

UNIVERSITY OF MISKOLC
FACULTY OF ECONOMICS

ANDREA GUBIK

**THEORETICAL QUESTIONS AND
PRACTICAL EXPERIENCES
OF COOPERATION AMONG SMALL- AND
MEDIUM SIZED ENTERPRISES IN
BORSOD-ABAÚJ-ZEMPLÉN COUNTY**

PH.D. DISSERTATION THEORIES

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1. REVIEW OF THE RESEARCH TOPIC

Small- and medium sized enterprises receive more and more attention these days all over the world considering their economic, and their social importance. Economic processes and their fluctuations caused an increase in the uncertainty of economic decisions and appreciated flexibility on all fields of companies' management. The ever stronger competition and permanent change in circumstances forces the actors of the economy to renew themselves from time to time, to search for new methods and new solutions to their problems. Networking and the evolution of a broad scale of international relations among companies can be regarded as one of these innovative solutions.

Partnerships have always been playing an important role in the lives of the majority of the small- and medium sized enterprises, mainly because of the limited nature of their resources. But uncertainty accompanying changes and the requirement of enhanced flexibility brought about major changes both in the quality of company cooperation and in the circle of the participants.

The evolution and development of Hungarian small- and medium sized enterprises shows major differences from the international trends. This specialty is explained by several factors by the authors¹ (for example by historical traditions, and by socialisation inheritance of loose business faith, by the lack of the heritage effect, by the valuable nature of political relationships and their economic effects, etc.) Hungary's small-and medium sized enterprises show resemblance to neither the development process based on economic logic characteristic for the Western part of Europe, nor with the SME sector of Asian countries which is based on social traditions. Its evolution and development can be regarded as an organic process as its major fragment had evolved based on obligations after the changing of the Regime. On the other hand social traditions had not played major role in its development. All these factors determine the operation, attitudes and practice of the actors of the Hungarian SME sector.

All these specialties are of major importance even if Hungarian SME sector does not show major differences concerning statistical data from other European countries. This is the reason why we will have to be careful in using the results of international researches (for example Observatory of European SMEs, 2003). This is even more important in case of the data of the North-Hungarian Region.

Our research intends to fill in this gap, searching the answer for the question what type of work distribution specialties can be observed in the chosen circle of the small-and medium sized enterprises on the one hand, while on the other hand what kind of characteristic differences can be found compared to international surveys. Based on these researches we intend to answer the important question of whether the analysed circle of Hungarian entrepreneur had already managed to form real cooperation or not.

¹ The literature of the Dissertation Theories consists to references concerning this question.

2. RESEARCH BACKGROUND AND METHODOLOGY

I wrote my graduation thesis on the Hungarian development policy of small-and medium sized enterprises. Since then my attention turned to the analysis of companies' cooperation and networks of enterprises and the circumstances of these processes. I started my research in 2001 in the Doctoral School of Enterprise Theory and Practice. I was able to participate in two OTKA projects during my research which was a major help in work. One of them was the OTKA project 029862 titled "*new frontiers of globalisation theories – globality and sustainable development*" between 1999 and 2002 which was led by the late Professor Dr. László Tóth while the other was OTKA 043149 project running between 2004 and 2006 titled „*Globalisation - EU integration. Convergence strategies of Hungary*” led by Dr. Tóthné Dr. Szita Klára. FKFP 0015/2002 education and research program led by my present academic tutor was a further help in my research titled „*global enterprises and Hungarian SMEs micro-integration in Northern-Hungarian cross-border relationship, in connection with the Eastern enlargement of the EU*”.

During my research I concentrated on the literature concerned to be relevant by the best known representatives of the field of science. I thoroughly studied all the literature I used.

This was followed by a *survey based on my own questionnaire* and the statistical analysis of the data obtained through it. When making the questionnaire I used the principles of the Observatory of European SMEs (2003/5) in order to ensure my results will be comparable with the results of the surveys conducted in the EU-19. Some questions were borrowed from other relevant researches (from the Observatory of European SMEs 2003/5, Györffy, Pogátsa, Török, 2003) or were based on my own previous research results.

In my empirical work I used the questionnaire accomplished in the framework of our Doctoral Schools already mentioned FKFP 0015/2002. education and research project. The data basis constructed based on the results of the survey contains representative data according to employee number and field of activity of 217 small- and medium sized enterprises of Borsod-Abaúj-Zemplén county (10-249 employees). Furthermore, 16 micro enterprises' (1-9 employees) answers were also used, but only case of the questions concerning the subjective opinions of entrepreneurs about tendencies. In case of these questions I always guided the attention to treat these results with precaution. The county's structure of SMEs concerning the scale of enterprises shows major differences from neither national nor European statistics. If analysing only enterprises employing more than 10 people the distribution of small-and medium sized enterprises is 80-20 percent.

For the analyses of the data I used SPSS 14.0 software package. I analysed the sample by descriptive statistics, multi-variable analyses, cluster-, factor analyses and by correlation showing the strength of stochastic relationship among variables.

In order to be able to draw general conclusions based on my sample I paid special attention to the structure of my sample. I used the layered sample technique belonging to the group of random samples. The reliability of the sample was 95 percent, the sampling error $\pm 6,16$ percent. During the analysis I used pair wise method when treating missing values, I only used the full answers in case of any questions. In my research I considered 0,05 significance level to be relevant and gave the probability values by the distinct questions if they differed.

3. AIM OF THE RESEARCH

The aim of the dissertation is to show the present specialities of cooperation among small- and medium sized enterprises in Hungary. In order to reach this goal the following questions were intended to be answered:

What fragment of the county's small- and medium sized enterprises are involved in cooperation among companies during the period of the research? Which types of companies (scale and field of activity), and which fields of cooperation are characteristic for them?

What types of motivation and barriers to cooperation can be observed? What differences can be seen in connection with the scale and field of activity of companies?

Can positive relation be shown between the fact of being involved in cooperation among companies and their economic situation and performance? Can any difference be found between the cooperation ability and intention of stable and competitive companies and weaker enterprises?

Does participation in so called social networks, local communities influence the characteristics of cooperation?

To answer these questions we started from differing three groups of factors influencing cooperation in the framework of a closed conception:

1. The first factor is *intention to cooperate*, which embodies the entrepreneurs' willingness to participate in cooperation. According to us this is influenced by the following factors:
 - Processes working in the direction of company cooperation for example globalisation, or economic- and technological development. This work as pulling forces giving the *demand side* of cooperation.
 - Some characteristics of companies' cooperation (fields of activity, scale, etc.) and the entrepreneurs' attitude toward cooperation which can be regarded as the pushing forces of cooperation. These determine the *supply side* of cooperation together.
2. The second factor is made up of those expected or real *barriers* to cooperation which evolves from the characteristics of the companies, or the lack of these specialities, or from external reasons.
3. Finally, the third factor is made up of those economic- social- and cultural framework in which the first two factors can work. Factors like these are the quality of regulation circumstances, the system of institutions, the educational system or informal rules, norms, values and the system of tastes and preferences.

The Dissertation is made up of five parts:

1. In the first chapter the general increase of the role of small- and medium sized enterprises will be introduced and the actuality and timeliness of the theme will be explained. The importance, economic and social weight and growth of the small- and medium sized enterprises' sector will be shown by international (EU, USA, Japan) and domestic statistical data, and the introduction of the latest economic- and social tendencies.
2. The second chapter of the Dissertation introduces the theoretical aspects of cooperation among companies paying special attention treaty theories (concentrating on transaction cost theories), and evolutionary competence based theories. We will show the social relationships' role in forming economic relationships and will turn to the role of faith in organising economic relationships.
3. The third chapter typologies the possible ways of small- and medium sized enterprises' environmental adaptation and will introduce the types of companies' relationships (networks) according to their directions and geographical extent. We will focus on the possible roles small- and medium sized enterprises can play.
4. In the fourth chapter we analyse by using statistical methods the sample which is representative according to scale and activity standing at our disposal concerning Borsod-Abaúj-Zemplén County's small- and medium sized enterprises to be able to answer our questions.
5. Finally in the last chapter we conclude the new and novel observations of our research.

4. NEW AND NOVEL OBSERVATIONS OF THE RESEARCH

The new and novel observations of the research will be introduced – in the form of theses – grouped around four main points:

1. Experiences of the buyer-subcontractor relationship;
2. Experiences of the cooperation beyond traditional buyer-subcontractor relationship;
3. The interconnection between company performance and involvement in cooperation;
4. Characteristics of small-and medium sized enterprises embeddedness in the local environment.

4.1. THESES CONCERNING THE BUYER-SUBCONTRACTOR RELATIONSHIP

In the course of the research the *cooperation declared* by companies (when the company filling in the questionnaire declared involvement in cooperation) and *latent cooperation* were treated separately. Latent cooperation was analyzed by the characteristics of buyer-subcontractor relationships, their share, geographical distance and the time-horizon of the relationship.

Literature emphasizes the advantages of long run cooperation, because of the routines and the evolution of mutual faith, by which companies can realize economic benefits. A possible benefit of this kind can be the ever decreasing cost of processes.

According to our work hypothesis rational companies will form permanent partnerships as strategic decisions within a relatively narrow geographical area.

In order to be able to test this hypothesis the length of the surveyed companies' buyer-subcontractor relationships was analyzed, followed by filtering the age of companies to decide the permanent nature of these relationships by measuring the length of the relationships as a share (%) of the companies' age. It can be concluded based on these tests that there is a connection between the permanent natures of the surveyed companies' relationships: if a company decides to be involved in a permanent relationship, it is more likely to act so in all of its partnerships. This means companies tend to harvest the additional gains of cooperation as strategic decisions.

After this the buyer-subcontractor relationships were analysed according to their geographical concentration. According to our working hypothesis there is a connection the size of companies and the geographical concentration of their relationships and the geographical concentration and the permanent nature of cooperation.

Local markets are generally very important for the surveyed companies. The smaller the size of a company is, the more likely it is to be connected to the local environment, to the local market, because of its limited resources and the characteristics of its purchasers. It was cleared that personal contacts and human factors generally are decisive in respect of the cooperation's success. That is why they play a major role in forming permanent cooperation.

The time-horizon of the surveyed companies' buyer-subcontractor relationships and the geographical concentration was analysed separately. The stochastic relationship between the permanent nature of relationships (the length of the partnership as a share of the companies' age) and the geographical location of the buyer-subcontractor was tested. When analyzing the partnerships from the geographic point of view it can be concluded that there is a statistically significant relationship between the geographical distance and the size of the company involved in cooperation. The smaller the company is, the more like its partnerships are concentrated. The further extent of cooperation proved to be matched with the more permanent nature of relationships.

The geographical concentration of partnerships is beneficial for the companies involved as it contributes to the permanent nature of relationships on the one hand, giving additional economic advantages for the companies, but on the other hand, concentration denies the requirement of economic rationality as it causes the company to be dependent on the economic fluctuations of its close environment.

The above mentioned observations concerning the cooperation among companies shed light on the contradiction of the time-horizon and geographical aspects of partnerships.

T1a Interrelation can be found between the permanent nature of the surveyed companies most important partnerships: If a company forms permanent relationship on any fields of its activity, it will try do act so in all of its partnerships. Companies tend to harvest the additional advantages of cooperation by making strategic decisions. Permanent partnerships are usually made within a relatively narrow geographic region and as the concentration of partnerships increases so will increase the time-horizon of the relationships as well.

T1b Permanent and geographically concentrated partnerships of small- and medium sized enterprises contribute to harvesting the additional advantages of cooperation while on the other hand make them more dependent on their economic environment. Economic rationality appears in a paradox way in this case.

This is why rationally behaving companies have to find the balance between forming economically beneficial permanent partnerships and bearing additional risk of geographical concentration.

4.2. THESES CONCERNING THE EXPERIENCES OF THE COOPERATION BEYOND TRADITIONAL BUYER-SUBCONTRACTOR RELATIONSHIPS

Cooperation beyond traditional buyer-subcontractor can be distributed according their direction. Distinction can be made between cooperation among small- and medium sized enterprises and subcontractor partnerships among small- and medium sized and large enterprises. Following this we analysed the major characteristics of these relationships.

4.2.1. CHARACTERISTICS OF COOPERATION AMONG SMALL- AND MEDIUM SIZED ENTERPRISES

Our starting hypothesis in this case was that successful environmental adaptation requires the companies to pursue such activities (research and development, marketing, supply-chain management) which can not be made efficiently on their own. That is the reason why companies aim to cooperate in the hope of rationalizing their activities.

It is well known that the share of research and development, marketing and financial services within the economic activities companies pursue is increasing. These activities gain more and more importance in improving the efficiency, competitiveness and economic success, but require more and more spending on the other hand. These costs can be regarded as fixed costs, but cooperation among companies enables those who are involved to share – and decrease these fixed costs.

In order to test our hypothesis small- and medium sized enterprises operating in Borsod-Abaúj-Zemplén County were surveyed on the fields of cooperation they are involved in. It was discovered that an increasing share of companies is getting involved in partnerships. Companies usually cooperate on the fields of purchasing, selling and marketing activities. As the size of companies increases, cooperation beyond these activities gains importance (cooperation by the supply chain of the branch of industry, common management of inventories, etc.).

The adaptation of small- and medium sized enterprises to market environment requires them to pursue such activities (for example research and development or marketing) which cannot be done efficiently on their own, so cooperation on these fields is a rational economic decision for them.

T2 It is characteristic for cooperating small- and medium sized companies that the larger the size of the company is, the more likely it is to be involved in cooperation beyond selling (for example cooperation by the supply chain of the branch of industry or common management of inventories). Our working hypothesis is proved without limitations for medium sized companies, while only partially true for small enterprises, as they often do not form long run cooperation which would enable them to enjoy serious saving evolving from the partnerships.

In the course of the research serious emphasis was put on getting to know the motivations and obstacles to cooperation among small- and medium sized enterprises because of the specialties of the Hungarian SME sector's evolution, and on comparing our experiences with the results of the research pursued by the Observatory of European SMEs.

In connection with the motivations of cooperation among companies two theories must be mentioned. The *theory of transaction costs* (Coase, 1937, Williamson, 1985, 1991, 1998) explains the decision among institutional forms (independent, market, ambiguous) by the costs beyond the price of the product related to these forms. *Competence based theories* (Hodgson 1998) on the other hand emphasise the key role abilities, latent knowledge and know how play in these decisions. The motivation of cooperation is to require some these competences missing according to this theory.

According to the relevant literature one of the important motivations for cooperation is the *need to require the necessary resources*. This means the smaller the size of the company is, the more intense intention to get involved in cooperation it should show, because of the limited nature of its resources. The analysis of our sample of companies did not justify this consequence. We experienced that cooperation becomes more common as the size of companies increases. One of the possible reasons for this can be found in the costs related to cooperation (even if it is smaller than the cost of other alternatives), which comes from the additional time and knowledge needed to get involved.

With a smaller modification of the motivation to require resources we can get closer to the resolution of this contradiction. We regarded *requiring resources with relatively better conditions to be an important motivation* to get involved in cooperation. There are no major obstacles to requiring *traditional resources* though. But getting them by usual market transactions would mean that the company can obtain them with the same conditions any of its competitors can do. The motivation to cooperate can be that it enables companies to obtain the resources necessary in a *different way* its competitors can do, so it can realize competitive advantage. This motivation can be matched by the motivation either to reduce costs or to improve quality.

In connection to further motives to cooperation *additional costs* were also analysed. We supposed that the unfavourable economic situation of Borsod-Abaúj-Zemplén County will play an important role both as motivation as obstacle. It was discovered that this is one of the important factors of motivation and obstacle as well. The following step of the research was to test the motivations of broadening market, obtaining knowledge and experiences as well.

Different factors of cooperation motivation were measured Likert scale from 1 to 5. Than obtained results were ranked and analysed by different points of view. Based on these we draw the consequence that companies rather see the advantages of cost reduction and access to larger markets. Access to knowledge, requiring additional knowledge, the use of excess capacities and harvesting economies of scale are seen as driving forces for cooperation of medium strength.

Opposite to the arguments of the two schools of theories explained above our research showed that motivations for cooperation are determined by several factors at the same time.

<p>T3 Actual motivation for cooperation among companies are determined by several objective factors at the same time (for example the size of the company, its fields of activity, etc.) This is the reason why any monocausal attitudes can only give partial empirically tested explanations for the fact of cooperation.</p>
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Objective and subjective factors of cooperation are well known. Still, we only had the possibility to test the objective factors. According to the analysis made on the sample of companies smaller companies make their decisions to get involved in cooperation in order to obtain additional competences, for example knowledge, technology or know-how, while enterprises with more employees intend to make use of their excess capacities and make their production more efficient. This lets us draw the consequence that larger companies face a stronger pressure for competitiveness.

We also observed that besides the scale of companies their fields of activity (merchandising, services) also cause differences in the importance of the distinct driving forces. Based on this observation we draw the following consequence.

T4a The smaller the size of a company is, the more likely it is motivated by the opportunity to obtain missing competences for cooperation. As the size of companies increases requiring financial, cost reduction and the improvement of efficiency gains more and more importance and becomes the dominating factors of motivation for cooperation.

T4b The main motivation for cooperation according to the field of activity in case of services is to obtain additional knowledge and labour force, while in case of industrial companies to make better use of their capacities, finally, in case of merchandising companies to broaden their market opportunities.

We suppose that small- and medium sized enterprises, because of their characteristics (limited resources, etc.) face major internal and external barriers to cooperation. In respect of internal and external obstacles we thought there can be differences in the importance of these factors according to the scale and fields of activity of companies.

A group of obstacles felt by small enterprises are external, for example technological requirement, Bureaucracy, risk, high costs of transportation, communication, or else, and legal regulations. Another group of obstacles can be regarded as internal ones, which evolve from the characteristics of the company, the entrepreneur himself, and the employees. Such an obstacle can be the poor quality of the product or services they produce, or the lack of properly qualified employees. Internal barriers can be divided to objective and subjective obstacles. Objective internal barriers come from such characteristics of the company like the existence or lack of necessary resources, while subjective internal obstacles evolve from the different abilities and efforts of entrepreneurs and employees.

On the one hand we suppose that the unfavourable economic situation of Borsod-Abaúj-Zemplén County will be shown in the obstacles they feel, meaning that they will mention several obstacles to cooperation. On the other hand we started from the well-known fact that entrepreneurs are often characterised by individualist attitudes, they do not like interference in their decisions, and prefer to make their choices on their own, this being the reason why many of them chose to be entrepreneurs, and do not like to admit their own barriers. Based on this we supposed them to give mainly external obstacles to cooperation.

In order to understand barriers to cooperation we used a Likert scale, and based on the points we obtained we made a rank. It was discovered that the majority of obstacles felt were so called external barriers. Naturally, companies were generally satisfied with their own performance (efficiency, quality, range of products, etc.) and saw the reasons of their unsatisfactory business success in external barriers.

As the most important factors of entrepreneurship are competition, taking risk, and material responsibility, we can draw consequences from the obtained results, the overemphasised nature of external barriers that a large fragment of them are obliged entrepreneurs (fear of competition, reliance on state subsidies, and financial barriers).

T5a Companies judge the role of external and internal barriers to cooperation biased. They overemphasise external factors while underestimate the quality of their own abilities and competences. The major barriers to cooperation are seen in external reasons, like the strong competition, the lack of proper subsidy system, and the foreseeable costs of cooperation. This point of view is a sign of the obliged nature of these entrepreneurships.

According to the scale of companies in the sample we can draw a similar consequence to the one obtained in the course of analysing motivations. Smaller companies feel bureaucratic barriers and the limited resources standing at their disposal to be of major importance, while larger scale companies gave higher points for barriers like the strength of competition, and high costs of cooperation. We did not discover any significant differences in connection with the field of activity in this question.

T5b In case of smaller companies the most important of barriers are related to competences and physical resources, but as the scale of companies increases, the strength of competition and costs come to the foreground.

The obtained results let us think that cooperation among small- and medium sized enterprises and its development in general terms requires different type of support according to the scale and field of activity of these companies, and when determining their education and development needs it is not enough to rely on company-feedbacks, but experts should also be involved in making these decisions.

4.2.2. CHARACTERISTICS OF THE BUYER-SUBCONTRACTOR PARTNERSHIPS AMONG SMALL- AND MEDIUM SIZED AND LARGE COMPANIES

Small- and medium sized enterprises can be involved in both vertical- and horizontal types of cooperation. The former one is cooperation among small- and medium sized enterprises and one or more large companies, while the latter is partnership of small- and medium sized enterprises. Subcontracting is a special type of vertical relation between companies, in which small- and medium sized enterprises are related to large companies, and their products or services will be built in other companies products, increasing its value.

Opposite to the general way of thinking (the belief that subcontractor position is generally advantageous for small- and medium sized enterprises) our *hypothesis* is that subcontracting is beneficial only for a limited group of small- and medium sized enterprises

It is well known that vertical and horizontal cooperation differs in the aspect of the strength of parties taking part in them, and the reciprocity of these relationships. Vertical partnerships usually incorporate hierarchical elements as well, causing a higher level of dependence for small- and medium sized companies. This type of dependence can also be present in case of horizontal relationships; furthermore, it can be regarded as necessary because of the common objectives. The symmetric or asymmetric nature of relationships differs in case of vertical and horizontal relationships. Generally, the larger a company is,

the smaller its dependence on its environment can be, letting it obtain more and more control over its relationships.

To characterise the actual situation in the County, we made factor and cluster analysis, which helped us form three groups of companies. We can declare that only 15 percent of the surveyed companies judged their subcontractor position to be advantageous. Companies belonging to this cluster are those who spend the largest sums on development and investment, are more motivated than the average, and feel smaller obstacles to cooperation on general. Another cluster of about 47 percent of the surveyed companies can not realize profits even on the cost of approving a high level of dependence in their partnerships, while 37 percent maintained their independence, but did not manage to harvest the opportunities of subcontracting either.

T6 On the one hand, there is no general correlation between the subcontractor position and the advantages that can be gained from cooperation. On the other hand, subcontracting position is only beneficial for a small fragment of companies which has an over-average performance and can maintain its relative independence.

We analysed both the motivations and barriers to small- and medium sized enterprises' cooperation.

According to our hypotheses motivations for subcontracting and for cooperation of small- and medium sized enterprises show major differences.

The most often mention argument for subcontracting is that even though it is difficult to get in the circle of suppliers, if a company can meet the requirements it should, it is relatively easy (in questions of price, quality etc.) to maintain its stable business position.

According to the opinions of the surveyed companies subcontracting as a possible mean of increasing efficiency is mainly motivated by the opportunity to obtain market share and use of their capacities and cost reduction.

When analysing the motivations we found major differences according to the scale of companies. As the size of companies increases, just as in case of horizontal relationships, competitive and efficiency points of view are appreciated. Smaller companies aim to obtain additional knowledge, but as the scale increases, the above mentioned efficiency gains, making use of excess capacities, harvesting economies of scale and getting access of markets becomes ever important.

External barriers to subcontracting were given high points by the surveyed companies, just as it happened in case of the horizontal relationships. The obstacles regarded to be most important were connected to the problems of the subsidising system, to bureaucracy, and to strong competition. In connection with the obstacles to subcontracting we were not able to find any significant differences according to the scale of companies.

Motivations and obstacles found in horizontal relationships (cooperation among small- and medium sized enterprises) are almost fully characteristic for vertical relationships (subcontracting) too. This means that our starting hypothesis was contradicted by the results of our research, so this hypothesis must be taken out of consideration.

Because of such characteristics of small- and medium sized enterprises like their scale or field of activity, taking part in subcontracting can be a realistic option for a small fragment of the sector. The results of the subcontractor relationships' analysis let us think that only a

limited fragment of these companies can make use of this kind of relationships. The increasing complexity of the system of requirement and the internationalisation of activities also takes us to this direction. Considering the relations small- and medium sized enterprises usually form with their close environment we can conclude that forming a cluster could be an optimal solution to their relations to large companies.

4.3. TAKING PART IN COOPERATION AND THE RELATIONSHIP BETWEEN THE COMPANIES' ECONOMIC SITUATION AND ITS PERFORMANCE

In the course of the research we started from the hypothesis that there is a positive relationship between taking part in cooperation and the economic situation and the performance of companies.

The system of relations companies have can help them obtaining information, resources, market and technology, so it can be beneficial to their performance. Cooperation enhances economic performance according to international empirical researches too (Observatory of European SMEs, 2003/5). All these let us think that cooperation among companies, and the advantages these relationship can hold (cost reduction, economies of scale, etc.) will contribute to the improvement of the economic performance (profitability) of companies.

The positive relationship between the performance of companies and their involvement in cooperation can be understood in a different way as well. The better balanced a company's operation is, the more likely it will be to cooperate with others. This lets us suppose that cooperation can only be a realistic choice for the more profitable, more competitive companies.

In order to test our hypothesis we analysed the relationship between objective characteristics of companies (revenue, expenditure on research and development and investment, information technology devices, etc.) and their subjective opinions on cooperation and economic situation („Characterise the economic situation of your company ...”, „What do you think of your company's economic situation compared to your competitors ...”).

Just like previous empirical researches, our own analysis did not manage to find any direct relationship between involvement in cooperation and the economic performance of companies. This can be explained by the special way of Hungarian small- and medium enterprises evolution and on the one hand, while on the other hand their efficient economic situation. Based on all these our starting hypothesis can not be regarded to be well-founded so we must restrain from using it.

4.4. THESES CONCERNING THE ENVIRONMENTAL EMBEDDEDNESS OF SMALL- AND MEDIUM SIZED ENTERPRISES

According to newer theories to explain the cooperation among small- and medium sized enterprises a larger emphasis must be put on social- and cultural factors besides technological and economic factors, while on the other hand the local environment's role must also be taken into consideration. The literature concerning these aspects is very rich (Polányi, 1976, Barabási, 2003, Gulati et al., 2000). We used the *embeddedness theory* in the course of our research (Granovetter, 1990), which emphasises the deep integration of economic relations to social networks.

Partnerships among small- and medium sized enterprises secure *external economies of cooperation competitive advantage* for the companies involved. In connection with the higher importance of distinct subjective factors like social relations or faith which play a more emphasised role in case of small, than in case of medium sized or larger enterprises. In our analysis we only considered one type of embeddedness, the environmental aspects. For the purpose of this research by local environment we meant labour, capital and infrastructure used in economic activities within the borders of a regulation region, independently of ownership aspects.

We started our analysis from the well known fact that local environment is decisive for small- and medium sized enterprises. Still, we supposed that on the one hand local environment is not independent of the geographical situation of business partners and the knowledge companies have on their local environment is beneficial for their economic activities and for their cooperation as well.

In order to prove this hypothesis we analysed the role local environment plays in the life of small- and medium sized enterprises as a first step. We only had a limited opportunity to test environmental embeddedness quantitatively. We could draw conclusions on this matter based on companies' relationships to local authorities, the geographical locations of their partners and the location advantages they felt. We experienced that there is relationship between the judgement of local environment's importance and the size of companies. There is a linear relationship between the geographical distance of partners and the size of the surveyed company: the larger the size of the company is, the more likely it is to have more distant economic partners. Following this we asked the companies about the advantages their location holds for them. It was discovered that those companies tend to feel larger advantages which have a more concentrated network of partnerships. These observations led us to form Thesis 7:

T7 From the point of view of survival for small- and medium sized enterprises generally, and with the decrease of company size role of local environment gains importance.

As the size of companies increases, their relations to local environment change. Family and friendship plays a more important role in case of smaller enterprises. This is actually one of the main barriers to the exact measurement of relationships among companies, as instead of the length of the actual relationships we can only measure the business relations themselves statistically.

The size of the company influences its relationships to supporting institutions. It was discovered that the number of relationships with supporting institutions increases with the increase of companies' size. This also lets us draw the conclusion that smaller companies choose different ways of finding the support they need. This speciality also influences the way they obtain *information*. With the increase of company size informal channels are changed for more and more formal ones. The role of supporting institutions is of highest importance for the medium sized enterprises.

Company size plays role in the forming partnership characteristics too. Our assumption is that the smaller a company is, the more informal its relationships will be. In case of informal relations, things are settled only orally.

According to our opinion, environmental embeddedness is a major factor of the evolution of faith among companies. We proved earlier that the smaller a company is, the more embedded it will be in its local environment, and the more concentrated its relationships will be. The geographical closeness of business partners makes it possible to form personal relationships and contributes to the evolution of faith among partners, so to gain a more and more personal, informal form of these relationships.

The role of informal relationships was taken to the focus of research attention by the appreciation of the requirement of flexibility. With the help of these, the activity is easier, faster, and less expensive to adapt to the actual conditions, meaning economic advantage for the companies involved. Cooperation, mainly its informal way supposes faith among partners, the evolution of which is a lengthy process (among other factors we draw this consequence based on the age of relationships) which was not benefited by the ever changing circle of entrepreneurs of the 1990's, nor the missing (formalised and society) efficient sanction mechanisms of the institutions. This let us suppose that the share of formal relationships will increase in our sample compared to the informal ones.

In the course of our research we found that about 24 percent of relationships are informal. After the analysis of relationship characteristics and the interrelations of the companies in the sample we draw the conclusion that the form of relationships is a function of the companies' performance. The increase in the scale of the company and in the performance of the company brings formal relationships to the foreground. This tendency can be found when analysing the subjective performance of companies. So, even though literature emphasises the importance of informal relationships, among other factors because of the flexibility of the company, we were not able to prove its advantages.

T8a There is a relationship between the characteristics of partnerships (formal/informal) and the scale of the company. As the size of the company increases, formal relationships gain more importance, for the cost of informal ones.

T8b The increase of companies' performance brings the increasing share of formal relationships with itself.

Even though we know that larger companies' relationships are not fully formalised either, we can informal decisions beyond the formal partnerships in their cases as well, but the framework of our research did not let us dig that deep in the matter. So, our declarations on the formal, informal characteristics of relationships can only be relevant for the researchers.

Quite serious attention was focused on cooperation among companies in the last years (its motivations, barriers, framework of conditions). Even though it is very difficult to measure quantitatively the direct effects of cooperation on companies' performance (as several earlier empirical work draw attention to it) still indirectly, we have to approve the appreciation of cooperation in companies' lives. The most important consequence for supporting institutions is that a key question of the development of small- and medium sized enterprises is to motivate them and reduce the felt (imagined or real) obstacles.

5. POSSIBLE APPLICATIONS OF THE RESEARCH FINDINGS

The survey of the county was a one time, cross section research, but we see the opportunity to broaden it to the North-Hungarian Region, with some adaptation of the questionnaire. This would enable us to make a regional comparison and moreover, to compare our results with the Observatory of European SMEs results on small- and medium sized enterprises. A possible way of further research could be international comparison too (in the framework of the planned „Impact of global and local interorganizational relations on the development and growth of competitiveness of enterprises in a region” 7th FP).

We can see the opportunity to make use of the primary and secondary research results in education, as elements of new teaching materials, so in the accredited BSc courses “Management” and “International management of our Faculty, which were started in 2006 and on the MSc course “Enterprise development” which is to be started in 2008. Besides these we also plan to publish the research results both in domestic and international conferences too.

Getting to know the opinions of entrepreneurs, the motivations and obstacles they feel can be useful for the institutions regulating and supporting the operation of small- and medium sized enterprises, and for the representing unions of the enterprises themselves too.

In the framework of the Laky Teréz Foundation’s grant an experts’ questionnaire will be accomplished in the course of which we would like to get to know the opinions of other parties (supporting institutions, authorities) too. The results of empirical researches will be controlled by this expert questionnaire and deep interviews will be made for the situation of small- and medium sized enterprises too, asking the representatives of institutions which influence small- and medium sized enterprises directly, or indirectly.

Further qualitative research should be made, as the barriers of our research showed, which evolved from the complex nature of relationships among companies. This complexity of the system of relationships and the analysis of embeddedness requires qualitative methods to be used. Data standing at our disposal did not enable us to fully map all the relationships between factors of partnerships, mainly in case of reasoning, so further efforts should be made to answer all questions.

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