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## **POLICY CONSEQUENCES OF FDI, LINKAGE PROMOTION OPPORTUNITIES IN HUNGARY**

**Country Paper for Session II**

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## **Introduction**

The topic, structure and scope of this paper was determined by two factors. UNECE terms of reference described the topics and structure, the available new information on FDI, spillover effects and linkage promotion policies in Hungary determined the scope. Thus, the paper is not a ready-made lecture or book-chapter. It is rather a collection of information with the author's comments which was provided some kind of structure. But the paper does not include an overview of already documented literature, does not follow a strict and theoretically approved logic and structure, it does not have hypothesis and much conclusion. It rather provides information for further discussion. Some aspects of FDI and of local linkages will be highlighted, that seem to have importance at least in the Hungarian context.

## **1. Lessons of FDI literature**

The analysis of FDI literature (for example, Szanyi 1999) provides a number of policy related conclusions regarding also linkage promotion. The most important message of FDI literature is perhaps that foreign investment enterprises (FIEs) are not uniform. UNCTAD (2001 p.137) also lists a number of characteristics that make companies more likely to enter and develop local supply linkages. Literature surveys proved the importance of those factors. A government may decide to focus on firms and linkages that would not enter cooperation on their own (for example assemblers). It is also possible to concentrate on the further development of existing links. It is quite obvious that different concrete measures are required in the two cases. In the first case it is difficult to achieve success in terms of the creation of actual, substantial cooperation. In the other case the question arises why to support linkages that evolve on their own too. We should not attempt to answer this question, this is the task of governments. But it is important to stress, that whatever type of firm and linkage is promoted, promotion reaches the addressee only if interests and stakes are fully understood and measures developed accordingly.

Empirical surveys identified groups of FIEs with differing investment goals (Meyer 1996, Lankes – Venables 1996, Éltető - Sass 1998). The case study evidence on FDI also supported the existence of groups with alternative investment motivation in Hungary (Szanyi, 1999). These goals and motivations produced different sourcing patterns of FIEs. Local-supplies-based firms sourced for a variety of inputs locally, already in the early phase of investments in Hungary. The local inputs included materials, services, sub-assemblies, in some cases even R and D. The most important factor was, however, relatively cheap qualified labor. In the case of assemblers this was the ultimate important factor – sometimes higher qualifications were not required. From the point of view of linkage promotion assemblers provided little space: only auxiliary services were used from local firms (maintenance, catering, cleaning, guarding). Szalavetz (2000) and Sereghyova - Vesely (1998) also emphasize that the typical foreign investment pattern in Hungary is the one that fully integrates the affiliate into global vertical production structure. The specialization of Hungarian affiliates on production rather, than on pre- and post production activities means that the integration occurs at the simplest, least profitable, least stimulating phase of the value chain. Besides, being integrated into intra-firm vertical cooperation is not in line with the emerging “new economy’s” competitive network-type organization structure (Szalavetz, 2000).

Among the different types of FIEs special attention has to be paid to assemblers, as well as to their traditional suppliers. Assemblers often induced their partners to follow them and establish new facilities near to them in transition economies as well. Follow-up investments were especially frequent in car industry and electronics (Somai 2000, Antalóczy and Sass 2000, UNCTAD 2001). Most of them were established as greenfield investments. Even those affiliates which were based on privatization purchase were reshaped to the extent, that they can be regarded as greenfield (Antalóczy and Sass, 2000). Since their primary motivation is spreading activity towards accessible cheap production inputs (labor) they are very much cost sensitive. This holds, even though they operate in capital intensive branches, where the local input of labor represents only a very small fraction of total costs. Unit labor costs are lowest in these firms (Éltető, 2001), and there are various tools in Hungary that aim the reduction of capital expenses as well.

Most TNCs operate global networks, thus, linking TNCs with local suppliers means linking local firms into a highly competitive structure. TNC networks are not arms-length business contacts. The networks require competitive values from suppliers (adequate technology, reliability, high quality, flexibility, matching communication systems, etc.). These values may be present or can be developed: the chances of absorption are very different in each firm. It depends on the assets and existing qualities of the firm, the economic environment, the role and tasks a potential supplier would fulfil in the network and the willingness of networking partners to support. On the other hand, being member of a cooperating network means long term commitments of all parties, which also includes certain level of technology cooperation and continuous knowledge transfer, and adequate level of profits. Some empirical evidence on these characteristics was provided by Szanyi 2001. Network membership also serves as a reference for firms enabling them to widen cooperation or to enter new contacts.

Network operation is enhanced by agglomeration effects. In a number of industries cooperation is based on daily deliveries, thus close location matters very much. Also, the creation of linkages, as well as the development of potential partners is quicker and more efficient if donors and hosts, competitors, sources of know-how and pools of potential participants are close by. This condition is provided by cooperation clusters. Clustering started to develop in Hungary as a TNC initiated process, mainly in or around Industrial Free Trade Zones (IFTZs).

There is a fairly big part of the Hungarian economy dominated by assemblers. Their influence is decisive in automotive and electronics industries. These industries seem to be less active in linking local supplies, moreover, they are fairly concentrated in a few clusters of Northern Transdanubia. The biggest TNCs like IBM, Philips, GM-Opel, Audi as well as their traditional first tier suppliers (mostly other TNCs) seem to be the least active. These firms are rather isolated and provide less spillover than some other competitors even in the same branch. Suzuki's supplier promotion program for example is just an important exception (UNCTAD 2001, p.166). Non-assemblers and firms of privatization origin are usually much more likely to maintain and develop local supplies networks, even if they substantially streamline and alter production of acquired facilities. The point is that entering-maintaining supplier status is not easy in these cases either. Qualification requirements are similar. But these FIEs are more willing to develop local roots.

TNC operation and the logic of networks differs very much from what Hungarian firms, citizens and politicians got used to during the past decades. There is a widespread negative perception of the changing role of Hungary-based companies in global division of labor. Hungarian participants of the new global cooperation can play different roles, than before. Specialization for example is much deeper, quality, reliability, flexibility gained a lot of importance. Obviously, corporate activities have to be reorganized according to these new requirements, unless Hungarian firms will be crowded out of their markets or will need strong protectionist measures to stay alive. It is therefore completely useless to cry for simplification and degradation of activities (Farkas 1997, 1999, Sereghyova et al. 1998), for the loss of full range final production of companies, for the reduction of special functions like R and D. Worldwide division of labor hardly allows the fully-fledged activity for most firms in more developed countries either. The point is really where, how, and to what extent local firms can enter the networks. Hungarian firms usually entered at production: the least strategic phase. But there is development: sophistication of production continuously increases, some auxiliary functions settled (R and D, logistics). The potential for spillover effects stemming from FIEs is increasing.

There is plenty of evidence on direct spillover effects on subsidiaries, and their local suppliers. Employment, production, exports, technology level, managerial know-how was boosted by FIEs. Evidence on indirect spillover is more scarce, or is difficult to capture with exact methods. Nevertheless, statistical figures and empirical evidence proves that the modernization of domestic owned firms also occurred. True, many of them could not make the change and did not survive. True, there was also some 1 million jobs lost during the transition process, and this can be regarded as a negative externality of FDI led restructuring of the Hungarian economy. But the Hungarian economy became a competitive one and competitive strength is based not merely on cheap labor. According to the Financial Times ranking Hungary is 6. in the list of the most successful countries of knowledge based industries (FT October 29, 2001). Even if this is to some extent an exaggeration, certain branches, areas and clusters tend to play a role in global competitive networks. Unfortunately, the spatial distribution of the hot spots is very uneven, and the Eastern part of the country is rather immune of it.

## 2. FDI promotion

Now, let us turn to the first set of policy tools, FDI promotion. Hungary's government policy towards foreign investors has been one of the most favorable in Central and Eastern Europe. The origins of the policy traced back a decade before transition started. Inviting FDI to Hungary, mainly in the form of joint ventures was a major policy aim during the 1980s and a fairly large number of JVs were established. Because of the openness of the Hungarian economy, long term cooperation links were also developed rather frequently with major TNCs. Therefore, Hungary was not a "terra incognita" for foreign investors.

In the beginning of the nineties parallel with the liberalization of trade and economic activities a generous legal framework was created for foreign investors. Establishment of joint ventures with foreign capital participation was promoted by allowances of corporate income tax. Investment policy also favored foreign investments and joint ventures in the first half of the 1990s. State subsidies were offered for large scale investments in certain high technology sectors (electronics, automotive, biotechnology, communications, etc.) and in tourism, for investments in depressed regions with a requirement of certain amount of job creation, and for increasing exports. Later the investment subsidies were expanded to domestic companies as well, but because of the conditions mostly FIEs could utilize the benefits anyway. The scope of subsidized investments was further increased in the new Hungarian development plan (the Széchenyi Plan). Among others, creation of industrial parks, industrial clusters, incubator houses, establishment of R and D facilities, R and D cooperation between industry, university and Academia are supported. These payments are usually received by local governments, or their agents. Cash subsidies must be put up soon, since they are not conform with EU regulation.

The investment promotion system is not targeted towards FIEs. But conditions of obtaining investment support are bound to certain investment size and to cost sharing. This means that it is mainly FIEs who are able to apply for the investment support. Another tool of investment promotion relevant to FIEs and especially to assemblers is the regulation of industrial free trade zones. IFTZ regulation was introduced in 1982 with the aim of attracting export-oriented, high technology FDI to Hungary. Another objective was to integrate the companies operating in the zones into the host economy. The risk of developing a dual economy through IFTZ regulation was recognized. It was decided therefore to allow any company to set up own zones without any kind of spatial restrictions under the license of the customs and finance authorities. IFTZs are regarded ex-territorial from the aspects of duties, foreign exchange and other legislation. Otherwise dutiable machinery and production inputs are not subject to customs duties and VAT. One company may set up several IFTZs. This is an extremely favorable regulation for assemblers with only labor on the side of local inputs, as it enables them to import high value equipment free of duty. They were also allowed to keep books and accounts in foreign currencies that allowed them overcoming of currency exchange risks.

The number of firms in IFTZs as well as the scope of their activities increased rapidly during the 1990s. Representatives of the automotive and electronics industries settled almost exclusively into IFTZs. Assemblers like GM, Suzuki, Philips were followed by their competitors and suppliers in IFTZs (Ford, Audi, IBM, Nokia, LEAR Corporation, United Technologies, Sony, Zollner, etc.) In fact, the largest size investments with the highest turnover and export share are almost exclusively foreign assemblers of IFTZs. The economic impact of this group of FIEs is very significant. They employed 6 % of manufacturing employment in 1999, produced 42,8 % of export with a positive balance of over USD 2 bn. Obviously, their weight largely determined the changing commodity structure of trade (Antalóczy and Sass, 2000).

Local supplies to the IFTZ-based assembly firms is very much limited. They include a number of services (including planning and constructing buildings, facilities), packaging and other materials, electricity and similar supplies. The limited number of Hungarian suppliers of inputs to the core activity usually followed assemblers like others and moved to the IFTZ. On the other hand, overseas investors oriented towards EU or CEFTA markets are usually more interested in developing local supply networks. Japanese Suzuki even gave up its IFTZ in order to enable a larger number of Hungarian suppliers to join its supplier development program. But clearly, the IFTZ status is a major obstacle of local supplies development.

Hungarian IFTZs' regulation is not conform with the EU rules. True, in some sense it is stricter, but the basic idea of exemption from VAT will not be accepted by the EU. The similar regulations within EU relate to warehousing activity rather, than to processing (see e.g. the Hamburg IFTZ). The major problem is not customs the level of which is already very low due to general customs reductions achieved in WTO during the 1990s. It is not even VAT on current deliveries, since VAT paid for items contributing to exports can be withheld. It is mainly VAT on investment goods, that have to be paid. It seems, that there will be a compromise in accession talks to eliminate VAT exemption of IFTZs, but not with backward effect: investments that are already implemented need not be taxed. Still, for the future attracting power of IFTZs this measure will have a likely negative impact.

A number of further policy tools affected FDI and linkages development. Such policy was privatization through FDI. Privatization through FDI can be regarded as a form of M+A deal, especially if complete functioning firms are sold. Like in the case of M+A also privatization purchase of firms may have different business considerations in the background. The elimination of concurrent production as feared by many was not typical in Hungary. Even critical observers of Hungarian privatization admit that there were basically no hostile takeovers. The few firms that went bankrupt after FDI privatization represent a far smaller failure ratio of FIEs, than domestic firms'.

The spectacular success of Hungary in attracting FDI in the early 1990s was largely based on FDI preference in privatization policy. The earlier contacts of Hungarian firms with foreign partners made matchmaking superficial and

accelerated the process. In fact, until 1994/1995 FDI was mostly conducted through either the establishment of joint ventures, or privatization. Even some greenfield investments started in the privatization process. For example, GM purchased a workshop from the privatization agency to put up the Szentgotthárd Opel works.

Privatization related FDI meant in most cases an interest of investors in different types of corporate assets including facilities, workforce, products and brands, markets, even suppliers in some cases. The level of local supplies is markedly higher in these cases than by greenfield investments (UNCTAD 2001). In food industry, for example, the purchase of processing plants automatically meant access to local agricultural output (Jansik 2001, Szabó 2000). In the case of food industry this fact is even a topic of discussions, since agricultural producers feel exposed to superior economic power of processing companies. This could have been avoided with farmers access to at least parts of ownership rights in processing units. Since however, foreign owners usually gradually increased their ownership share towards even exclusive rights, it is not very likely, that they would have allowed significant Hungarian ownership. Besides, many of the formerly independent Hungarian manufacturers were acquired by larger FIEs during the 1990s, as it is shown by the example of the dairy industry (Szabó 2000). On the other hand, farmers' fears of replacing their supplies through imports did not prove to come through. Still, a more powerful competition policy might be applicable in certain markets where concentration is very high (e.g. vegetable oils, sugar, tobacco, etc.).

Another case is competition policy. Competition policy should probably be strengthened in general, and not only in the case of food industry. There is substantial evidence that large firms misuse their position against their suppliers. Since most of them are FIEs, strict competition policy would be targeted mainly against FIEs, in favor of domestic firms (but not exclusively). There used to be rather little research carried out on this topic because it did not support the aim of FDI promotion. There was, however, many anecdotal evidence on unfair supplier conditions used for example by large retail trade companies. The most prominent cases were the charging of shelf money, or regular late payment. More recent research revealed frequent undue vertical restriction practice (that is restriction without any compensation, like for example technology transfer) in different branches of manufacturing industry (Mollgaard – Lorentzen 2001). The authors emphasized that TNCs are able to violate competition laws this way because of the very limited legal knowledge of Hungarian enterprise management, and because many cases would fall under the *de minimis* rule making legal counter action impossible.

In the case of depressing of competition (and especially in food industry) the real problem is in our view that concentrated markets are well organized on the one side, and small suppliers are not at all organized on the other. It is perhaps not only changing competition policy that should solve the problem, but an organization and strengthening of suppliers' associations and interest groups, so that they can defend themselves. One side of the concentrated markets was readily imported, but the other side was not developed accordingly.

### 3. The Supplier/Integrator Target Program

The Hungarian government decided in 1997 to launch a program aimed at promoting the most promising way of positive FDI spillover effects the establishment of local supplier ties. The Supplier Target Program was launched in 1998. After two years of operation some basic principles of the program were reconsidered and the program was relaunched in 2000.

Supplier links of FIEs started to develop as soon as they took up operations in Hungary. Thus, their interest in developing local roots was already clear. The empirical evidence showed, that some FIEs outsourced only a few services, meanwhile others tried to outsource as much of the production as they could. A comparison of Suzuki and GM-Opel for example cleared that substantial local delivery was beneficial for both FIE and local supplier, if the production surpassed a minimal volume. GM car production of 15.000 pieces a year was below of the threshold: it was not economical to start producing components for this car in Hungary. Thus, besides some auxiliary services only the accumulator and the motor oil was sourced in Hungary. At the same time, because of local content requirements, and the absence of Suzuki's traditional background industry, this firm actively looked for local suppliers. This activity was supported by the Hungarian government as well (Somai, 2000).

FIEs' possibilities incorporating of and demand for local supplies very much depends on their status in the global network. Local affiliates of huge TNCs may play a rather marginal role, or their role, the scope and nature of their activity may change over time (Szanyi 1999). In certain periods local TNC affiliates may perform also very simple subcontracting-type activities. In fact, many of them do either assembly, or simple labor intensive processing. These activities do not provide much room for local suppliers. Through further investments the activities can be developed towards more added value and sophistication, but this can be influenced primarily by FDI and investment policy, and not by linkage promotion. MVKHT (2000) provides estimations on Hungarian supplies to some important TNC affiliates:

Audi	below 10 %
Ford	over 20 %
GM	10-20 %
Philips	around 10 %
Suzuki	around 10 %
GE-Tungsram	60-70 %
Electrolux	40-50 %
SONY	below 5 %
Opel cars	7 %
Opel gear production	40-45 %
RÁBA	40-45 %
United Technologies Automotive	around 10 %

Another interesting lesson of the early experiences was that besides other foreign owned companies, FIEs established business links rather with medium-sized Hungarian firms. Some of them supplied several FIEs in Hungary, but also in abroad. Companies like RABA, Ganz, TRANSELEKTRO VIDEOTON or Bakony Művek were all traditional medium sized companies in the automotive and electronics industries, that were not sold to foreigners. They maintained independent production, had even own products and brands, but the bulk of their turnover was subdeliveries, components shipped for TNCs. These medium-size Hungarian companies had similar sourcing policy than FIEs. Requirements set to would-be suppliers very much the same (Szanyi – Tari 2000). The early empirical evidence proved that Hungarian second (third) tier suppliers, that is SMEs could hardly meet the requirements. There was much room for development.

The Supplier Target Program (STP) recognized this SME development need. It aimed the creation of direct links between FIEs and Hungarian firms in selected industries: automobile, electronics and rubber and plastics. In doing so it focused on providing information and match-making, as well as training and consulting to SMEs: would-be suppliers. Hungarian firms, especially SMEs were set in the center of the program. It wished to support preparations of SMEs to qualify requirements, to help matchmaking and contracting. The program did not count with the above mentioned two facts, that a, FIEs had various interests, b, there were Hungarian mediators (first tier suppliers) already on the market.

Main partners to the program were the local chambers of commerce, ITD Hungary, the Hungarian Foundation of Enterprise Development (HFED) with regional network and the STP Program Office. HFED and the chambers organized training programs for SMEs to learn in general what TNCs looked for and how to cooperate with them. They also provided advisory support and supported the audit of SMEs books. ITD Hungary managed a large-scale database with files of some 250 thousand entrepreneurs (many of them quasi entrepreneurs) and provided information for match-making. The main forum for match making was a series of businessmen meetings and suppliers' fare, where the two parties were to meet, where SMEs were expected to receive some concrete, specific information about requirements. State mediators of the program wished to support SMEs specific needs in the preparation process for the qualification.

This set of focus did not prove to be efficient. The very critical report on the activity of the STP evaluated the program as a failure. Almost all the activities carried out in the program failed to bring the expected results. Most striking was the fact, that a full-size questionnaire survey reported only a couple of dozens new contracts resulting from the program. But the potential pool of suppliers did not develop either. There were only some 1500 qualified for the program entrepreneurs (with audited through the program accounts). Estimations set the number of potential suppliers to 5-7000 (MVKHT 2000). So even the primarily targeted SME population resisted entering the program (they were approached through ordinary mail – a technical mistake).

The primary tools of the program were training and education, advisory services, supporting of quality control programs, preparation for credit applications. The financial support was separated from the general purposes and supported (upon the management's decision) single supplier constructions. Financial support for general program purposes was only provided for the audit of participating SMEs books. The use of the program funds through STP program management was similar to the use of venture capital. STP management evaluated programs and decided on financing.

The local network of the program was also inefficient. They were not able to attract the interest of FIEs. FIEs did not send representatives to the local STP offices, or to meetings that they organized. The reasons of this failure were A, sourcing is not carried out locally: contacts to FIEs sourcing personnel needs higher level involvement. In this regard STP officials were not adequate partners for FIE representatives. B, Contacts to potential local suppliers were already established through signing the local Supplier Charts (another initiative of the Hungarian government) by both parties. Thus, the most important contacts were already present. Local partners of FIEs (mainly medium sized firms) did not enter the program, because they were not addressed and invited. It was rather SME related.

MVKHT (2000) puts it straight: "FIEs were in contact with suppliers without STP, they now suppliers' production and financial problems without STP and they also look for new suppliers without STP. On top of all their opinion was not asked during the preparation of STP about neither the condition of supplier background nor their suggestions on what to do. Active FIE participation in the program could not be expected when STP did not contribute the program with matching own financing" (pp. 30-31).

The Supplier Target Program was reconsidered in 2000, and the new Integrator Supplier Target Program (ISTP) launched the same year. The establishment of the new framework was still not finished at the time of the preparation of this paper (November, 2001). Thus, it is rather the new concept that can be introduced here.

The new Program focuses on some existing supplier networks. In the center of these there is the core company, the Integrator. The Integrator firm is the primary partner of the state agent. The already chosen Integrators are Suzuki, General Electric, AUDI, OPEL and Rába. The Integrators actively contribute to the planning and creation of a cooperation network, a business cluster. Cluster means in the concept the cooperation of suppliers, innovative companies R and D centers, local development agencies. The development of business clusters is also supported by the Széchenyi Plan.

The state partner of the Integrators is the local office of the Regional Development Corporation (RDC). This company is fully owned by the State Property Management and Privatization Company. Its activity is management of long-term state property, and the crisis management of some still ailing SOEs. RDC defines itself a venture capital firm, in the new sense of this terminus. It does not deal with classical venture capital activity: the financing and promotion of highly innovative and therefore very risky start-ups. RDC's activity is expanded now with the management of both the ISTP funds, and the cluster development funds of the Széchenyi Plan. Beside RDC new Supplier Agencies will be established, based partly on the network of the Hungarian Enterprise Development Foundation, but also other local institutions (chambers, offices of ITD Hungary, etc.) may apply for the status, or they can join together. The agencies will be responsible for the operative tasks. A new institution the Supplier Employment Company was also set up. Its task is training and education of labor to be employed in partner companies.

The basic idea of the new Program is that existing supplier networks can be further developed as a nucleus of a bigger and more colorful cooperation network, a local cluster. It changed the direction of the promotion activity to the opposite: it starts with the needs and requirements of FIEs and other integrator firms. The primary purpose of the program is to increase local supplies' share from the current 10-20 % to 30-40 %. Matchmaking events are continuously organized, and there are plans to update the established database and even expand it to 4-5 thousand records as well. Training and advising of SMEs remained still on the agenda, qualification and auditing of supplier members of the program is also foreseen (with financial support from the program sources). Long-term finance for necessary investments in supplier firms is also planned by the new Program. This would include both loans and equity participation (venture capital function). Support of quality insurance programs also remained in place. The new state support agency regularly monitors the system and keeps continuous contact with the participants.

The new program will be perhaps more effective, it will serve the reconsidered tasks better, than the previous program. There are important new elements. One is the better coordination of the operation and usage of the parallel institutions and funds. Another important element is the incorporation of both interested sides in the program. Obviously, linkage promotion should not be a simple type of SME support scheme. The expansion of the horizon of the project to the potential creation of business clusters is also a nice touch.

There are, however some problems with the new projects. The most serious one is perhaps the role of the state as venture capitalist. RDC and other state-owned "venture capital firms" were created in fact for crisis management and not for risk management. The new role may cause problems for them. Unfortunately, there are very few private venture capital firms in the region, the state companies serve as a second best solution in the crisis management function as well. It is also a question if the new type of local agency, the Supplier Agency will be very much different and more active, efficient, than the predecessor local network. Very much depends on clear-cut definitions and descriptions of the tasks. Inadequate knowledge of the personnel of what he was expected to do was a major reason of inefficiency of the previous project. In fact, the concept was not well developed, and it is still not clear whether this mistake will be avoided this time in the new version. It is maybe not fair to ask a new institution to try to cope with all kinds of development preferences. Maybe regional development issues should not be incorporated in this framework. But it is almost certain, that the new institution will further increase spatial tensions in the country. It supports the development of clusters in the places where they actually are: the relatively most developed parts of Hungary.



#### 4. General remarks on the Hungarian experience with linkage promoting measures of government and FIEs

As a summary, this section follows with some comments the lists in Table VI.1. and VI.2. of WIR 2001. The first set of measures concerns governments. In the Hungarian context measures providing information did not prove to be efficient. This was partly due to the passive approach of agencies (the message did not arrive at SMEs), partly because of the poor content of the information (FIEs were not asked or made interested). There was in fact little new match, the contacts picked up, and contracts signed were the ones that would have realized without STP. The supplier audit was also a nice touch, but SMEs hardly made use of it, since they did not realize the importance of it, or were skeptical about the whole idea of becoming, supplier, or were simply too much occupied with other, urgent for the survival problems, that they had no capacity to use the opportunity. Many of them were not ready and prepared to make an audit. A major conclusion was that the knowledge base, training level of many Hungarian entrepreneurs is simply not sufficient for such programs (Réthi 2001). As a first step they need some basic education in business. This would be a major task of the Chambers of Commerce, but this institution is still very inefficient in Hungary. So the roots of the problems of inefficient promotion tools are rather complicated, and more fundamental in most cases, than a simple technical failure.

Technology related measures work fine with medium-large companies but not with SMEs. The mere existence of the two tier system reflects this fact. There were on the other hand rather successful attempts at improving R and D cooperation of FIEs with domestic firms (integrators) and universities. The technology upgrading policy measures listed in WIR 2001 work well in this segment of the economy. As mentioned, major deficit can be observed in the field of training. The smooth functioning of a system is still just a dream.

As regards finance, there are tools that already work adequately, others are expected to improve due to the new ISTP, further ones are similar situation as training: they have no effective institutional background. Legal protection against unfair contractual arrangements is almost absent as it was seen in Mollgaard – Lorentzen (2001): the interested SMEs either do not know the laws or can not afford losing important partners. Encouraging a shortening of payment delays and legislatively limiting payment delays, guaranteeing the recovery of late payments is basically absent in Hungarian practice. Tax policy is rather inflexible as regards tax allowances. There is an initiative in the Széchenyi Plan, and also in the ISTP to establish a factoring institution and strengthening the credit guarantee schemes for the use by participants in ISTP. These institutions are under development now.

Direct transfer of funds from FIEs to suppliers is not encouraged by government measures, though, there are several programs co-sponsored by FIEs and the state the primary beneficiaries of which may be also suppliers. A number of FIEs do support suppliers as well as through financial transfers. The first version STP was aimed at subsidizing certain activities of local SMEs, though not much money was spent. The ISTP has also similar purposes, and there are a number of other projects containing direct subsidies of local firms. Direct cash subsidization of private business is however a major problem of EU negotiations. Thus, the chances of this measure are limited in future.

As of FIEs activities to promote linkages is concerned, the basic observation is that there is a group of interested companies active in this field, and another, bigger one, which does not seem to intend to develop Hungarian supplier roots. Obviously, there is also a third group which can be influenced. Active companies use a variety of tools many of them are listed by WIR 2001. Their efforts are linked mainly at the elimination of technological barriers, securing quality standards at suppliers, linking them into their own information network. Sometimes, in case FIEs like Suzuki actively search for suppliers financial support, advantageous payment conditions are also provided. Suzuki, and a few others largely influenced government policy in setting up and develop cluster-type cooperation networks. This is their strongest long term commitment to develop local supplier roots.

Active FIEs use by definition public announcements and every other available tool of supplier recruitment. Their primary interest to eliminate technology gaps even through provision of proprietary product know-how (although, the typical technology and sophistication level of suppliers is usually so low that there is little need for that). Product designs, blueprints and samples are submitted, and there is also regular technical consulting. Collaboration in R and D is scarce, mainly because of the low level of sophistication of purchased goods. There are some instances, though. The provision of machinery and equipment to suppliers is not very frequent: it usually includes only a few key machines that are necessary for securing quality. They also support the establishment of adequate quality control. Talking about the formation of "supplier clubs, or supporting spin-offs is rather early now, though the cluster development plans contain such plans. Many FIEs signed local Supplier Chartas, an intent declaration of linkage development, which was urged by the Hungarian government.

Among the possible different training schemes sending teams of experts to suppliers to provide in-plant training seems to be a frequently used tool. This is also the channel of know-how transfer for management. Information sharing

is still not frequent. Major FIEs and integrator firms do share information, but SMEs not. The cluster type development may produce new forums for information exchange. Giving of financial support through any means happens only in the case of the very few strongest interested FIEs.

## 5. The latest empirical and case study evidence on linkages

The above analysis of the Hungarian linkage promotion package revealed the fact that the first years of operation did not bring a breakthrough, and the new system is still under development. It was therefore rather difficult to find matching case study evidence, that is case studies that contain some information on the usage of this particular development program. There is plenty of evidence on linkages for example Szanyi – Tari (2000) or Habuda – Szalavetz (2001) based their research on case studies. Here we summarize the findings of a new paper on linkages (ÚT-EUROCON BT 2001) containing interesting case studies. Two interesting empirical surveys were conducted in the topic in 2001. Réthi (2001) interviewed 25 suppliers, GM (2001) 40 TNCs about supplier linkages.

The two empirical surveys (Réthi 2001, GM 2001) that focus on the opposite sides of the linkages agree that the extent of Hungarian suppliers role in FIEs activity is considerable, but relatively low. It lags far behind the level experienced in developed countries, especially if we do not consider foreign owned suppliers. On the other hand, it is markedly higher, than in the case of developing countries. They also agree, that the tendency is an increase, but the barriers on the side of Hungarian would-be suppliers are considerable, especially for SMEs.

From the side of the 40 largest TNCs' affiliates GM (2001) identified a number of problems. There were only two out of the 40 FIEs which had the right to decide on local purchases on their own. Large scale sourcing is organized in the headquarters (or at least contracts are to be approved), the possibly accessible share of procurement is currently below 20 % of the turnover, end even lower (5-6 % on average) if we exclude services not tightly bound to the core business (cleaning, catering, etc.). There are some well known barriers of delivery on the side of suppliers: quality, adequate technology, capacity constraints, reliable delivery, lack of sufficient capital for financing current expenses and suppliers' failure to share common management values with FIEs. This later barrier relates for example to the continuous search for improvements and cutting costs. All these problems were identified also by Réthi (2001).

Réthi (2001) clearly identified the existence and strengthening of two supplier tiers, and concluded that they were in fairly different position as regards potential supplies to FIEs. SMEs have practically no chance in their current status to directly join FIEs networks. Due to their small size, inadequate technology and know-how, limited managerial capabilities their operation is concentrated rather on the short-term decisions. They are simply not strong enough to afford longer-term cooperation links. Still, they are present, and they are able to capture a share in deliveries even through short-term strategies.

As far as medium-sized Hungarian companies are concerned (the integrators), the same above mentioned problems still hold for most of them, but their capabilities are significantly better, and they can successfully manage the shortcomings. Their position was successfully stabilized during the transition process. They also have ambitious development plans to eliminate the problem sources through the use of different sources: mainly own sources and state assistance (Réthi 2001, p.78). Both studies mention positive examples of FIEs direct supports (technology, finance, know-how) to suppliers, but the number of these companies is rather limited. More typical is the tendency of isolation, Réthi found that foreign owned suppliers unilaterally depended from assembler FIEs, and had almost no supplier contacts to other companies in Hungary.

ÚT-EUROCON (2001) describes the supplier programs of three FIE integrators. Mátrai Erőmű Rt. is a foreign owned power generation plant which carries out a large-scale reconstruction program with the help of Hungarian partners. Power generation equipment was one of the large scale cooperation products of the Hungarian electrical industry. After the transition cooperation network was largely destroyed, but most recent tendencies show a recreation of the branch under the integration of Ganz and Transelektro (Szanyi – Tari 2000). The team organized for Mátrai Erőmű reconstruction includes traditional Hungarian suppliers, as well as the privatized ones: ABB and Siemens, and a few other TNCs. Mátrai Erőmű prepared a detailed questionnaire for potential SME suppliers and through the local SME promotion network conditions of delivery were circulated among potential participants. Match making was further supported by the local Enterprise Development Fund's nationwide conference on supplies opportunities. As a result of the efforts a list of 242 potential suppliers was prepared. Unfortunately, it is not clear, how many of them were actually contracted.

Japanese first tier automotive supplier Denso also actively searched for Hungarian suppliers. The company has a number of Hungarian, and more EU suppliers. Because Denso is rather cost sensitive, it continuously searches for new cheaper suppliers. This would mean opportunities for Hungarian SMEs. Denso developed and uses a strict multilevel evaluation program. Denso started recruitment with a meeting of some 100 firms of the nearby region. The products

were introduced, and technical parameters set for those parts that could be purchased locally. Next potential suppliers made offers that were evaluated. Denso staff visited promising companies thereafter. After receiving positive feedback a first batch of sample production is ordered. In case of more sophisticated products an investigation in the Japan Headquarters follows. Not only quality, but durability is also tested: a fairly time consuming procedure. After positive signal from the lab, Denso visits the supplier again checks equipment, company management and finance from the point of view of regular and reliable delivery at constant quality. After these conditions were met the supplier may be contracted, if the parties can agree about sequencing, quantities, deadlines and price, which is usually not very high. In fact, low prices are counterbalanced by large-scale batches that make production profitable. Only a few firms qualified, but Denso believes that through substantial investments in equipment, measuring devices and in quality control systems, suppliers technology level can be upgraded to the required level. Unfortunately, no mention was made if Denso also actively supported potential partners' efforts.

Rába Rt was the third case study in ÚT- EUROCON (2001), a majority Hungarian owned integrator firm producing various truck parts including diesel engines and shafts. The company worked with over 1000 suppliers. The imported foreign share of supplies was 25-30 %, and there are also FIEs delivering to Rába. Some important subassemblies were produced by some own affiliates of the company. These were former workshops of Rába that became part of a holding-type network around Rába, that was established during the privatization process. Rába does a lot of efforts to support members of the holding, but is not powerful enough to go beyond this group of firms. Besides traditional Hungarian suppliers (with their problems) Rába also searched for new partners, especially in spatially more distant locations of Eastern Hungary, where it had no traditional supplier links. Rába faced similar difficulties than FIEs: only 5 % of potential suppliers could qualify technically, and a mere 3 % could offer competitive prices and became supplier of Rába. This case study also revealed a weakness of the Hungarian integrator firm. It seemed, that the position of the first tier firm largely determines second tier companies (SMEs) chances of success. Rába was frequently required flexible response to market changes, sudden deliveries, or cancellations made production and capacity utilization difficult. It caused for second tier, very much dependent on Rába deliveries suppliers even greater troubles.

Because of the uncertainties Rába also launched a supplier development program, like Suzuki. An agreement and memorandum was signed with the aim of supporting SMEs and other suppliers participating in the Rába supplier network. The support will be provided by Rába, as well as by some local enterprise development agencies. Funding comes partially from local and state sources. Provided services include auditing of suppliers, financial support for continuous production and product changes, technological development, supporting quality control, logistics and management, marketing, establishment of transitory employment association.

## 6. Attempts at modeling horizontal spillover effects

Mickiewicz et al. (2000) used sectoral data of various Central and Eastern European countries. They found that it was only Hungary, the employment structure was already comparable with the most developed European "North" that increased its ability to absorb positive spillovers. The authors were unable to detect consistent effects on employment and wages. But short run productivity growth and investment activity was affected by the presence of foreign companies. This finding is also supported by our previous analysis. Mickiewicz et al. (2000) conclude that FIE may be instrumental in achieving short-term efficiency gains by improving allocation of resources, even without the necessity of large scale investment. In the longer run the important gain of FIE presence may consist of better access to financial resources, which facilitate investment and create basis for sustainable growth.

Novák (2001) used Hungarian balance sheet data for 1993-1998. He assessed the efficiency impact of FDI on production and on competitors. FIEs increased their efficiency faster than domestic firms, but the difference declined over time. When corrected the data for the endogeneity effect of FDI he observed that by the end of the period local firms increased their efficiency faster than FIEs. The evaluation of spillover effects (via the use of fixed effects framework) provided the result that the only important determinant of output given size and ownership was the presence of foreign firms at the industry level. He concluded that different spillover effects similarly helped domestic and foreign firms, with the exception of the level of foreign penetration. In branches of high foreign presence FIEs tended to increase productivity more than domestic firms. This result matches the empirical observation of Jansik (2001) who stated, that market concentration and the level of foreign penetration were strong explanatory factors of FDI in food industry.

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