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Possible Networks of Suppliers and Industrial Cooperation in the Central Transdanubian Region

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Possible Networks of Suppliers and Industrial Cooperation in the Cenral Transdanubian Region

Tibor DÕRY

***Abstract**: One of the key issues of the formation of industrial districts is the intensity level of co-operation and subcontractor relations between companies settled down in the region. This lecture is seeking the answer to the question of how the Hungarian companies judge over their subcontractor relations after switching over to market economy, what kind of experiences they have on the preparedness of the local workforce and how they appreciate their co-operation with the local governments and the chambers. The authors attempt to establish the possible clusters of the forming industrial district based on the empirical survey made in Summer 1998 in Central Transdanubia, the region attracted the most of the operating capital investments after the capital city.*

1. Industrial districts and subcontractor relations - a theoretical outlook

The history of the formation of industrial spaces was one of the central issues of the Hungarian researchers already in the eighties (Enyedi-Rechnitzer 1987, Korompai 1991, Nikodémus 1991). However no practical need has emerged so far from the side of the spatial development for the clarification of the *structure of innovation areas, the complex process of up-to-date industrial transformation and the functional spatial distribution of flexible production systems* for the case of a domestic area or region.

The relating international literature many times introduces the *formation of industrial districts* in fairly one-sided way, through the global success of technology policy (Pyke-Sengenberger 1992, Camagni 1995). Similarly the survey of innovation processes arising out of the corporate structure of multinational companies or - as a counterpoint to it – out of the regional self-development based on small-and medium sized businesses falls into the background (Nikodémus-Ruttkay 1994).

It was first Marshall (1975) who laid special emphasis on the role of regional factors, on the economic advantages arising out of the spatial economic agglomerations. The success story of the businesses of a number of regions (Silicon Valley, Road 128 in Boston, M4 corridor) prove that scattered islands of regional integration processes are able to achieve outstanding economic results. Obviously the rising regions of the developed industrial states – within that of the European Union – also consider the listed “success regions” as examples to be followed. It should be stated however that Baden-Württemberg, the “Third Italy” as well as Grenoble’s and Montpellier’s technopolis in France has shown totally different course of development-growth from each other. Because of the complex combination of factors it is impossible however to find an unambiguously successful recipe for the reproduction of the processes on the basis of the economic development experiments based on the rapid economic growth of small and medium sized businesses. Namely for the rising regions the *economic success as a consequence of the fortunate combination of modernising elements of various origin and nature* has brought the reputation (Horváth 1993 and 1997).

It is known in the literature of economics that the growth of processing industries has a positive effect on the *overall speed of economic growth.* We can state that because the growth of the output of the processing industries has a beneficial effect on the speed of growth of productivity even within the industry, and indirectly also contributes to the increase of other sectors including the service sector. The surplus workforce will be disappearing in an ever increasing rate as the effect of the increase of processing industries, and the increase will also make it possible for the goods "to be pumped" into the consumption to increase ever more. Nevertheless it is generally true that industrialisation gives the technological changes a higher speed in the whole economy (Káldor, 1989).

When looking for the causes of the speed of growth of the output of processing industries it is advised to consider the problem in two phases: from the standpoint of the *resources of demand* on one hand and the *factors determining the possible supply* on the other. Accordingly three resources of the demand can be distinguished: *consumption, development of domestic investments and net export.*

Investigating the effect of these factors in line with Káldor (1989) we can state from the viewpoint of consumption that the increase of industrial production brings the increase of real income with itself, and it will increase in turn the speed of increase of demand towards industrial goods. The more significant explanation of the increase of demand is given however by capital investments. Namely the increased capacities as a consequence of the investments will increase the speed of demand towards the products of that sector by itself, thus producing the incentives and means of further expansion. And when investigating the third factor of increasing the demand we can state based on the experiences of a number of rising countries that the import-substitution process of consumer goods is gradually expanding and the phase of expansive development is terminated thereby. In the second phase the country will become net exporter of the consumer goods of processing industries in an ever increasing rate. This is followed by the import substitution of capital goods, and in the fourth phase of the development the positive balance of capital export of the country can be given a high probability.

From the side of supply two basic *growth barriers* are recorded in the respective literature: the *product barrier* and the *workforce barrier.* With the growth of production the industrial sectors takes more and more products and services produced outside the processing industries, but – parallel with it – the demand for import increases considerable even despite import substitution, and in turn it will result in the deterioration of the balance of payment.

1.1. Actuality of the theory of industrial districts in Hungary

The actuality of the described economic reasoning is given by the industrial production of significant rate and – parallel with it – the growth of export, the outstanding rate of investment activity, as well as the increased demand towards well trained workforce in one of the most dynamically developing regions of Hungary, Central Transdanubia. When analysing the effect of the above listed factors of development it can be stated that nearly the sole "driving force" of economic growth in Central Transdanubia has been the consistently high and ever increasing level of export ratio. The local, regional consumption plays a negligible role in the control of this process, while the ratio of domestic investments is only a fraction of the investment directed from foreign headquarters. The economic successes of the region are represented

unambiguously by the ever increasing rate of the output of the new plants, as well as the increase of productivity experienced in these businesses of limited number (their number is not more than a dozen)[1]. Because of these businesses the number of unemployed has sunk to almost to the natural rate, and the demand towards workforce makes it necessary for the hundreds of workers to commute day after day from an ever increasing circle. Moreover it can be forecasted that the demands towards certain professions will be the barriers for further development of the region.

With the large-scale macro-economical analysis of the phenomena observed in the region it can be stated that the tendency of the increase of the regional economy is constantly positive, and – thanks to the commenced and the finished investments – further development of the regional economy can be reckoned with. In the further sections of the study we shall deal with analysing of conditions of the sustainable economic development (to use a fashionable expression), and within that we lay special emphasis on the possibility to extend the growth of production to other sectors, and the opportunities to increase the ratio of domestic sub-contracting.

We can namely rightfully suppose based on the experiences of the comprehensive economic-social survey conducted within the framework of Regional Development Strategy of Central Transdanubia that even in this region one can experience signs and economic results that may lead *on a longer term to the formation of "industrial district(s)"*[2] *described in the theoretical outlook.* Of course it is at the present moment no more than an initial assumption, and there are a number of factors including just the programs based on the named strategy that may have the greatest contribution to the formation of "*industrial districts" in Central Transdanubia.* However we call the attention – based on international experiences – that an extremely intensive development of *co-operation and subcontractor relations* is essential between the businesses of the region (domestic and foreign big, as well as small and medium sized businesses) for achieving the goal of long lasting and consistent economic success.

Giving a kind of background to this possible scenario we have pinpointed the businesses of the region which can be the dominant businesses of the subcontractor networks in our initial assumption. We did it because it is obvious that subcontractor relations play an important part in *technology transfer* and the *diffusion of innovation.* At the same time this relation system contributes to the increase of technical, management and organisational level of the subcontracting company, in addition the meeting the demand of the customer, and this is of utmost importance from the viewpoint of the development of the region and Hungary. Nevertheless it must also be stated that the individual subcontractors must also compete with each other in order to be able to remain in the market, and that they have to meet high quality requirements[3].

Nowadays the increase of the role of subcontractors (especially within the frames of the subcontractor target program co-ordinated by the Ministry of Economy), as well as the increase of the ratio of added domestic production value is spoken about in Hungary very intensively. In this context it is not clear many times what these inter-company relations really mean. In line with the definition of the European Statistical (EUROSTAT),

- in the subcontractor relations *the customer participates in the formation of the product, it supplies detailed technical documentation* or *well-defined specification* for the manufacturer
- the customer is responsible for the distribution of the product in the way that

- the subcontractor is not entitled to sell the product to another consumer till the expiration of the contract and/or
- after installing the component the end product will bear the trademark of customer.

We are of the opinion that for those interested in regional development (institutions, economic organisations, etc.) the judgement over subcontractor relations is unambiguous. Namely the economic interests of the region is served in the best way if subcontractors supplying the required base material end semi-finished products needed for the products and services are available locally, or at least within the region. In line with the opinion of the researchers the multinational companies that settled in Hungary will not become "cathedrals in the desert" only if they manage finding local suppliers, subcontractors (in the region, or at least those settled down in Hungary), embedding them thereby and binding them to the local economy with many ties. In a fortunate case they will be therefore able to obtain the base materials and services needed for the production or at least a part of it from local sources. It will merely depend on the fact whether they will be able to find businesses in relation to the given task that can substitute the previous subcontractor[4] (based on a decision brought merely on the principle of result, having only profit interests in mind). If there are or there will be domestic businesses that will be able to become active partners preferably in large numbers and in the key areas then we do not have to think on the probability any longer that the foreign owner – based on its unilateral decision - will relocate the factory to a lower wage-level country. In such a case it will be namely also interested in staying in Hungary, since the business will "embed" into the domestic and regional economy, that it would be able to open a new plant in another part of the world only through additional investments of significant amount and risks.

We, as producers of the regional development strategy consider it utmost important to accept that kind of thinking, because it will be possible only through it that the responsible decision-makers, experts in governments and regional governments could handle the programs connected with subcontracting properly and could do their utmost for the proper development of the conditions of business assistance both in local and regional levels.

Within the national economy of Hungary two ways can be seen from the viewpoint of the development of the economy, and these ways differ from each other quite considerably (Matolcsy, 1997). The first is mainly based on the innovation role of the foreign investments, on the role it plays in integration and in strengthening the productivity, while the second possible way is also equally based - in addition to that - on the businesses of domestic ownership, within that on the sector of small and medium-sized businesses. The first way is characterised by the outstanding *innovation centres* (Budapest and its agglomeration, Northwest-Hungary), *by increased productivity in the centres, the increase of regional differences,* as well as *increased financial unbalance.* The second way contains the *coupling* of innovation centres *with each other, their surrounding with networks,* and the strengthening of the *small and medium sized businesses* of domestic ownership. The *new jobs so created* will also help solving the employment problem.

2. The development of subcontractor relations in Hungary after the change of regime

On analysing the position of domestic subcontracting we can state that the events after the change of regime negatively influenced the otherwise not very extensive subcontractor relations within the domestic market from a variety of standpoints. Three conditions had predominant role out of them that *have brought the subcontractors to a disadvantageous position* against the pure wage work that have anyhow been more popular (Bagó, 1991):

1. The sectors mainly involved in subcontractor relations have been affected by the *recession of industrial production* extremely badly, because formerly they delivered a significant part of their products to the former COMECON countries.
2. In order to safeguard their size and the level of employment many big companies have eliminated their former *partner relations,* and wanting a repeated autarchy they have even dismantled such subcontractors who had been advantageous for them from the standpoint of specialisation, economy and competitiveness.
3. The quick (too quick) *liberalisation of import* also contributed to the ousting of the domestic subcontractors to a large degree.

Stabile economic environment is needed for the development of lasting subcontractor relations. The management of companies pursued their activities in the first couple of years after the change of regime under extremely uncertain conditions in most occasions, waiting for the privatisation and the hardly foreseeable steps of institutions stepping up in the role of the owner. At the same time the opportunities of subcontracting were widely extended by the abolition of the former barriers, the presence of foreign capital and also by the multinational companies stepping into the stage one by one.

After analysing the previous domestic and international experiences we can state if analysing the future tendencies that the domestic *small and medium sized businesses* in the region may by no means reckon with getting to the leading position of the *subcontracting pyramid* at once, or even in medium term. They *do not get* initially *development contracts* and long-term safe orders therefore owing to their quasi-monopolistic position. However they can strive with reason of *becoming sub-subcontractors of the direct subcontractors* and can connect themselves that way to the system of such companies with extensive international experiences. However they have any chance for it in the case of technically really sensitive components like engine parts only if they have a foreign partner with well established market connections beside/behind them.

This future vision is naturally a big step forward compared to the previous situation, because the subcontractors have to master the production, organisational and technological methods required by the customers, they have to introduce several times new products and new production processes to which they get expert and financial backing from their partners. These changes – the *necessity of continuous innovation* – undoubtedly serve for the expansion of new production methods in Hungary, the domestic modernisation, and they help achieving the position in the long run that the Hungarian partners can also be considered in the international markets as partners of equal right.

It can be stated based on the study “The Analysis of Structural Changes in Industry” made by the former Ministry of Industry and Commerce[5] in December 1994 that in most branches of

processing industries (except for clothing industry) the role and weight of subcontracting is smaller than in the advanced market economies. An essential part of *subcontractor relations were liquidated* as a consequence of the big *recession of* industrial *production* following the change of regime, while new relations formed only in limited numbers, mainly in areas of *automotive parts production and wage work in clothing industry.*

The selection of subcontractors may be influenced by a variety of standpoints of which *the consistently high level quality and the exact delivery conditions ("just in time")* play predominant role (Chart No. 1).

Chart No. 1. Order of importance of the factors determining the selection of subcontractors

Factor	Engineering	Information technology	Road vehicle production	Clothing industry
Quality	1	1	1	1-2
Delivery conditions	2	3	4-5	3-4
Price	3-5	5	2	1-2
Flexibility	3-5	2	4-5	3-4
Development potential	3-5	6	6	6
Professional reputation	6	4	3	5

Note: 1- of utmost importance, 6 – least important

Resource: Román (1995): Subcontracting in the Processing Industries

3. Experiences of company surveys

3.1. The survey

We have initiated empirical survey for the justification of the theoretical hypothesises set forth in the introduction in the circle of big and medium sized companies of Central Transdanubia. Our aim has been to analyse the demand side that potentially developing towards subcontracting. Within its frames we wished to get answer to the question: what are the necessary factors for the domestic and multinational big companies of the region of having more domestic subcontractors, and what kind of experiences do the interviewed companies have regarding economic co-operation.

We intended to include in the survey such *production businesses* of which *the share capital* surpasses Forint *100 million, and employing* at least *100 persons*[6]. One third of the companies (15) meeting these criteria refused to answer referring to various reasons. Finally we have made our analysis[8] on the basis of the experiences gained on pursuing in-depth interviews *with the manager*[7] *of 27 businesses.* The analysis also contains – in addition to the analysis of subcontractor relations – the opinions on labour management, company developments, judgement on the activity of local governments and economic chambers, as well as those connected with joining the EU.

3.2. Subcontractor relations

In the course of examining the subcontractor relations – concentrating on the region of Central Transdanubia – the most vital question has been the extent by which the significance of regional market grows in the procurement and sale connections of the companies. We have experienced in the case of multinational companies that they are in contact regarding procurement and sale mainly with foreign partners (the business partners of their parent companies), while some of the previously state-owned companies (e.g. IKARUS MÓR PART PRODUCING Kft –hereinafter referred to as IMAG -) has maintained its previous domestic relations, but its opening towards West (towards European Union) has become predominant also with them. Foreign partners enjoy nearly 100 % of the sale market in the case of multinationals, and within that the dominance of German and American companies is typical. The same tendency also exists for the procurement and subcontracting relations, although they also have domestic subcontractors in a negligible rate. This latter means first of all the use of *services not connected directly with the production:* book-keeping and auditing services, use of banking services, plant catering, safeguard services and in some cases also the maintenance is carried out through local companies or those located in the region.

A number of big industrial companies (e.g. Magyar Aluminium Rt, ALCOA-KÖFÉM) possess a just-developing network in Central Transdanubia. The development of real subcontractor networks is evidenced by the fact that a business uses the product of one of its plants as base material for the other plant. They try furthermore to develop the inter-plant co-operation which, in turn, means that information system, as well as the labour management will become more efficient. On of the goals of the multinational companies and the cash-rich big domestic companies (VIDEOTON, MAL) is to establish Central European bases, in addition to the already operating ones.

In addition to the co-operation contacts between domestic plants of the same company there is a demand on behalf of the companies of foreign interest towards strengthening the domestic subcontractor relations. Alcoa Fujikura Limited (AFL) for example has been continuously seeking Hungarian subcontractors with the aim of co-operation, but they were unable as yet to find a partner that could meet its demands. They tried to get in contact with a couple of small businesses in the area, without any success however so far. The reason behind it is that the prospective subcontractors they have investigated so far could not meet the company's expectation regarding *quality,* but first of all *quantity.* For the companies with activity connected to the automotive industry technical requirements are represented by the conformity with international quality standards. The *lack of capital and capacity* of the neighbouring businesses constitutes the main obstacle to meeting the quantity requirements.

The companies have expressed the following specific expectations towards their possible Hungarian subcontractors (they can be considered of general validity in the today's economic life):

- meeting the quantity requirements,
- quality assurance system,
- adequate technical level, the establishment of computer technology,
- up-to-date management, the utilisation of organisational and management knowledge,
- adequate skill,
- cost estimation and post-calculation,

- independence.

Based on the experiences of the interviewed businesses meeting the listed requirements causes a general problem to the companies (in the second and third line) striving to become subcontractors. With the aid of the customer company it may become possible to introduce up-to-date quality assurance systems, and the establishment of the adequate information system is also a base requirement. The costs of all this must naturally be borne by the subcontractor, and in many instances it surpasses their capabilities. Tasks that the subcontractor has to solve itself are in the field of adequate skill, to obtain economic, managerial and marketing knowledge and expertise in process organisation procedures.

The question whether the Hungarian business mentality is competitive has been emerged in the course of the interviews. In line with the experiences the domestic companies do not lay adequate emphasis on management training, and therefore meeting the market demands and flexibly handling the rapidly changing conditions causes troubles to them. In spite of these existing deficiencies we may state that the attitude, knowledge and market experiences of domestic business persons is progressing into a positive direction, and there is not to be ashamed compared to their European competitors working under much more favourable (first of all macro-economic) fringe conditions.

In contrast with the experiences of the multinational companies the domestic companies in the sample (e.g. VIDEOTON, IMAG) have significant domestic subcontracting relations. IMAG is a traditional Hungarian company and they know therefore the economic-market opportunities to be found in the region of Central Transdanubia, and they strive exploiting them. It turned out from the answer to our question inquiring after the importance of the regional market that this is becoming more and more predominant for a number of companies, and they co-operate typically with small businesses located in the neighbouring villages. For example, according to the judgement of IMAG *the obstacle to increasing the circle of subcontractors* is that the small businesses have difficulty in meeting the competitive conditions, and their lack of capital determines not only the volume of production but also their *technological and human developments.*

3.3. Summary of the experiences

The most important common characteristic of the industrial areas developing in Central Transdanubia is that the activity of all foreign big companies settled down here is connected with automotive production in a way. The companies are involved in various partial fields of automotive production within their activity, so they are not necessarily competitors to each other.

Their connection to the same branch of industry, the partial lack of competition and the concentration of the companies in a comparatively small area (within one settlement like Mór, Székesfehérvar, Veszprém, Tatabánya) makes it possible in our forecast that a group ("cluster") specialised on automotive production can develop in Central Transdanubia on medium, but rather on long term. However to achieve that the further increase of the intensity of co-operation between the companies is necessary, although presently it is not yet a commonly observable practice. Outside of a couple of exceptions we did not find example for seeking relation within the same town or region. The mentality of the companies is characterised by strong *orientation towards foreign markets,* while for the relation towards

neighbouring companies the policy of *"peaceful co-existence"* is typical. After all it can be understood, because the companies – especially the multinational ones – are looking for foreign sale markets first of all, their main goal is – in addition to satisfying the need of the Hungarian market that has relatively small capacity – to increase their participation in the world market.
To obtain the workforce is not yet an extraordinary big problem, but it is markedly increasing. In this context the companies are unambiguously competitors to each other. Labour management – to maintain the high qualitative and performance requirements – is of vital importance for the multinationals, it is one of the factors of opening towards East. Since all the companies accepted the strategy of dynamic growth it can be suspected that the opportunities of inner, endogenous growth are available. That way the growth of the businesses and the extension of their activities may be hindered by the *narrow labour supply of the region,* and that is a common problem that requires common handling of the conflict involving all interested parties.

4. Possible clusters of the forming industrial district in Central Transdanubia

It is not merely a scientific question which clusters and groups of the economy will be appearing in a given region. This approach may also offer assistance for the decision-makers of the region (both private and common sector). In the course of this the regional economy is investigated not only in sectorial approach, but by determining the clusters the investigation will give such a support to the players of the region with the aid of which they can more easily bring *strategic and tactical decisions of a new nature,* and *can direct* the development of the regional economy *to a new development path* (Hrubi, 1994).
The sectorial clusters – according to Lasuén – concentrate also in space, since the inside and outside savings will increase as a result of the economic growth appearing as series of technological changes, while thanks to the inter-company relations the market and production complementary effects will be extended. *The close inter-dependency of the sectorial clusters* goes hand-in-hand with the formation of regional clusters generated by the course of urbanisation the development process based on innovations, and they create the preconditions of *regional growth* (Rechnitzer, 1994).
We shall briefly discuss in the following couple of points those clusters that seem to be outlined in Central Transdanubia or may be strengthened in the future in our opinion, on the basis of our empirical studies, investigations based on interviewing companies, as well as evaluating statistical data.

4.1. Automotive component and vehicle industry cluster

The formation of this cluster is the most likely in the region, since automotive components production (e.g. Bakony Works) and vehicle production (e.g. Ikarus) had significant traditions here even before changing the regime. However we can demonstrate the extension of the role of the sector by the appearance of Western investors in the 90's, because a number of subcontractors of Suzuki - that has settled down in Esztergom (near to the capital Budapest) –

are located in this region, and the list could be extended by the businesses of automotive industry settled down in Mór, as well as the Ford factory in Székesfehérvár.
Its elements:

- the automotive factories settled down in the Western part of Hungary (Transdanubia), together with their direct subcontractors,
- domestic and foreign subcontractors of the (generally foreign) direct subcontractors belonging to the secondary or tertiary line of automotive production
- productive service providers connected to the automotive industry and the engineering industry in general, e.g. maintenance, research and development, IT businesses and other contractors.

In line with the international industry development tendencies it can be stated that the strengthening of the cluster *will carry on* in the future, because the Western vehicle manufacturers will further relocate the production phases of high labour content to "countries of lower wage costs", and in our opinion the really capital intensive development will also be appearing in the region sooner or later. In this context the AUDI engine development centre to be established in Győr and the Philips research base planned for the region are significant signals.

4.2. Electronic and electro-technical industry cluster

The forming cluster is smaller both regarding its character and size than the automotive components and vehicle industry cluster discussed in the previous point. Electronic and electro-technical businesses will be appearing rather as islands, with the main centres located in Székesfehérvár, Tatabánya and Veszprém. Naturally the radiation effect of these centres can be felt nearly in the whole region.
Its elements:

- outstanding and central role may be played by VIDEOTON and the *integrated production services* offered by it. The active expansion policy of the holding in the region serves the same purpose
- the international businesses settled down in the region (e.g. IBM, Philips), with the subcontractors connected to them.

The listed businesses and those that will settle down in the future as well as the smaller service companies connected to them play a determining role in the development of the cluster. Having in mind that the Hungarian electronic and informatics experts can excellently hold out with the leading companies of the world, the further dynamic growth of the sector can be reckoned with. It should be noted however that investments of extremely large amounts are needed in this field, first of all regarding production, since it is dominated by a couple of international concerns (e.g. hardware production). However the various informatic, programming and testing services offer opportunities also for the domestic small and medium-sized businesses for connecting to the cluster.

4.3. Chemical industry, plastic processing

One could take the risk of indicating also chemical industry/plastic processing as independent cluster, it is important however to emphasise the heavy links of the sector with the automotive industry and the industry of electronics.
Its base is constituted first of all by the businesses connected to Veszprém and the region.

5. Proposals, recommendations

In line with the lessons that can be drawn based on the survey of the theoretical background of subcontracting, as well as on the case studies it is essential for the development of the region that *many-sided co-operation as well as developed and extensive subcontractor relations and their networks* should be formed.
It is important to repeatedly stress that absolutely meeting the *reliability, perfect quality, delivery terms* and other requirements are essential criteria in the contemporary industry. With prices based on increasing productivity and decreasing costs the productivity can be maintained namely only by continuous developments and by the utilisation of various forms of organisational learning. In an opposite case their subcontracting position and consequently their existence may be in jeopardy.
Earlier researches and the empirical investigations made by us have proved that handling of regional subcontractor relations and co-operations, as well as helping the networks that are to be organised must be handled as *independent program* even within the regional development strategy.
To do that it seems however unavoidable to *have an appropriate picture on the position of subcontractors and subcontractor relations.* This work has already started in part, because the centres and foundations belonging to the Hungarian Foundation for Enterprise Promotion (MVA) joining the subcontractor target programs – initiated with the co-ordination of the former Ministry of Industry, Commerce and Tourism and then continued by the Ministry of Economy – are now making audits on the businesses that can be potentially considered as subcontractors. It is a kind of *screening activity,* to be followed by the professional (first of all training and quality assurance) preparation of the selected potential subcontractor companies.
Strategic aims of the subcontractor program of MVA are:
- increase of the products suitable for export, import substitution
- increase of the added value to the products of domestic production
- increase of the “ratio” of innovation and research-development in the products of domestic production
- strengthen the subcontractor position of small and medium sized businesses
- creating and maintaining jobs.

It is essential however to state that the mentioned target program embraces only three sectors (machinery and vehicle industry, metal processing; electronic and electro-technical industry; as well as plastic and rubber industry), to be extended later to other sectors according to plan. Therefore we consider it very important within the frames of regional development and based on the organizations belonging to the chambers and the network of MVA that companies and within that specially small and medium sized businesses be given information on the potential partners, on the system of requirements of those seeking subcontractors. Training, consultancy,

exchange of experiences must be organized connected with it, utilizing the international forums of partner procurement available also for Hungary.

Taking the European programs into consideration it is necessary to monitor not only in national level, but also in local one the *positive and negative effects* caused by the regulations and rules planned to be introduced.

We take it especially important to adapt the *"Regional Innovation Strategies" (RIS)* elaborated in the European Union and to work it out in the domestic regions, since according to experiences their effects are appearing by the extension and strengthening of the innovation potential of the region even in short term.

It is also worth considering to assist – with the intervention and co-operation of the chambers and in given cases with their financial support - the *trade associations* of the businesses that can be considered in case of subcontracting, and the organizations to be established by the present and the potential subcontractors; *to build up regional networks of groups of companies,* which could offer *integration framework* for the small and medium-sized businesses in line with the regional structure of the chambers and separated within that according to sectors. In line with international experiences *the formal and informal relations* - developing between individual businesses and *operating on market conditions* - constitute the main base of building and developing subcontractor relations and networks. Therefore the organisations interested in regional development strategies can fill their position in the most efficient way if they are able to organise and carry out *communication, forming connections and transferring information between businesses,* and also *education and professional further training* based on specific needs.

Endnotes

[1] We note that it is nearly exclusively the domestic plans of just a couple of multinational companies (IBM, PHILIPS, AUDI, SUZUKI, TUNGSRAM etc.) responsible for the increase of gross domestic product (GDP) seen in Hungary in the recent one-two years (Matolcsy, 1997). This would not be a problem alone, but for the extension of their production these international businesses do not take the services of Hungarian businesses. They only constitute island-like growth poles and they do not help the Hungarian region for being more dynamic.

[2] In line with the original definition of Marshall the industrial district is a production system that concentrated in a given area the element of which are a large number of small and medium sized businesses belonging to the same sector, specialised on different phases of the production process and are in close work divisional relation with each other. According to more recent researches this definition is complemented with the requirement of the existence of the complex network of social, political and cultural relations that extends beyond the economic co-operation of narrower sense. This goes hand-in-hand with the creation of formal and informal organisations providing joint services and with the extreme intensity of co-operations between the players (Dusek, 1997).

[3] The existence of quality assurance certificate and the audited quality assurance system is an essential requirement ("springboard") for the commencement of subcontracting negotiations, with all other conditions coming only after that .

[4] Naturally all this meet the opposition of the previous subcontractors. They will do everything possible in order to be able to remain subcontractors of the given factory. Interesting is the example of German subcontracting companies. They do not tolerate it very much that another foreign company could subcontract for e.g. BMW or Daimler-Benz, and they will try to do everything with the management of the named companies to maintain their beneficial position. Moreover they remain subcontractors even if this market segment brings loss to them. It can be seen also from this example how vital it is to be subcontractors of companies of big reputation. This is a kind of guarantee for the further partners, and the lost profit will be earned on them .

[5] Today Ministry of Economics.

[6] Selection of the sample happened from the database of Hoppenstedt Bonnier: The big and medium sized companies of Hungary 1998. In the region 42 businesses pursuing production have met the criteria determined by us.

[7] The interviewed businesses were the following: Ajka Kristály Üvegipari Kft., ALCOA-FUJIKURA LIMITED HUNGARY Kft, ARTESIN Kft. (ZYTEC Kft.), ASG Gépgyártó Kft., Bakony Mûvek

Autóalkatrészgyártó Rt., Balaton Bútorgyár Rt., BOWDEN Kft., Emerson Electric Magyarország Kft., Garzon Bútor Rt., GASZTROMETÁL Gép és Berendezésgyártó Rt., IBM Storage Products Kft., IKARUS MÓRI ALKATRÉSZGYÁRTÓ Kft., ITT Automotive Magyarországi Kft., Le Belier Magyarország Formaöntöde Rt., LEAR CORPORATION HUNGARY Kft., MACHER Gépészeti és Elektronikai Kft., Magyar Alumínium Rt., Magyar Suzuki Rt., Móritech Kft., NORIT Kozmetikai Kft., Payer Industries, PHILIPS Végszerelõ Központ Magyarország Kft., R&M ALUFE Fémszerkezeti Kft., ROBIX Hungary Kft., Székesfehérvári Metál Fék- és Köszörûgépgyár Rt., TULIPÁN Ruhaipari Rt., Uni Montex Kft., Videoton Holding Rt.

[8] Referring to the small number of samples the emphasis has been put on the remarks and proposals of the companies, since with such a low number of elements the use of statistical methods would distort the essence.

References

Bagó, E. (1991): A nagy- és kisvállalatok kapcsolata. Közgazdasági Szemle, 9. sz.

Camagni, R. P. (1995) The Concept of Innovative Milieu and its Relevance for Public Policies in European Lagging Regions. Papers in Regional Science: The Journal of the RSAI, 74, Number 4, pp. 317-340

Dusek, T. (1997): A területfejlesztés megújítási iránya, az ipari körzetek. In: Az ipar, a kereskedelem és az idegenforgalom regionális szintû fejlesztésének hazai feltételrendszere és alapvetõ harmonizációs feladatai az EU csatlakozásból adódóan. (kézirat), Készült az Ipari, Kereskedelmi és Idegenforgalmi Minisztérium megbízásából. MTA RKK NYUTI, Gyõr, pp. 1-18.

Enyedi, Gy. - Rechnitzer, J. (1987): Az innovációk tárbeli terjedése a magyar mezõgazdaságban. In: Tér és Társadalom, 4. sz. pp. 69-88.

Horváth (szerk.) (1993): Régiók és városok az olasz modernizációban. MTA RKK, Pécs p. 384.

Horváth, Gy. (szerk.) (1997): Régiók felemelkedése és hanyatlása. Regionális átalakulás a brit szigeteken. MTA RKK, Pécs p. 440.

Hrubi, L. (1994): A Dél-Dunántúl gazdaságszerkezete és ipara. In: Tér és Társadalom 1-2.sz. pp. 83-107.

Káldor, M. (1989): Az Egyesült Királyság lassú növekedésének okai. In: A gazdaságelmélet - gazdaságpolitika. KJK, Budapest pp. 156-186

Korompai, A. (1991): Innovációs parkok és terjedési folyamatok szerepe a területfejlesztésben (kézirat) p. 22.

Marshall, A. (1975) The early writings of Alfred Marshall. (Edited by Whitaker, P. M.) Macmillan, London

Matolcsy, Gy. (1997): Innováció és kis- és középvállalati fejlesztési stratégia. In: Tanulmányok a kis- és középvállalkozások fejlesztési stratégiájáról. OMFB, Budapest, pp. 13-41.

Nikodémus, A. - Ruttkay, É. (1994): A gazdasági modernizáció elemei a hazai regionális fejlõdésben. Kandidátusi értékezés, Budapest

Nikodémus, A. (1991): Az innovációterjedés földrajzi modelljei. In: Aula 1. sz.

Pyke, F. and Sengenberger, W. (1992) Industrial Districts and Local Economic Regeneration: Research and Policy Issues. ILO, Geneva

Rechnitzer, J. (1994): A regionális gazdasági növekedés elméletei. In: Fejezetek a regionális gazdaságtan tanulmányozásához (Szerk.: Rechnitzer), MTA RKK, Gyõr-Pécs, pp. 142-167.

Román, Z. (1995): Beszállítások a feldolgozóiparban. Közgazdasági Szemle 12. sz. pp. 1165-1176.