Abstract
The field of small and medium sized companies (SMEs) networking has become very popular since 1990s among researches and practitioners. Compared with earlier decades, multilateral cooperation between SMEs has increased. Limited resources of SMEs and increasing international competition have forced small firms to search for new, flexible and effective forms of organization. Under the conditions of an increasing globalization of trade, factor flows, and finance, innovation and learning are regarded as central mechanism for maintaining the competitiveness of the firm. The innovation process has changed considerably in the past years. It is no longer the outstanding and independently acting entrepreneur or firm which is seen as the main driving forces. Instead, innovation is considered as an interactive, cumulative and path-dependent process. Innovation and learning occur in various kinds of networks and/or as some authors call variety of cooperative inter-organizational relationships. In the 1990s a rapidly growing number of firms were entering into series of alliances with the other organizations as part of their strategy to lower overhead costs, obtain new technologies, increase responsiveness to customers, enter new markets and in general, to enhance their flexibility. For SMEs any type of network becomes an essential issue to competition, to have an access to innovation and finally to sustain its growth maybe even survival.

Even though networking among SMEs is a growing phenomenon within EU, particularly Slovakia, there has been very little empirical study of the factors that lead to the long term success of these networks. The aim of this paper is to evaluate the three main theories that have been taken to analyze alliances and networks: The resource-based view, transaction cost economics and social network theories. Specifically, analysis looks at their ability to explain 1) the formation of inter-organizational relationships and 2) value creation in inter-organizational relationships.

The paper focuses on the main concept of distinct theories, specific research questions and preliminary results. The results of the inter-organizational research show the different approaches of entrepreneurs to enter the network and highlight possible advantages and prerequisites of successful cooperation.

Methodology: A qualitative methodology – case studies research was applied. The primary data were collected through a number of interviews, structured discussions, and workshops with the entrepreneurs. Secondary data were obtained the companies’ materials, reports, and internal documents. There are two potential approaches to cross-case analysis: a case survey approach and a case-comparison approach. Due to the fieldwork limitations (entrepreneurs spread in 2 regional districts) cross-case evidence is analyzed by applying case-comparison approach.

Key words: network, industrial district, inter-organizational relationships, transaction cost economies, resource based view and social network theory

1. Introduction
The design and management of networks, such as alliances, franchising chains, cooperatives, joint ventures, venture capital relations, clusters and virtual organizations, have become very important research topics in the field of organizational economics and management. Research on joint ventures (Harrigan 1985; Kogut 1988) was among the first in the field to pay systematic attention to the trend in the formation of inter-firm partnerships. More recently, research on strategic blocks (Nohria,Garcia,Pont 1991), strategic supplier networks (Jarillo 1988; Dyer, Singh 1998), learning in alliances (Hamel, Doz,Prahalad 1989), inter-firm trust (Gulati 1995; Zaheer,Venkatraman 1995) and
network resources (Gulati 1999) have examine inter-firm relationships from a variety of theoretical perspectives, levels of analysis, and outcomes. Current with the interest in inter-firm relationships in the literature is a growing interest in understanding how the social context in which firms are embedded influences their behavior and performance. Our focus in this introduction is on the various approaches for creating a network organization among the SMEs, which highlight the significance of the inter-firm cooperation for the future growth and performance of the SMEs. The field of SMEs networking has become very popular since the 1990s among researchers and practitioners. Compared with earlier decades, multilateral cooperation between small and medium sized firms has increased. Limited resources of SMEs and increasing international competition have forced small firms to search for new flexible and effective forms of organization.

Under the conditions of an increasing globalization of trade, factor flows, enterprises and finance, innovation and learning are regarded as central mechanism for maintaining the competitiveness of firms. It is mainly through innovation i.e. new and improved products, more efficient and higher quality production processes, and new ways of management and organizing production, that competitiveness can be maintained in the long run in turbulent environments.

The innovation process has changed considerably in the past years. The innovation is considered as an interactive, cumulative and path-dependent process. Innovation and learning occur in various kinds of networks where different actors become involved such as large and small firms, knowledge providers, transfer agencies, universities and research organizations and other support institutions where different kinds of knowledge are exchanged and exploited.

**Definition of Networks**

Network is a particular form of organization that consists of a collection of actors that pursue repeated, enduring exchange relations with one another and, at the same time, lack of legitimate organizational authority to arbitrate and resolve disputes that may arise during the exchange (Podolny, Page 1998).

According to Wratschko (2005) a network is basically defined as a set of actors (“nodes”) connected by a set of ties (“threads”), which can be directed or indirected, dichotomous (i.e. present or absent) or valued (i.e. strength or type of relationship).

A major part of the research has been done on dyadic or bilateral relationships between two partners in vertical chain including buyer-seller relationships, channel dyads, buyer-supplier alliance, and distributor – manufacturer partnerships like in the work of Gulati (1998), although new co-operative ventures increasingly involve multiple partners instead only two (Doz, Hamel 1998).

There is a debate to examine, which firms actually engage in network and analyses with respect to their innovation activities and the networking of firms in the innovation process. The results show that innovation is for many firms still a rather internal affair. Reliance on internal competencies and lack of trust in other firms and organizations are among the reasons for this.

In Varamaki’s and Vesalainen’s opinion (Varamaki, Vesaleinen 2003) academic discussion and practical networking have not been linked sufficiently. One of the main reasons for quite poor results is the limited knowledge of how to manage cooperation and what are the successful prerequisites for different models. Entrepreneurs as well as consultants do not have sufficiently effective tools as their disposal when trying to form networks and various cooperative groups. Therefore, the results of inter-firm cooperation have been quite modest.

Based on the fundamental theory related to firms’ competitiveness and profitability, firms are viewed as autonomous entities, striving for competitive advantage from either external industry resources (Porter 1980) or from internal resources and capabilities (Barney 1991). However, the image of atomistic actors competing for profits against each other is increasingly inadequate in a world in which firms are embedded in networks of social, professional, and exchange relationships with other organizational actors (Gulati 1998; Galaskiewiwicz, Zaheer 1999). Such networks encompass a firm’s set of relationships, both horizontal and vertical or they enter the cluster district model on the regional level with other organizations – be they suppliers, customers, competitors, or other entities – including the relationships across industries, regional districts and even countries.

Networks potentially provide a firm with access to information, resources, markets, and technologies; with advantages from learning, scale, and scope economies; and allow firms to achieve strategic objectives, such as sharing risks and outsourcing value-chain stages and organizational functions. Networks also have a potential dark side and may lock firms into unproductive relationships or preclude partnering with other viable firms. In this way, a firm’s network of relationships is a source of both opportunities and constraints (Gulati, Nohria, Zaheer 2000).
Gulati (1998) focuses on five key issues on inter-firm cooperation, which have been: (1) the formation of cooperation, (2) the choice of governance structure, (3) performance of cooperation, (4) effects of firms entering cooperative ventures, and (5) the evolution of cooperation.

The current trend in economies and management of networks is twofold: On the one hand there is a tendency toward theoretical approaches developed in economics and management, such as property rights theory, agency theory, transaction costs theory, resource-based and organizational capability theory, social exchange theory, signaling theory and etc. On the other hand, there is also a strong tendency toward the application of new research methods, such as agent-based modeling, co-integration analysis, data envelopment analysis, case study method, time series studies as well as survival analysis.

Our current research which is conducted in the field of networks between SMEs on the regional level tries to imply the resource based theory and social exchange theory through case studies research method.

**Resource based theory of the networks**

Traditional strategy research suggests that firms need to seek a strategic fit between their internal characteristics (strengths and weaknesses) and their external environment (opportunities and threats). Considerable emphasis has usually been given to firm’s competitive environment and its competitive position (Porter, 1980; In: Das and Teng, 2000). In contradiction to the external emphasis, the resource-based view embodies a different approach, which stresses the internal aspects of a firm. Rather than being defined by the competitive environment, the parameters of a firm’s competitive strategy are critically influenced by its accumulated resources. A firm should pay more attention to its resources than to its competitive environment (Das, Teng 2000). The contribution of the resource-based view is that it develops the idea that the unique resources and relationships define a firm’s competitive position. A resource-based view seems particularly appropriate for examining different forms of networks because firms essentially use network to gain access to other firms’ valuable resources.

**Transaction costs method**

In general, transaction costs emphasize costs minimization when deciding to enter the any type of network organization. In transaction cost economics, a firm’s ownership decision centers on minimizing the sum of transaction costs and production costs. While transaction costs refer to costs that are incurred from activities necessary for an exchange (such as writing and enforcing contract), production costs come from coordinating activities in-house, in terms of learning, organizing and managing production. Due to this facts the transaction costs theory is significant within the internalization for mergers, acquisitions forms and we will not apply this theory in our research strategy.

**Social network theory**

The basic assumptions of social network theory are in the three parts: social capital, embeddedness and economic performance.

The authors who study inter-firm relationships increasingly focus on how firms are socially embedded in networks of relationships that incorporate a diverse set of organizational actors. Social capital represents the ability of actors to secure benefits by virtue of membership in social networks or other social structures. At an organizational level, benefits include privilege access to knowledge and information, preferential opportunities for new business, reputation, influence and enhance understanding of network forms (Inkpen, Tsang 2005).

For this paper and our further research we adopt a definition of social capital as the aggregate of resources embedded within, available through, and derived from the network of relationships possessed by an individual or organization – a definition that accommodates both private and public good perspectives of social capital (Nahapiet, Ghoshal 1998, Bolino, Turnley, Bloodgood 2002 In: Inkpen and Tsang 2005).

The central proposition in the social capital view is that network of relationships are valuable resource (i.e. capital) for the individual or organization.

**Methodology**

The case study method is frequently used in the study of economics and management of the networks. The case study approach allows an integrated view of many aspects. It is particularly recommended where there is no integrated theory for a phenomenon and there is a complex interaction of factors as happens with the process of network development, organization and relationships issues.
The involvement of the author, from the beginning of the research project (May 2006 – till present) was a unique opportunity for a detailed longitudinal research and an inductive exploratory study. The disadvantages of a single case method, especially regarding the generalize-ability of the research results are well known and much discussed in literature (Yin 1994).

We are conducting research in the three regional districts where mostly small and medium sized firms operate and we use case-comparison method. During the research we applied several qualitative methods to gather the data. Observations regarding the actual performance of participants were recorded in a diary. There was also analysis of secondary sources of information (minutes from meetings, articles in regional newspapers, different internal materials and documents related to strategy plans and operations). Several interviews structured with open questions were taken with different entrepreneurs and a few workshops were conducted with the main focus on the future development of the regions and prospects for the SMEs.

After the general description of the individual cases, the each case analysis is summarized within the five themes, as follows:

- Critical incidents
- Motivation for cooperation
- Barriers/Obstacles for partnership
- Incentives for different networks

2. Preliminary research findings

Even if industrial districts have been largely analyzed in the economic and business literature, this term usually refer to a variety of inter-firms agglomerations that often miss some important Marshall’s characteristics, such as the technical segmentation of production processes, the prevalence of manufacturing SMEs, and the concentration of a given industry within a delimited geographical area.

The Marshalian industrial district is characterized by the presence of many small firms buying and selling from each others; they purchase raw materials and services from outside the district and sell them to the external market in the form of exchange rather than cooperative relationship. What makes the industrial district so special, in Marshall’s account, is the nature and quality of the labor market, which is internal to the district and highly flexible. Individuals move from firm to firm and workers live in the same community so that firms benefit from all advantages of their agglomerations (Marshall, 1920. In: Calvelli, Cannavale, Canestrino 2004).

Rosenfeld (1997, In: Oravec 2006) defines the cluster as geographically tied similar or complementary enterprises which are involved in trade operations, communicate and share specific infrastructure, goods and services, and together compete in the market.

Clusters are providing opportunity to SMEs to grow and sustain their competitiveness not only locally but also internationally. Motivating factors for the cluster development were identified as follows:

- technology transfer
- knowledge transfer
- social infrastructure
- qualification and structure of the labor market
- competition

2.1. Industrial district in the wood industry - cluster

Slovakia has 3,7 mil. ha forest land, what represents 390 mil. m³ wood resources. Almost 90% of the country is covered by forest; therefore natural resources make the highest potential for the wood industry. Unfortunately, the situation is different. Wood industry contribute only 1% to the national HDP, and comparing with the other industries provide value added below average.

The wood processing industry is growing slower that other industries and they are developing differently in its segments e.g. furniture production, wood processing and etc.

Critical incident

The industry seems to be in crisis, it affects mostly the regions where wood production and forestry were historically the main employer. The value added is low, insufficient technology transfer, no existent cooperation between existing companies, lack of government support.
The research was conducted within three enterprises, which are in the small and medium sized segment.

1. Pro Populo, j.s. – lumber firm, having operations in wood processing, established originally in 1999, converted into the joint stock in 2000 by adding also a mill.
2. Town forestry Ltd., established in 1994 – forestry garden, wood cutting, trade, maintenance of the town forest property.
3. Tatraponk Ltd., established in 1996, trading company, providing supplementary services

The main focus of the research was to identify the motivating factors and barriers to create or enter a network form of cooperation, in this case particularly regional cluster. The motivators to operate within the cluster were stated, as follows:
- improvement of the managerial experiences and gaining new skills,
- risk sharing,
- access to new markets, minimize the accompanied costs and risk,
- improving the qualification and experiences of the employees,
- access to different information,
- new technologies and know-how,
- financial and market stability,
- lobbying and relations with the decision makers within industry,
- economies of scale,
- higher security against competition and external changes, and
- access to new resources e.g. capital, human, property etc.

The results showed that the biggest motivators to embed in the network forms are:
- improve and gain new managerial experience
- to get access and better opportunity to enter new markets and therefore to minimize the costs and risk
- economies of scale, lobbying and building the relations with the decision makers within the industry and
- secure their business against competition and external changes.

The biggest barriers or constraints to develop or enter network forms were identified as follows:
- knowledge transfer
- technology transfer
- different strategies and different structure of the partners
- size and variability of the market
- abuse of internal information / trust
- common labor market and social capital

The results from the interviews with three firms operating in the wood industry within one region were very different. One of the reasons could be the firm’s dependence on the main resource i.e. wood as it is fundamental for their core business. In the case of ProPopulo lumber and wood processing is the core business therefore they show the highest concern related to common resources. The main barrier to creation and function in the network form was a size and variability of the market and different strategies and operations of the partners.

The important benefits of the cluster for SMEs
a) Information flow and access to different sources of information
Building the databases and commonly sharing information is the most frequent benefit that cluster form offers to its members. Every partner contributes to the information database and also intends to use the information provided by others. The most needed information for the SMEs are related to suppliers, customers, competition and technology.

b) Innovation and innovative approaches
The main objective for the cluster development is to support the innovation process either in the new product and technology development or in the organizational functions. It becomes very difficult and costly for SMEs to compete with the big companies and sustain the development through continuous innovation process individually. The innovation brings together also enterprises, municipal authorities, scientist and universities with their research activities on the regional level.

2.2 Kremnica town case
In cooperation with the representatives of the municipality Kremnica (town with the mining history, located in the Central Slovakia, 7,500 citizens) we have conducted a pilot research among SMEs. The research strategy was to identify the entrepreneurs’ understanding and potential of the various SMEs to create an entrepreneurial network. With the support of the municipality we have analyzed the regional resources, which gave us the fundamental prerequisites to select specific representatives from the SMEs sector, which might be suitable for the partnership and inter-organizational cooperation.

There were selected 11 representatives from SMEs: 2 – furniture production, 3 – sole proprietors, 6 – services firms. The sample was very heterogeneous in the sense of the industries, and also the formal structure of the firm.

The two workshops were organized, one with the representatives of the municipality and school, and the second one with the commercial organizations.

**Critical incident**

The town Kremnica has rich natural resources consisting of mountain resorts, forest, thermal water, gold and other minerals; a strong and rich history in mining and crafts. Due to its mining history there are some underground excavations of gold and other metals ongoing by foreign investors in order to restart the mining activities again. On the other hand, the town has preserved the historical center with a number of small restaurants, hotels, pensions and crafts shops. The intention is to focus on the tourism; therefore further development of the ski resort is already finished with added higher value to wellness and recreational facilities. Since mostly SMEs are established in the town, the municipality sees the high potential for the developing of the entrepreneurial network in order to get higher number of small business involved and create a so called “Kremnica Kingdom”.

At the beginning of the case research, we have analyzed the motives for inter-firm cooperation, where we identified, as follows:

- globalization pressure,
- external changes and markets demands,
- internationalization impact,
- competition, and
- new experiences.

Most of the companies stressed the importance of the external changes and market demands together with their survival under the strong competition.

During the research some barriers for the inter-organizational cooperation were mentioned, as follows:

- unclear legislative tools and law for this type of inter-firm governance
- lack of information providing specific data and advices on how to manage the network
- bad experience from the various types of partnership, mostly through projects within EU schemes

The main success factors for any network cooperation were suggested as follows:

- provide evidence/ real data about what the economic benefits of the network are,
- develop trust and effective cooperation between partners,
- problems solving,
- equality,
- fulfilled common objectives, strategy and clear perspective for cooperation, and
- mutual prosperity.

The highest ranking was for effective cooperation – 45%, common objectives – 20% and than mutual prosperity -10%.

In the second part of our preliminary research we have analyzed the results of the workshops and outcomes of the SWOT analyses. The municipality representatives have reviewed the town strategy plan and based on our preliminary research result the further development was added in the area of infrastructure by utilizing the natural resources, expanding the activities in tourism with the orientation on the value added products and services, get more involvement of the various representatives from SMEs, particularly traditional crafts workers and family run business. In the area of tourism development there was an recommendation to consider the heritage tourism as the main concept for further development of the town and region.

The concept of the establishing an entrepreneurial network between various SMEs seems to be very important for the municipality in order to provide jobs for young people, otherwise in the near future the town might face a problem with the lack of qualified and skilled labor.

The existence of the natural resources in the town region gives an opportunity for a number of SMEs to develop inter-organizational structure e.g. horizontal network in wood processing industry or heterogenous network in tourism.
On the other hand there are some similarities with the first case of the industrial district Spis, in the production and technology area where a big demand for innovation and implementation of the ICT technologies seems to be a crucial motive to develop network cooperation between SMEs.

The vast opportunity for entrepreneurship has been provided by the service sector. Particularly tourism could be more oriented on the value added products; more customers oriented and therefore focus more on the development and qualification of the personal. The proposed concept of the “heritage tourism” provides opportunity to develop heterogeneous network bringing together SMEs carrying the core business i.e. hotels, pensions, restaurants but also supplementary partners such as crafts workers, carpenters, artists or even educational organizations.

3. Discussion and propositions for future research

Entrepreneurial networks are voluntary arrangements that allow their members to develop and maintain contacts with other companies and individuals for the exchange and sharing resources or information. These arrangements offer a number of competitive advantages for instance economies of scale and learning, economies of scope, reduction of entrepreneurial risks, enhanced entrepreneurial capabilities, and buffering against market turbulence. Networks, clusters or preferred partnerships allow firms to bid for bigger projects, to acquire new technology and to grow in the market. Entrepreneurial networks between SMEs display a number of different attributes, purposes, benefits, coordination, communication, perspectives for innovation, structure and etc. which classify them in a number of various forms, formal and informal, vertical and horizontal, long-term and short term partnership, dense and loose. These categories are not mutually exclusive, but complementary with each other. This means that any type of the network may display a number of different attributes at the same time: formality, openness, hierarchy, high density, and close – partnership that determine their configuration, and efficiency and effectiveness to function and compete in different environments.

The practical experiences from creating the entrepreneurial network have focused mostly on the short term membership with formal project structure. These network attributes are easy to develop and replicate across different network, and therefore create temporary and short-term competitive advantages. Other network attributes, such as close-partnership ties and relationships and trust are difficult to develop and replicate across network, therefore create a long lasting benefits and competitive advantage. These are the most important factors of the network creation and functions that we have been concentrating in our research. In both our network forms such as industrial district and entrepreneurial network between SMEs we have emphasized on the reasons to create and enter into network cooperation (see Exhibit 1).

Further we have focused on the motives and barriers for network on the regional level. Special attention was given to attributes i.e. trust and potential results of the network cooperation in order to sustain further growth and innovation transfer in the SMEs segment. Trust, cooperation and network development are related together what has been described in the two case studies. The trust has rational based decisions when it concerns traditional trading relations. Nevertheless, there are some situational, cultural and personal factors which make the different level of trust in relation to various regions. This gives a strong argument and support for the development of the entrepreneurial network between SMEs within specific region.

Exhibit 1 The main motives for inter-firm cooperation

<table>
<thead>
<tr>
<th>Reason</th>
<th>Specific description</th>
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<tbody>
<tr>
<td>economic</td>
<td>Market expansion into the new regions, cooperation in new product development, services or entrepreneurship, offering value added, economies of scale, costs reduction, new financial resources for further development</td>
</tr>
<tr>
<td>technical</td>
<td>Access to latest information and to the new technologies, combine common know-how, access to the innovations, new technical development</td>
</tr>
<tr>
<td>personnel</td>
<td>Professional managing, gaining managerial skills, specialists involvement, possibility to obtain missing personnel or lacking competencies</td>
</tr>
<tr>
<td>social</td>
<td>Increase its role within the region or in the professional community, obtaining new experiences, responsibilities and knowledge</td>
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To conclude, this study paper describing the two case studies represents a brief summary of the ongoing doctorate research in order to widen the theoretical and empirical evidence about the networks between SMEs. As a further research agenda, we suggest an in-depth analysis of the factors identified for the network performance, as well as the identification of new factors that might, in some
way, have an influence on creation of the network forms. Furthermore, we believe that the consideration of particular cases as a cooperation between SMEs might offer results more specific about each kind of network. In this sense, it would be of interest to analyze existing structures in which partners are featured differently (firm-firm, customer-supplier, municipality-firm and etc.) comparing organizational and social factors for cooperation. Finally, generalizing the results requires contrasting our findings with other cases of the network cooperation locally or even internationally because of increasing relevance of this kind of cooperation for the growth and prosperity of the SMEs.

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