

11. *The Cooperation of Small-sized Enterprises in the New Media Sector (Hungary)*

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1. **The development of the home page of a public office**

In this case study we are describing cooperation among three companies within the framework of one common project. The project involved the design and development of the homepage of a public office under the Hungarian Ministry of Finance. The companies participating in the project partly or fully operate in the new media sector, i.e., they produce mainly digital products and provide related services. We have selected this sector, as it has many characteristic features that well illustrate the specificities of the operation of knowledge-based networks and the production of social capital.

The strengthening and rise in the world of the new media started in the middle of the nineties. The companies operating in the sector are mainly small or micro-enterprises. A high level of specialization of working tasks and related knowledge is typical of this sector. Interactive media products are usually produced in short-term projects, as a result of cooperation among the companies. New Information Technology (IT) significantly supports the operation of networks created among companies. Companies in the new media sector usually operate in large cities with universities or other tertiary education institutions. (3)

With a few indicators, we will describe the economic environment in which the players cooperate during the project. All of the enterprises participating in the project are registered in Budapest. Concerning the basic economic indicators, Budapest is the most developed region of the Hungarian economy. The data below presents the most important economic characteristics of Budapest in comparison with the data referring to the moderately developed Pest County surrounding the capital, and the national data for Hungary as a whole. We have selected Pest County because of its geographical proximity and its intensive economic relationships. The following table presents the employment data of the capital, Pest County and the Hungarian national average on the basis of the data of the Central Statistical Office from the year 2001.⁵²

Table 1: Budapest, Pest County and Hungary, 2001 employment data

Region	Economically active population	Employed	Unemployed	Activity rate	Unemployment rate
	Thousands			%	
Budapest	797.3	763.8	33.5	57.2	4.2
Pest County	451	430.7	20.3	56.4	4.5
National	4092.4	3 859.5	232.9	52.4	5.7

⁵² Statistical Yearbook of Budapest 2001., *KSH, 2002*; Hungarian Statistical Yearbook 2001., *KSH, 2002*; Statistical Yearbook of Pest County 2001., *KSH, 2002*.

The table demonstrates that the employment situation in Budapest is slightly better than in Pest County, and is much better than the national average both in terms of the activity rate and the unemployment rate.

Table 2: Investment in the national economy, HUF (based on company data), 2001

Investment in the national economy (million HUF)	
Budapest	1,401,291
Pest County	277,339
National	3,122,091

As the table illustrates, nearly one third of the investment is concentrated in Budapest. Altering the data on the basis of population does not lead to a significantly different result (one fifth of the Hungarian population lives in Budapest).

Table 3: Per capita investment, 2001

Per capita investment (HUF)	
Budapest	806,266
Pest County	254,907
National	306,719

The other indicator of the economic development of the region is the number of operational enterprises. The following table provides information in this regard:

Table 4: The number of operational economic partnerships per region, and nationally, 2001

Number of operational enterprises (partnerships, individual)	
Budapest	239,426
Pest County	88,954
National	840,575

As the table shows, nearly 30 % of the operational enterprises are located in the capital of Hungary. In the case of enterprises with some degree of foreign ownership, this concentration is even higher. It means that every other partly foreign owned enterprise is based in Budapest.

Table 5: Number of foreign owned enterprises, 2001

Number of foreign owned enterprises	
Budapest	13,584
Pest County	1,864
National	25,365

GDP per capita provides more information on the competitiveness and economic development of the region.

Table 6: GDP per capita, HUF, 2001

GDP / capita		
Region	Thousand HUF	Percentage of the national average
Budapest	2,592	201
Pest County	1,004	99
National	1,288	

The Central Statistical Office gathers data on companies in computer technology only at the national level; therefore no regional comparison can be drawn. In 2002, 7,176 enterprises operated in the sector; their net sales revenue amounted to 364,660 million HUF. These enterprises employed 24,055 people altogether. The table below shows the distribution of companies in computer technology according to the number of employees:

Table 7: Employment capacity of computer technology enterprises, 2002

Number of employees	1 – 9	10 – 19	20 – 49	50 –
Number of companies	6,780	227	111	58

Based on the above data, the majority of the enterprises in the sector qualify as *small* or *micro-enterprise*. In conclusion, we can say that the enterprises in the study operate in the economically most active region of the country, with the highest number of economic partnerships, the highest volume of investment and foreign capital, and the highest GDP per capita. At the same time, as we referred to it in the introduction, the small size of enterprises is a distinctive sectoral specificity. The small size of enterprises in the new or interactive media sector is far from being solely a Hungarian feature; the same can be observed globally. In this respect, enterprises operating in this sector in countries that are in the vanguard of activities, such as Sweden, employ fewer than ten people on average. (Sandberg – Augustsson, 2002.)

2. Short description of the project and participants

As indicated in the introduction, the project was established with the aim to design and develop the home page of a public office. The homepage was launched in January 2002, when the Office issued a private tender with six bidders invited. R. Ltd., the later prime contractor, was one of the bidders. R. Ltd. cooperated with two companies, and the three companies collaborated and submitted the application jointly. The tender involved three phases; in the end, R. Ltd. won the tender. The contract was signed in April 2002 between the office and R. Ltd. According to the original timetable, the project should have been finished by September 2002, but the project lasted until the beginning of 2003. The task consisted of the following parts:

- The design of the visual elements and the image of the website
- Web design
- Programming

Companies participating in the project were as follows.

R. Ltd.

R. Ltd. is an art studio operating in the form of a family firm, which was established in 1995. The activity of the firm covers:

- Graphic design and implementation
- Image development
- Artistic activity
- Management of art projects.

The company was established by three private persons as the successor of R Private Gallery, which was set up in 1990. Besides the three founding owners, there are no employees. They mainly deal with image development and graphic design, and they carry out the implementation activities in cooperation with strategic partners (e.g. printing). Their clients are from the private and public sectors, and they mainly provide customer-tailored solutions for major clients. The three owners carry out their activities according to a well-defined division of labor: one person deals with creative activity, one is responsible for customer service, and the third takes care of the implementation of projects.

C. Ltd.

The company was established by young programmers in 1998. Their field of activity mainly covers development projects in connection with the Internet, including:

- Programming
- Counselling
- Content management
- Site management
- Website development.

It is a classical IT company, i.e. they mainly concentrate on the technological aspects of the new media: programming and development. The company was established from the former development unit of Index. Index (previously Internetto) is one of the first Hungarian Internet portals. The founders and owners of the company maintain active, cordial relations with those who have worked for Index. The number of employees often changes; usually it is around 8-10 people. The majority of them are developers, but there are also project managers and administrators. As their main activity is development, sometimes they also employ freelancers, if necessary, to carry out activities the company has no internal capacity for (e.g. they do not have a design-specialist).

K. Limited partnership

This is a two-person web-design studio. The founders also previously worked for Index. They mainly provide HTML and Flash-based solutions, usually as subcontractors.

The implementation phases of the project are as follows:

The general scheme of the implementation of Internet projects is as follows:



The particular phases require different skills and knowledge, which are often not available within one organization. Thus, the companies often need to involve external resources to implement the tasks. The specific phases are almost never implemented in this form in practice; there is often a need to ex-post corrections within and between certain phases, thus the constant coordination of the activities of the parties is vital.

The project in the case study was implemented in several phases.

1. The Office issued the tender and invited 6 bidders, including R. Ltd.
2. R. Ltd. decided to apply for the tender. They were aware of the fact that the resources of their company are not sufficient to implement the tasks, thus they sought partners. Through their contacts at Index, they found K. Limited partnership, which recommended C. Ltd. to develop the site.
3. The future partners negotiated a common platform. They decided to apply for the tender and to write the application jointly, and they also specified the responsibilities of the particular players.
4. Each company started to gather information on the task, and compiled a document on the specific sub-task they were responsible for.
5. After a short conciliation, they compiled the final application document, which was formally submitted by R. Ltd.
6. The selection procedure took place in three rounds. According to the preliminary agreement, R. Ltd. and C. Ltd. participated and presented their viewpoint jointly in each round.
7. Having announced the winning tender, the Office entered into a contract with R. Ltd., which concluded sub-contractor's agreements with C. Ltd. and K. Limited partnership.
8. The implementation of the project commenced.

3. Skills and knowledge necessary to implement the task

The three participants of the project had, and participated in the project with, different skills and resources. This was due partly to their different professional competences, and partly to their different positions in the project structure. The existing knowledge, the source of the skills, and the mode of the acquisition, were also different in the case of the particular companies. Each participant had specific professional-technical knowledge and social skills, which made cooperation possible. At the same time, the different types of competences had to be utilized in line with the different requirements of the sub-tasks of the project. The different types of knowledge were also divided within the company.

R. Ltd. participated in the cooperation with creative design and the management of the whole project. Thus, they both needed creative competence and organizational and management skills and market acquisition

abilities. Their accumulated knowledge, primarily social skills and capacities which made market acquisition and the coordination of the cooperation possible, are not “off-the-shelf” products, they are the results of a long learning process at the workplace. They obtained the necessary skills through a long knowledge-building process, in which the previous activity in the gallery and the artistic and art management activity was an important phase. During this phase, they had to learn the skills necessary to create and maintain business contacts. *“We never learned this; originally we worked in the field of art. When we started the gallery, we had no idea about the operation of enterprises, we did not know how to manage them, how to negotiate or how to find investors” (Owner, R. Ltd.)*

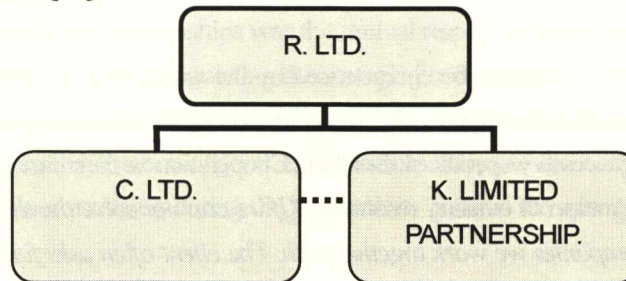
From the point of viewpoint of the project, the ability to integrate different types of knowledge was of the utmost importance. As the different knowledge-types necessary to implement the tasks are of a very specific nature, they are not transparent and controllable from “outside,” while at the same time there is no hierarchy among the different types of knowledge. A major precondition for this is the ability to specify the tasks adequately. It means that the project manager should be able to understand, clarify and “redefine” the demands of the customer as tasks to be implemented for the participants of the project. This step is necessary so that in a later phase the project development could be measured and the performance of the participants could be evaluated. *“We have provided complete customer service. The client presented his demands to me, and then I had to interpret those demands so that we could define them for ourselves. (...) Our relationship was good because the tasks were properly defined; they were written down and you did not have to do anything else but tick the tasks you had completed. Of course, we needed some time to reach this stage. The secret is that you must define the task very well. That way you can avoid misunderstandings. This is why constant partners are so important; in this case, a special terminology is already established regarding the definition of the tasks.” (Owner, R. Ltd.)*

C. Ltd. primarily contributed to the project with technological know-how. They regarded it as an advantage that customer service was run by R. Ltd., the prime contractor. In addition to technical knowledge, they also needed the management skills to run internal affairs within the company. One of the general problems of the interactive media sector is that the majority of the necessary technological skills are not available through the formal training system, and if they are, small companies cannot afford to pay the fee. Another major problem is that Internet development skills become obsolete very fast, even within the IT sector. Thus, those skills can almost only be obtained at work (on-the-job-training). This is partly done via the Internet, and also through direct exchange of skills among colleagues. The latter requires a developed cooperation skill based on trusts-based relations. *“Php. is not a subject at the university; you get help on the web and you start programming in php., or you get on a team which is using php. programming, and you adapt yourself to this practice. You can only learn how to program in php. by doing it, and when you have problem, you ask the others. The practical acquisition of the knowledge is dominant.” (managing director, C. Ltd.)*

The K. Limited partnership participated in the cooperation almost exclusively by technological know-how. They did not receive formal education; they mainly gained their professional experience at Index. Participation in the project was basically a money-making activity for them. Their primary motivation was practically direct profit-making activity, which—as we will describe later—created problems in the cooperation.

4. The establishment and maintenance of the network

The network established among the three companies created a hierarchical project structure. The whole project was coordinated by R. Ltd., and they were also responsible for customer service. The following figure demonstrates the structure of the project.



The parties entered into a contractual relationship, C. Ltd. and K. Limited partnership entered into a subcontractor's agreement with R. Ltd. At the same, the parties deemed it much more important that they were able to define the particular subtasks, the related responsibilities, and deadlines precisely when preparing the tender application documents.

It can be seen in the figure that each member of the network communicated with the others. The direction and means of communication were determined according to certain rules set preliminarily. R. Ltd. expressed its need for properly elaborated communication already at the time of the project application. Having prepared the timetable and delegated the different responsibilities, the parties worked out the future model of communication. They agreed that customer relations would fall exclusively under the domain of R. Ltd. They also received information from clients, which they clarified, classified and forwarded to the partners after filtering out the irrelevant content. *"We had a draft plan for communication right at the beginning. We kept contact with the Office and provided the subcontractors with regular information, but everyone received information adequate at their level. It was processed information. The Office sent us a record with more than ten points; they did not receive it as such, but we redefined it, we broke them down into tasks and both companies received only the relevant ones, which means that we forwarded reassessed information. They accepted our leading role; it was also easier for the subcontractors because they did not have to deal with the clients, which takes a lot of time and energy (owner, R. Ltd.)"*

During the project, the parties contacted each other mainly via electronic communication means. Mailing was done in a structured system, documents were labelled, and the different documents were categorised (e.g. records, responsibilities). Electronic letters were also documented in a print version.

When preparing for the communication, personal meetings were also planned. These personal meetings were held especially when joint decisions had to be made (e.g. major changes of responsibilities, changes in prices, etc.).

This well-structured and regulated communication made monitoring of the tasks and settling disputes easier.

Tasks were also distributed within the companies. In R. Ltd., one person carried out professional work, one person was engaged with daily customer management, and the latter one was also responsible for the whole project. In C. Ltd., two developers were commissioned whose activities were coordinated by a project manager.

Contacts among the three companies created a focused network of chains of loose links. The structure of the network, and the content and the form of the contacts among the parties, were defined by the tasks to be

performed. The function of well-defined communication and control mechanisms was to create and maintain an atmosphere of cooperation.

5. Changes in the relationships of the partners

The partnership of the three parties can be characterised by the willingness to cooperate from the beginning. This is partly due to the practice they gained in project-based organizational structures, and partly to the fact that none of them had the necessary specific skills alone. Cooperation in their case ensured successful business operation through the integration of existing resources. *“If we can not solve the tasks, we cooperate; we have many strategic satellite companies we work together with. The client often asks for everything from A to Z, so for example, we also have a printing office. In these cases I undertake everything, I keep the client in hand, and I determine which work phase the subcontractor is involved in.”* (managing manager, C. LTD.)

R. Ltd. started to seek partners before applying for the tender; they did not have preliminary working experiences with either firm. At the beginning of the cooperation, their previous contacts with K. Limited partnership in the circle around Index, and in the case of C. Ltd their previous development activity at Index, was their professional reference.

The basis of stable and steady partnership is long-term mutual interest. In the case of these three companies, there were slight differences among their interests, which also affected their internal relations. In the case of R. Ltd. and C. Ltd., the main motivation behind the participation in the project was market acquisition and provisional further businesses, as opposed to K. Limited partnership, which did not have a developed market strategy, and was primarily interested in direct profit making and short-term cooperation.

These slightly different interests had an impact on the behavior of the parties in the cooperation. The relationship between R. Ltd. and K. Limited partnership remained slightly hierarchical until the end of the project. However, this hierarchical relationship was also due to the fact that the professional competencies of the two companies were similar, and thus the control was tighter than between R. Ltd. and C. Ltd.

The relationship between R. Ltd. and C. Ltd. was based on partnership throughout the project, and it can be characterized by the respect of mutual interests and values. A key factor in the good cooperation was that the development activity successfully managed in C. Ltd. Two programmers and one project manager was dealing with the project. Their cooperation was supported by several indirect economic and social patterns. The co-workers knew each other, they had all worked for Index, and the joint professional history was an important link for them. Besides, the several contacts outside the workplace also constitute an integrating factor in company relations. *“This is not a tinned food plant, where you are sacked because you are five minutes late in the morning, and in the evening there is another guy in your place, who also knows what to do, just as you. This is another type of workplace. The team is quite tough in pubs, but we also exercised that when we worked for Index. (...) It is more like a family; we have to live together, and we must manage conflicts. If there is a conflict, we do our utmost in order to be able to solve it. I often feel more like the head of a family than that of a company...”* (Managing director, C. Ltd.)

The task of R. Ltd. was the efficient integration of resources. Their most important role was that they were able to create the frame necessary to manage the project, they were able to arouse the interests of the partners in the cooperation, and they were able to validate the values that steadily integrated the partners.

6. Internal and External Relations

The parties in the cooperation did not have common work experience previously, thus they did not have the time to gain the necessary experience to establish and maintain trust-based relationships. The necessity to utilize the divided knowledge jointly, however, contributed to the establishment of trust-based relationships during the project. The basis of these relationships was the mutual respect of each other's competence, and the joint system of values and norms primarily regulating the emerging cooperation.

Trust-based relationships are never born in a "vacuum;" they are primarily formed by the experience of the partners in the network. In the absence of joint experience to integrate the cooperation, the prospect of future cooperation and the values emerging during the joint activity ensured the operation of the network in this case.

When the project was launched, one of the basic values of the cooperation was explicitly defined by R. Ltd., the integrator, namely that specific solutions should be aimed for during the implementation of work, i.e. the parties should be creative within the defined boundaries. From the viewpoint of the integration, however, the unarticulated values and norms that were "produced" by the relationships were of major importance. As opposed to the above-mentioned professional values, these primarily referred to the know-how of work performance, the so-called social-cultural knowledge. We identified three core values of this type: timeliness, flexibility and reliability. The first referred to keeping to deadlines, the third to the quality of the tasks performed.

Besides the long-term mutual interests, primarily operational mechanisms had to be operated that enabled the establishment and maintenance of the above mentioned values. The integrator had a key role in this process, and as a quasi-broker, practically created the codes through which the integration of the different knowledge-types (including that of the client) was made possible. The integrator also ensured constant information flow, which was transparent for each party, and thus he created the opportunity of *mutual* control. The occasional personal meetings, whose hidden function was to strengthen the internal relations among the parties, contributed to this process.

All this, however, also required that the organizations participating in the project successfully manage their sub-tasks. They had to adapt to the frequently changing conditions with an adequate level of flexibility in order to avoid the emergence of "structural holes" in the cooperation. This was realized in the form of a dense network presupposing a high level of specialization and efficient control mechanisms within the organizations, i.e., strong links containing intensive relationships.

The companies in the case study all operate in Budapest, thus direct relationships typical of smaller and closer communities are not present in their operations. Nevertheless, there are "practical" communities existing, which are organized on a professional basis and informally. Their function is as follows:

- They facilitate contacts and identification of the members of the community
- They operate as a reference mechanism, and they provide information on the members of the community
- They facilitate contacts between the members of the informal community and those outside the community
- They enable the members of the network to share the knowledge and to create new knowledge (Lesser, 2000)

Such informal meetings are mainly typical of informaticians, who exchange numerous pieces of business and technical information there.

Creating formal links via institutions to professional communities, however, is not typical at all. It was a widely held opinion that professional organizations primarily represent the interests of large companies, that they are not able to provide information and to represent professional interests, because they are organized in a business-oriented way. The majority of companies operating in the new media sector are new, start-up enterprises characterized by a lack of capital. There have been several attempts to harmonize the activities of the companies and to elaborate a norm-system regulating the market, but so far they have all failed. In general, there are no attempts and political willingness that would enable them to influence their wider environment. On the other hand, the market is so segmented, with so many players, that interest representation seems to be utopian thinking for the time being.

7. Summary

We have demonstrated a task-specific network and its cooperation mechanisms in our case study. The characteristic feature of the cooperation is that, as opposed to networks of strong links operating in closed communities, the “ready-made,” extra-economic social institutions (e.g. ethnicity) are not markedly present.⁵³ The time dimension creating the basis of trust-based relations is obviously missing from the newly developed and task-specific cooperation. The emphasis instead is transposed to the more or less formal framework, which ensures the reciprocity of parties in their internal transactions.

In the case of a highly specialized task division, the integration of relations is ensured by two important factors besides long-term mutual interest: the ability to integrate the different types of knowledge and to play the role of the intermediary, which creates a common background, and respect of the mutual values that are created in the cooperation, and which primarily refer to the norms of cooperation.

⁵³ See case study on the role of ready-made institutions and on the operation of entrepreneurial networks based on strong links written for Sasakawa Pearce Foundation: Peter Csizmadia – Csaba Mako (2003). The rearrangement of economic and social resources in cooperative networks (Ten-year-long history of trust-based regulations of economic behavior), Budapest: *Institute of Sociology, Hungarian Academy of Sciences*

Methodological note:

We have presented the operation of an entrepreneurial network of three companies in our case study. Due to the logic of the case study, we targeted the exploration of specific characteristics, rather than statistical representativity. Thus, in order to implement the task, we gathered qualitative data. We carried out structured, in-depth interviews with the most important participants in the project, the managers of R. and C. Ltd., four times in Budapest. We quoted two participants in the case study. We would like to take this opportunity to thank them for their support.

The interviewees were as follows:

Interviewee	Sex	Status
R. H.	F	Owner, project manager R. Ltd.
B. I.	M	Managing director C. Ltd.