (in Hungary and in Poland) 165 firms participated in the survey which aimed to study various dimensions of the company and regional-level innovation systems. The REGIS Project was co-ordinated by Philip Cooke at Center for Advanced Studies, University of Wales at Cardiff, UK.

[3] Ten years later, these very generous local incentives for foreign-owned firms did create new type of conflicts between the subsidiaries of MNCs and the local governments, after the generosity of the local councils nearly bankrupt them. The current disputes have centered on the calculation bases of the local taxes (Toth, 1998:30).