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Structural holes in the local governments' tendering activity network in a Hungarian sub-region

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Abstract

The paper discusses the collaboration network of local governments through their tendering activity.

Although many tenders in the Hungarian tendering system have given special attention to those joint actions that targeted cross developments of multiple localities, collaboration between local governments in the tendering activity cannot be considered typical. This observation is corroborated by our research conducted in 2009–2010, mapping all tender collaborations by local governments in the Kaposvár sub-region, a total of 54 localities. Our research identified a social network with structural holes of tender collaboration between local governments in the sub-region. Network structural holes allow the presence of a 'third party' that profits from this network structure. This paper seeks to identify which actors benefit from the structural characteristics of the collaboration network of local governments in tendering activity.

Key words: local governments, tendering activity, social network

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Introduction

Many tenders in the Hungarian tendering system have given special attention to those joint actions that targeted cross developments of multiple localities. Although joint actions are encouraged, collaboration between local governments in the tendering process cannot be considered typical. This characterizes small Hungarian localities, too, where the lack of infrastructure and lower representational power would justify strong collaboration and common interest representation.

Our research conducted in 2009–2010, mapping all tender collaborations of the local governments of the Kaposvár sub-region, also describes this phenomenon. The Hungarian sub-region was selected because of the high number of small settlements that it consists of (except Kaposvár, all the 54 settlements had fewer than 2000 inhabitants, whereas the typical case was under 1000).

Our research identified a social network with structural holes (the term refers to the gap between closely connected groups) of tender collaboration between local governments in the Kaposvár sub-region. The gatekeeper actors—or in Burt's terms opinion brokers—between closely connected groups (the tender writing companies), can benefit from the tender collaboration network characteristics of local governments in the sub-region.

After 2010 the local government system and the territorial administration changed which affected the tendering activity of the local governments as well, especially in the case of communities with fewer than 2000 inhabitants. Our empirical evidence refers to the 2009–2010 years, and we can only make some hypothesis based on a couple of interviews on the consequences that the changes introduced after 2010 may have brought.

Background

According to Vági (1982) before the regime change in 1990 in Hungary the hierarchy of settlements was associated with a centralized resource distribution system that strengthened regional inequalities. After 1990, with the implementation of the local government law, decentralization began, which had an impact on the resource distribution system, too. This law established the structure and function of the local government sector (Pálné Kovács 2008) distinguishing it in four structural characteristics compared with other European systems: the organizational differentiation of the small settlements' local governments, the differentiation of power, the arbitrariness of the association system and the building of a Hungarian-specific local government/

state administration level. However, this law did not address the problem of the small settlements, while the empowerment of the localities was not defined specifically (Pálné Kovács 2008).

Although Hungarian local governments have a lot of leeway, in reality they have to make many compromises while completing their compulsory tasks. Tendering activity oriented to development funds was considered an optional task that could be tackled only after the local government had completed its compulsory or operating tasks.

Separating the operating funds from development funds, in the early 2000s there were governmental resources that financed the compulsory operative activities of local governments: infrastructural funds (TEKI,[2] CÉDE[3]) and funds for financing those local governments disadvantaged beyond their fault (ÖNHIKI). This kind of financing was discontinued in 2010. In parallel with this kind of financing, the process of pre-accession and accession to European Union changed the system of financing local governments. The accent was moved to development funds for local governments at the beginning, with the help of SAPARD and LEADER programs, later with the help of applying for funds to the National Development Agency (NFÜ).

Our study was conducted in 2009–2010, when tendering activity of local governments amounted to applying for national operational funds (TEKI, CÉDE, ÖNHIKI) and also EU development funds through Rural Development Plans (NVT, ÚMVP, NFT, ÚMFT) and the National Development Agency (NFÜ).

We were interested in the collaboration characteristics of small localities (up to 2000 inhabitants). That is why we conducted our research in the Kaposvár sub-region, where small settlements were overrepresented (except Kaposvár city, all the localities were home to fewer than 2000 inhabitants). According to the Hungarian Central Statistical Office (KSH) in 2009 although 75% of the total number of settlements had fewer than 2000 inhabitants (N=2381). The question is how do these settlements manage their tendering activity? What network conditions define collaboration between small settlements in their tendering activity?

Originally the Kaposvár sub-region included 77 settlements (as in Figure 1). However, the aggregated economic indicators for all the localities in the region was relatively good, influenced by Kaposvár's good economic indicators (low unemployment rate, high level of incomes, etc.). For this reason 22 settlements chose to secede from Kaposvár and to join Kadarkút, another sub-region. The Kadarkút sub-region had the most disadvantaged (LHH) classification (assigned to regions with poor economic indicators), making it possible for the local governments to obtain down payment discounts through tendering activity.

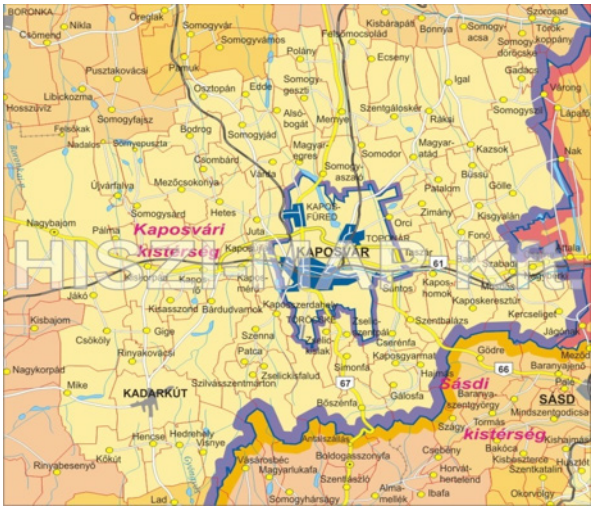
The remaining 54 settlements in the Kaposvár sub-region also organized themselves into three micro-regions: the micro-region of Igal, the micro-region of Kaposvár-Somogyjád and the micro-region of Zselic.

Development goals of the Kaposvár sub-region were set out by the Kaposvár Multi-Purpose Sub-region Association (KTKT) in 2005, an organization founded especially to help the localities realize their development in concordance with sub-regional aims. Long-term goals were defined in connection with improving quality of life, infrastructural developments, environmental protection, economic developments, improvement of the la-

2 Development support for regional equalization

3 Support for local development projects

Figure 1. Kaposvár sub-region in 2009



Source: http://www.hiszi-map.hu/catalog/displayimage.php?album=42&pos=5

bor market etc. Tendering activity of local governments and also of the KTKT were subordinated to these goals.

Collaboration between settlements through tendering activity was encouraged by the KTKT. As the small settlements were having difficulties with tender writing because of their lack of knowledge and human resources, the KTKT established a tender-writing organization, the Paktum Iroda, which assisted in the tender writing activity of the settlements at a very advantageous price.

After we finished our research in 2010, a reorganization of the system came to light, motivated by the new national administration and local government system changes.

This reorganization resulted in prestige loss for the local political elites with the introduction of the five year cycle and reduction of the number of delegates in parliament. The tasks of local governments were also decreased by centralization (public education, some social care duties, health care, etc.) and magisterial duties were removed from local governments.

In the case of small localities the possibility of compulsory associations was introduced, but it is exactly these localities that lost most of their functions (Pálné Kovács 2014). Furthermore, the law on sub-regional association and the Companies Act were repealed. Partly because of these changes in the studied sub-region of the 54 locality collaboration, the KTKT ceased to function. The failure of the KTKT is unique in the region, for example, the Kadarkút sub-region still exists. Even prior to ceasing it was a massive task to represent the interests in a unified way for a region with that many localities. Following the abolition of micro regions and sub-regions, in 2015 mayors unquestionably miss 'belonging to somewhere.' No structure remained of an inter-locality collaboration, common interest representation from the old sub-regional level. Although some entities do exist today, with the alliance of Somogyjád (the old center of the sub-region) there is a social network of 33 localities, a public education network of 18 localities, and a collaboration of 43 localities with the call for internal control. The Zselic micro region recognized as the most integrated one in 2010, is not a member of these associations.

Theoretical frame

Report on the tendering field of local governments in the first seven year cycle of joining the EU.

Theoretical and empirical research studies from Hungary have several conclusions as to the methods of distribution of local government tenders. There is a theoretical background as to how the funding of local governments adjusts to institutional transformation (Somlyódyné 2003, Kovács 2008, Pálné Kovács 2008). With the appearance of EU funds for local governments the number of studies that focus on the institutional distribution of sources (Perger 2009, Pálné Kovács 2011), and the effects of the funds distribution (Voszka 2006, Pálné Kovács 2009, Perger 2009a and 2009b, Balogh 2009, Hutkai 2009) increased.

Separating the governmental operating funds from the developmental grant funds, Somlyódiné (2003) analyzed the allocation of national operational resources: in the case of sources like TEKI, which was abolished in 2010, and CÉDE, it was found that the principle of need and fairness prevailed. ÖNHIKI was another source of support used among local governments, that provided help for those who were disadvantaged beyond their fault, and although from the national budget came only a small amount of support, in 1999 one third of all Hungarian local governments had to rely on this support to ensure their operability (Puskás 2000).

In parallel with the national resources, which were firstly operational in nature, the pre-accession and later post-accession EU development funds appeared. The pre-accession process was intended to develop the institutional system following a bottom-up design and regional planning. It is relied on current need and after the accession would further support maintaining finance of the development. Perger (2009) calls attention to the inconsistency between economic indicators and socio-economic development: while the economic indicators are favorable for Hungarian society, economic and social development is lagging behind.

Analyzing the use of resources from a sociological perspective, Kovách (2007) concludes that the business sector gradually gained ground in the financial funds raising system against local governments. Kovách named the process 'project conceiving,' in which the local governments are not able to perform the undertaken tasks, and they are then forced to outsource certain duties in the form of projects. As a consequence designers, experts, advisors, managers, organizers, civil servants, and researchers gained greater opportunities and influence in the preparation and execution of the national and EU development programs. The 'project class' according to Kovách is the social group (not social class or order) that is able, with the help of its social capital, to legitimize their own influence or power in the project.

The impact of resource allocation on regional inequality was investigated by Balogh (2009), who found that chosen projects are not reducing inequality. He also found that the individual's position in politics played no major role in winning tenders.

Organization theory of public administration and local governments

Organizational theory of public administration and local governments became popular in the sixties (represented in the USA by Merton (1968 [1949]), and in Europe by Weber (1970) and Crozier (1964), while in Hungary Lőrincz, Nagy, and Szamel (1976) gave an overview of the contemporary perceptions of public administration).

The sociology of organizations approach to local governments was reconsidered when scientific interest was turned toward social networking of local governments. Local community studies continued—or redefined—opinion leader researches, and by investigating local/community power and mapping relations among individuals/organizations (Dahl, 1958, Polsby 1959, 1962 for example) foresaw the social capital, embeddedness and social network approaches.

Recognizing the importance of regional power relations, in the 90's scientific interest was shifted towards research focusing on municipality, regional, interregional and personal relationships (Pálné Kovács 2008). Due to the urban regime school, the focus of research was not institution or structural elements, but the personal relations and circumstances affecting behavior (Stone 1998 [1995], Stoker 1998 [1995]). This school/paradigm will gain even more importance in the (macro level) network approach in the governance literature.

Governance literature's foundational recognition is that the government is not the sole decision maker but the civil society is also playing an important role (Rhodes 2000). But it was this governance literature that brought up several public policy dilemmas such as defining the bound between cooperation and competition, the topics of openness and closeness, controllability and flexibility, accountability and efficiency (Jessop 2003). A new term metagovernance got introduced through which Kooiman (2000) differentiated three levels of government: first-order (problem-solving), second-order (institutional changes) and meta-order (governing the government). The appearance of transnational organizations—such as the European Union—can be connected to this approach as well.

In the Hungarian sociology literature, rural studies also consider social networks (descriptive studies such as Kovách 2009, or regarding relations among localities, for example Kovács 2008 or Somlyódyné 2006, considering social capital such as Csurgó, Kovách and Megyesi 2009). A closely related study to ours is the ADAPT research conducted in 2001-2003 by Pálné Kovács Ilona on developmental policies and local development. The study emphasized the importance of intensive vertical relations among actors on a regional level. Results show that the density of relations within a region is higher than inter-regionally (Pálné Kovács 2008:279). As a follow up of the ADAPT study an OTKA research was conducted in 2008, that focused on the change of relations among regional actors (Pálné Kovács 2009b). Focusing on decision-making elites, 23 institutional and positional types were identified based on a sample of 200 respondents.

These results lead us to the conclusion, that local governments are using their social relations, whereas civil society is less embedded. The comparison of the sectors also shows that local governments have an emphasized role, as their network is the strongest (among politicians, media and local development institutions).

In our study, we use the results of the ADAPT research as foundational while going further in considering the characteristics of social networks and with inspiration from Ebers (1997), we suggest the differentiation of two separate research mechanisms. The first mechanism is the micro-macro approach,from?the personal network we can deduce the inter-organizational network. Second is the macro-macro approach, where from the regional network we can draw out the inter-organizational network.

Micro-macro approach of inter-organizational social networks

Micro-macro approaches are those studies that are deducing inter-organizational ties from interpersonal connections. Social network analysis on a macro level (inter-organization relations) reaches conclusions similar to micro levels (personal relations) studies (see Powell 1990, Burt 1992, etc.) likewise with studies where economic actions or inter-organization ties are deduced from the structure of personal networks (for example Uzzi 1996, Burt 1992 and others).

Macro-macro studies are making conclusions regarding the inter-organizational networks, by relying on the environment, the regional networks (Sabel 1989, Saxenian 1994), research of regional and local government relations (governance), collaboration or network studies of the development policy system.

From one hand, this research uses micro-macro approach when, during the analysis of inter-organizational network of local governments, studies the network structure, especially the structural holes. In the inter-personal analysis, networks that have structural holes, gives opportunity to brokers for playing important roles. The role of brokers was first mentioned by Simmel (1921(1908)) who differentiated dyads from triads. According to Simmel, triads are always carrying the possibility of breaking into dyads, which also means that the third member will be the subordinate of the new dyad. In this case the broker is the actor who as a tertius gaudens profits, while maintains the distance between the other two actors. The uniqueness of this relationship is the influence that the broker has on both actors. The most prominent broker literature is accorded to Fernandez and Gould (1994), who altogether differentiated 5 broker types (liaison, itinerant, coordinator, gatekeeper, and representative). Burt (1999, 2005) mentioned the opinion broker term, which means a broker, who is carrying information from one opinion group to the other, taking advantage of the structural holes. Obsfeld (2005) introduced the tertius iugens term, who, unlike the selfish broker profiting from the lack of communication between two associated partners, rather initiates and facilitates the cooperation and communication between the partners.

On other hand, this research also takes into consideration the macro-macro level, when the regional relations between local governments and other tendering institutions are considered. Analysis also aimed to find out if a broker's position at the micro level remains the same at the macro level.

Network structure is analyzed taking into consideration these two approaches. Since the network study of relations among local governances is not very popular in the sociological literature, the multiple functions of different organizations, as actors of a network, lead to definition difficulties.

Instead of terms such as opinion leader and opinion broker, which are already known from the specialized literature, our study prefers the notions of information leader and information broker. The information leader is the sociometric star, or the local government fulfilling the formerly used opinion leader role. The information broker is the local government that fulfills the role of a bridge as compared to the opinion broker among different actors of the network.

Methodology

During 2009 and 2010 we used qualitative methods (interviews) for investigating the relations between local governments.

The investigated region was Kaposvár's, where 54 localities constitute the country sub-region, most of them under 1000 inhabitants. The localities were grouped in 21 (district) notaries. Half structured interviews were made with the mayor or notary from each district notary: a total number of 21 interviews were made between 2009 and 2010. Previous fieldwork made in 2009 revealed that the notarial centers of the district notaries are familiar with the district localities' tendering activity. The information regarded the number of tenders, and the collaboration between local governments was comprehensive and valid for each 54 settlements.

The half structured interviews contained many questions, in this paper we will present only the results referred to the network investigation of tendering activity.

Network questions referred to the collaboration with other organizations through tendering activity.

In the case of notaries (where a single locality forms the notary) the questions referred to the locality, while in the case of district notaries (where typically 3 localities formed the district notary) the questions referred to all the localities in the district.

We were primarily interested in the inter-organizational relations between local governments. Secondly we were interested in the relations between local governments and other tendering institutions.

Through the investigation, and later through the analysis and interpretation the nodes of the networks represented organizations (local governments, tender writers and other regional tendering organizations).

The network investigation followed the section referred to the quantity of tenders, where the questions referred to the number and type of tenders of each localities. The interviewee was asked to list all the tenders (in the case of district notaries all the tenders of the localities from the district) in the past year.

All tender applicants were asked whether during the tendering activity help/consultancy or other type of collaboration was applied for with any other local government and/or other type of organization (like tender writers or local tendering agency) and interviewee were asked to name the organization they collaborated. The questions were: *'During the tendering activity which organization helped you?'* and *'Whose advice did you seek about the tender?'* The methodology corresponded with the name generation method, where a node generated other nodes connected to it. As a result we get not only the inter-organizational network of local governments in the sub-region, but the inter-organizational network of local governments and other tendering institutions, too.

The relation between the collaborators was also classified. In the case of local governments we asked what kind of relation the collaborating localities' mayors or notaries have: formal (derived from district notaries or micro-regional relations) or informal (acquaintance or friendship). In the case of relation with tender writers we also asked why they chose the given tender writer, what kind of relation do they have with the tender writer: whether there are any other formal or mandatory collaborative terms and conditions (for example they

have to collaborate to each other because they have legally defined relations or they are involved in regional associations), whether the collaboration has regional, county or national level, and finally whether the relation is a formal or personal one.

In order to better understand the collaboration networks of the local governments we made 10 complementary interviews with institutions regarded in some way as territorially important to tendering activity, such as with representatives of the regional development agency, tender writers, employees of institutions of regional importance (like Kaposvár University). We contacted all the regional development agencies, and the most mentioned three local tender writers.

The network relations were registered in a network matrix, 1 being the value for the existing relation, and 0 for the non-existing relations. Matrices were analyzed with Ucinet6 software, and networks were presented with Netdraw software.

In 2015 additional interviews were made in the region to inquire what happened to the previously investigated localities because of further changes in the local public administration system.

Research findings

Structural holes in the collaboration network of local governments

As our research findings revealed, the network structure of local governments' tender collaboration networks was highly determined by the type of inter-organizational relations. Classifying the answers to the questions *'Why did you collaborate with the mentioned organizations through the specified tenders? How would you characterize the relation you have with the organizations you mentioned?'* four types of collaboration could be distinguished in the Kaposvár sub-region.

The formal network is when local governments were collaborating through their legally defined relations, such as district clerks, regional association (KTKT), and the micro regions (with micro-regional centers in Somogyjád, Igal and Szentbalázs). Not being able—or not easily being able—to change the members and the conditions/premises is the most characteristic feature of formal relations. The formal network shows the hierarchy of localities in the administrative system where central nodes are micro regional centers (see Network1).

The quasi-formal relation connects those local governments that are not strictly following the formal demarcation. Associations with social implications, like development of education organizations, family support, social care, or sewage are not strictly following the sub-regional or micro-regional borders. For example, in the case of schools' integration tenders 18 localities were associated in order to develop schools' infrastructure. The main idea of the joint action derived from Somogyjád's mayor, and also the president of KTKT, initially wanted to unify all the localities in the schools' integration tender, but later 18 localities agreed to associate. Ties formed like this among localities can already suggest the kin- or negative ties among mayors to a small degree. The quasi-formal network differs from the formal network in the case of group members, but central nodes are very similar with those of formal networks (see Network 2).

The quasi-informal ties are often relying on informal relations connecting local governments with tender writing or consulting companies. Not derived from national administrative system, and neither from informal relations, some tender writers collaborated with local governments because they had a good reputation. Gossip about the successes and 'good' relations of tender writers was spread among mayors. They wanted to reduce the risk of failing in a tender by working with those tender writers who had been successful in the past, or who had proper relations in the fund distribution system (see Network 3).

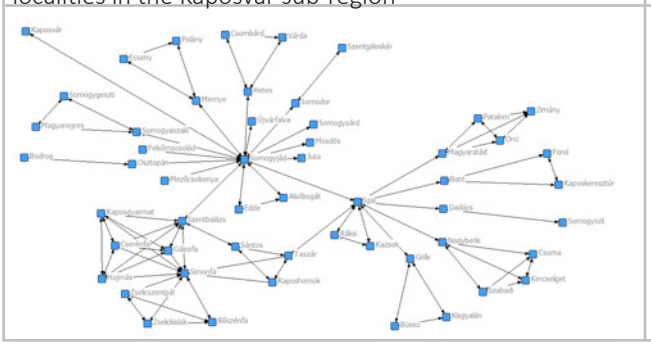
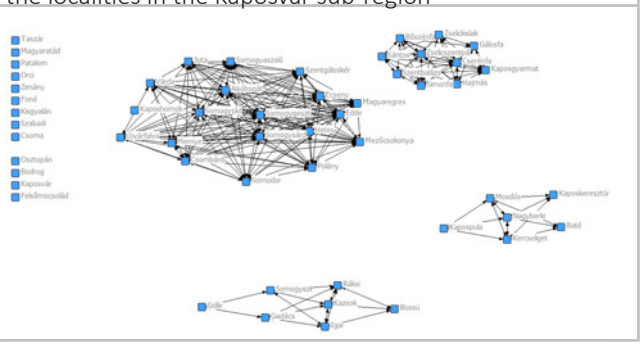
Finally, the informal network brings together the aid, mutual information exchange, and opinion groups regarding the tendering activity where sympathy, friendship and acquaintance ties dominate. Compared with the quasi-informal network, the informal network contains relations from other sub-regions (see Network 4).

Analyzing the answers to the question *'During the tendering activity which organization helped you?'* we found out, that formal and quasi-formal relations were dominated contrary to quasi-informal and informal relations. In the case of quasi-formal and informal relations mayors and notaries typically mentioned tender writers instead of local government institution in addition to their formal relations.

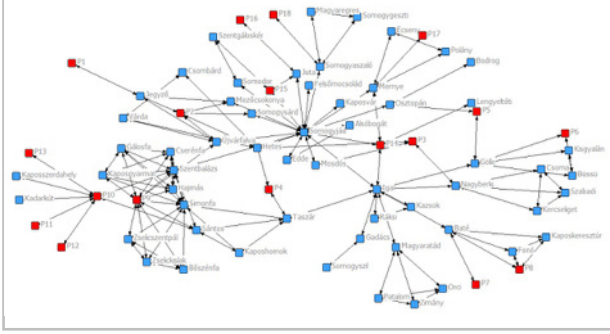
Through the network analysis we visualized all the four types of relations in one network. Since the network ties represent collaboration, we worked with symmetric relations.

Table 1 shows the relations reported by the mayors polled at four collaboration levels. The blue nodes were local governments in the Kaposvár sub-region. Red nodes represent tender writers (we did not obtain permission to use the tender writing companies' names). Green nodes are settlements from other sub-regions. A total number of 18 tender writing companies, and 9 local governments from other sub-region were mentioned. The Kaposvár sub-region contained 54 localities, and two more nodes were added to the local network: a notary who played an important broker role in the relations between local governments (Jegyző), and the County Local Government (Megyei Önkormányzat).

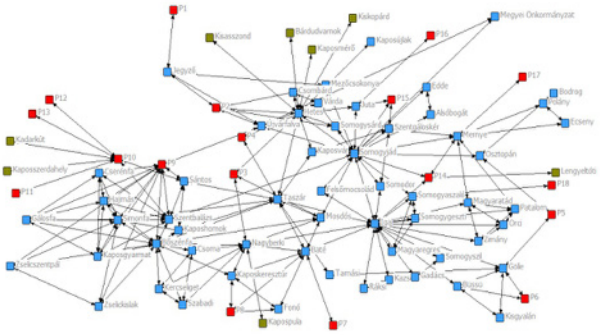
Table 1. The four types of collaboration networks of local governments

Network 1. Formal tender collaboration network of the localities in the Kaposvár sub-region	Network 2. Quasi-formal tender collaboration network of the localities in the Kaposvár sub-region
	

Network 3. Quasi-informal tender collaboration network of the localities in the Kaposvár sub-region



Network 4. Informal tender collaboration network of the localities in the Kaposvár sub-region



Based on these networks three characteristics of the tender collaboration can be observed.

1. In the tender collaboration networks formal relations dominate. Even when mayors and notaries were asked to mention with which organization they would prefer to collaborate, they usually mentioned the formal relations they already have with the other localities. That is why in the quasi-formal and informal networks the formal relations are represented.

2. The quasi-informal and informal networks move from the micro-macro approach to the macro-macro approach, where there are not only one type of organizations (local governments) in the network, but also other institutions that take part in the tendering system (tender writers, County Local Government). The role of tender writers in the tendering activity can be very important especially for small settlements without knowledge and capacity for writing tenders. Collaborations between tender writing companies and local governments were several: from the case where the tender writing company specifically asked local governments to collaborate in a tender (for example, the development of a children's playground) to the case where a tender writer was permanently employed, being responsible for searching out tendering opportunities, writing tenders and monitoring the development procedure.

3. The structure of tender collaboration network in the Kaposvár sub-region shows 'structural holes', which means that between densely connected groups brokers can provide information from one closely connected group to another. The question is which actor was able to take the most advantage from the peculiarities of the structural characteristics of the network.

Due to the domination of formal relations, collaborations within the sub-regions, typically the centers, had more ties. The degree of micro-regional center Somogyjád was 21 while Igal's was 20. The most interconnected group was the micro region of Zselic (with the center in Szentbalázs), where the local governments are permanently collaborating not only at formal, but at informal levels as well. The localities have similar geographic characteristics, they are representing their interests mutually and they apply for development sources together as well. The degree of Szentbalázs was 10 while Bőszénfa's was 16, and while the second is not a micro region center, due to the operation of a school, it is connected to the district notary of Nagyberk, and the mayor is also a member of several forums. The betweeness was the highest in the case of Somogyjád (1448,602), the most influential locality in the sub-region. Somogyjád was a micro-regional center, and a sub-regional

center, too. The mayor of Somogyjád was also president of the KTKT (the sub-regional Association) and a member of the County Local Government.

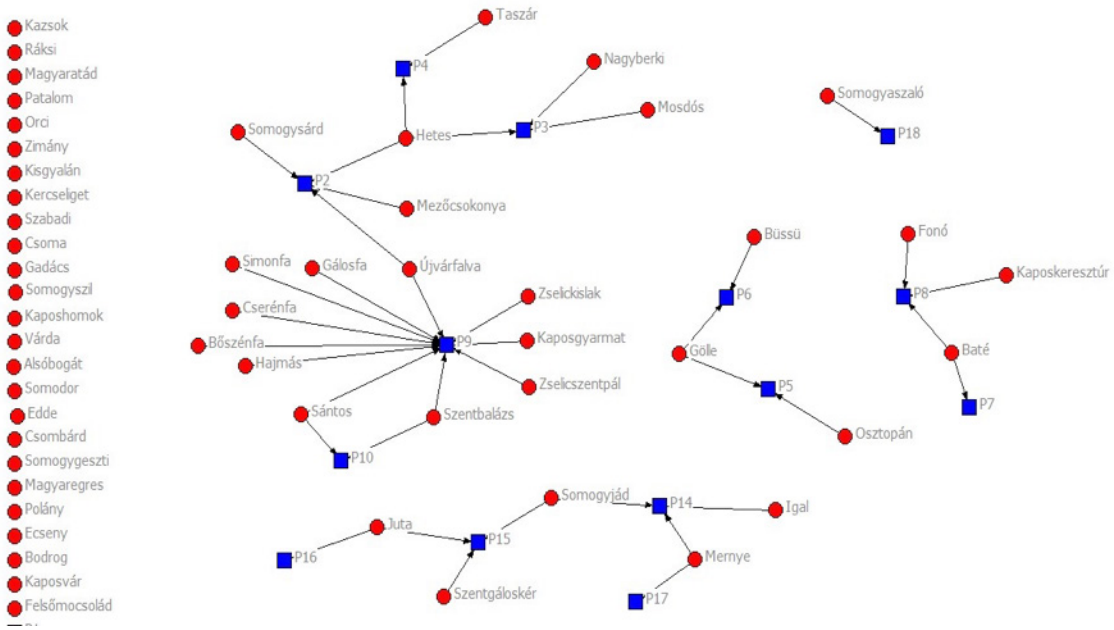
The formal and informal tender collaborating relations suggest that the most influential or 'information leader' node can be well defined: the local government playing the central role in the sub-region (Somogyjád), the mayor being a member of many forums and associations. At this point was not very clear what role the structural holes can have in the network, and which institution can profit from this network structure.

The laughing third party

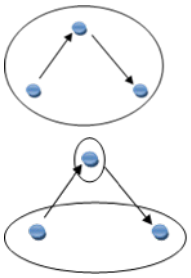
The localities of the sub-region (without Kaposvár) submitted 269 tenders in the observed period of time, and from these they claimed the help of professional tender writers in 177 cases. At the time of our study there were 18 market based tender writers in the sub-regions, complemented with the 3 organizations responsible for Leader tenders.

The sub-regional network shows that the tender writing companies were able to bridge among localities and even sub-regions which are otherwise not connected (e.g., P5, P15, P19, P3). Network 5 highlights the role of tender writer companies from the previous network and represents which localities (red nodes) are connected with specific tender writer companies (blue nodes). P4, P3, P2, P10, P15, P6, P5, P14, P8 and P9 tender writing companies collaborated with two, or more local governments. The most integrated tender writer was P9, who managed the tendering activity of all localities in the Zselic micro-region. About P18, P7, P17, P16 the interviewee did not mention other connections. What we can observe in this network is that some tender writers connected localities from different notary districts or micro regions with each other (for example in the case P2 who connected Mezőcsokonya with Somogysárd, or P3 who connected Mosdós with Hetes, otherwise connected only through the sub-regional center, Somogyjád).

Network 5. Collaboration ties of local governments and tender writing companies



Among the tender writing companies active in the Kaposvár sub-region, according to the Fernandez and Gould (1994) typology of brokers we could typically identify two kinds of brokers.



The coordinators (P2, P10, P9, P3) who spread information among local governments about tenders collaborating with local governments that already knew about them.

The itinerant broker (P14), who provided outsider help to groups otherwise strongly connected.

Results raise the question what explains the importance of the tender writing companies in the local government collaboration network, especially when the tendering system has service institutes that should aid the local governments in their activities (for example KTKT, DDRFÜ, etc.). It seems a viable answer that where the institutional system is not able to integrate the functions accordingly to the tender system (meaning the majority of small localities), the outsourcing of human capital, the trust in the professionalism of tender writers, and the hope of accumulating extra points during the application, the local governments reached out to tender writers. But it is also worth considering, that it was in the interest of the local governments to maintain a 'network with holes.' Perhaps a less dense network allows certain lobby activities, when actors believe that the successfulness of a tender does not depend solely on the quality of the application.

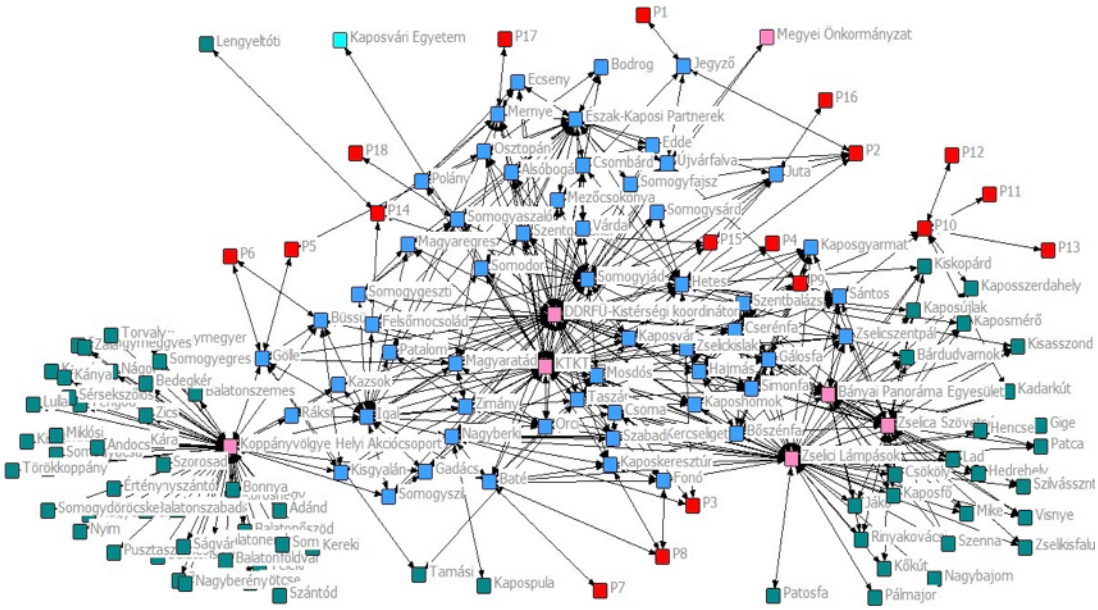
Regional networks—important, yet still peripheral tender writers?

The previous sections analyzed only the answers given by representatives of local governments to the questions *'During the tenders which organization helped you?'* and *'Whose advice did you seek about the tender?'* The mentioned local governments and tender writing companies were visualized in the above networks.

However, in the regional tender collaboration network there are influential service tendering institutions, which do not have the role of help giving in the administrative part of tender writing, but were responsible for information giving about the tendering possibilities and encouraging the collaboration between local governments by providing them with informational support. Analyzing the answers given to the question *'Which other organizations do you meet through your tendering activity?'* interviewees named the KTKT (the sub-regional Association: Kaposvári Többcélú Kistérségi Társulás), the sub-regional coordinator from DDRFÜ (regional development agency: Dél-Dunántúli Regionális Fejlesztési Ügynökség), associations due to previous PHARE and SAPARD programs (funding available in the pre-accession phase to European Union), now responsible for LEADER projects (Kopányvölgye Helyi Akciócsoport, Zselica Szövetség, Zselici Lámpások, Bányai Panoráma Egyesület, Észak Kaposi Partnerek). The partner communities in these last three associations did not follow the sub-region grouping. Within a micro-region, these organizations could strengthen integration, as they were providing the smaller funds accessible for small grants.

In Network 6 blue represents local governments, red nodes are tender writers, green nodes are local governments from other sub-regions and the regional tendering institutions are purple.

Network 6.
Regional collaboration network of local governments and organizations active in the tendering activity



In the event that these organizations were also included in the collaboration, they became the most central by the number of connections: KTKT and Koppányvölgye Helyi Akciócsoport with a degree of 55, Zselici Lámpások with 48 ties, Zselica Szövetség with 32, Bányai Panoráma Egyesület had 29 connections, while Somogyjád, the sub-regional seat had 24 ties. The betweenness was also high for these organizations, although with this indicator the brokerage role played by Igal, Somogyjád, Hetes and Taszár came to the fore.

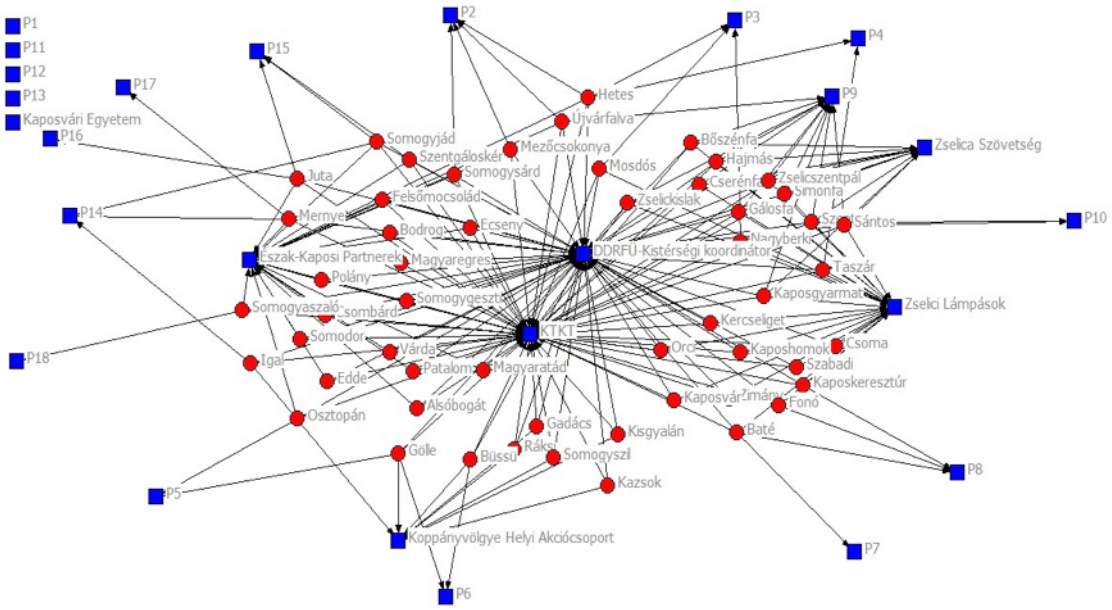
Interviews and observations made in the research period lead to the conclusion that the history of collaboration has an impact on partner relations as well. A good example to this is the bloc from the Surány valley, as prior to detaching from the sub-region, the tender collaboration with localities belonging to the Kadarkút sub-region already existed from the beginning of 1990s.

Localities from the Surján valley and Zselic decided not to maintain a legal organization, but to join the Zselica society, adding up to 32 local governments and 3 civilian members to the organization. This is following the European Leader logic, a voluntary collaboration with no public administration obligation, building up from the bottom where everyone elaborates their own agenda. The Zselica society, with the detaching of the Kadarkút sub-region became the connection between the sub-region of Kaposvár and Kadarkút.

Besides them, the Zselici Lámpások (the organization responsible for the Leader tenders), the Észak-Kaposi Partnerek, as well as the Koppányvölgye Helyi Akciócsoport also supported the collaboration.

In the regional social network one organization had a central role, the KTKT. Localities adjusted their development to the regional development goals drafted by the association. A somewhat mixed opinion about the KTKT came through from the interviews. Most often interviewees emphasized that the size and diversity of interests in the sub-region otherwise collaborative localities romper from each other. The KTKT as an institute did not write any tenders, but operated a section—the Paktum Office—that for a symbolic amount helped the

Network 7. Direct collaboration among local governments and organizations in the tendering activity



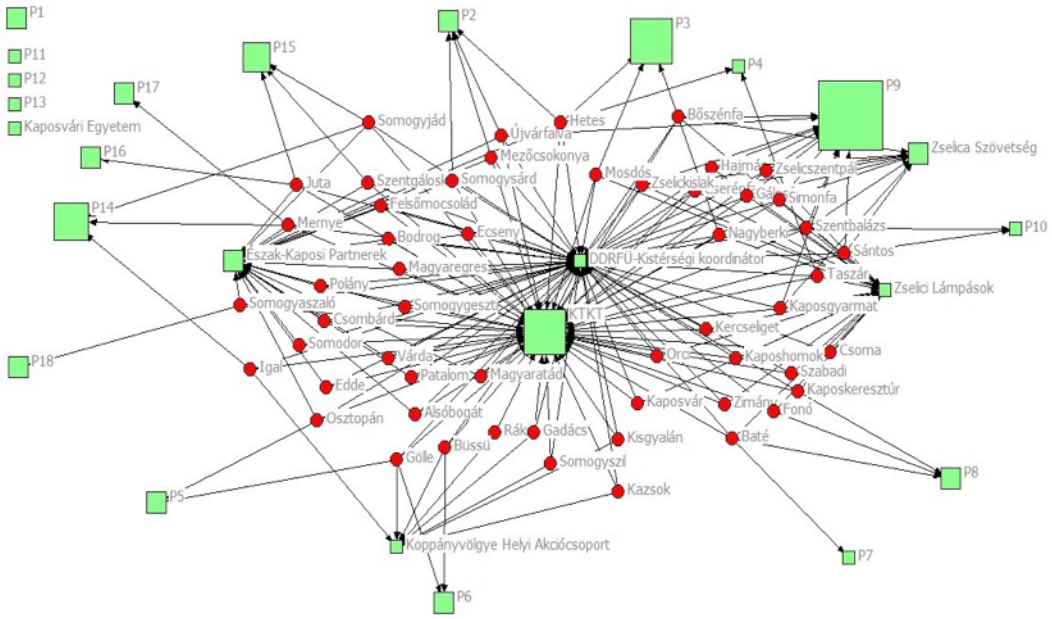
localities with their applications. Interestingly, the Paktum Office and the KTKT merged during interviewing, so if someone sought help from the 'sub-region', it was likely that the help came from the Paktum Office.

Given its position, it is not surprising that the KTKT had the highest betweeness indicator: this was the organization that connected all localities with each other. Due to the number of ties, a similar position was filled by the sub-region coordinator of DDRFÜ, with the difference that he did not provide any concrete help in submitting the tenders. They are connected with the localities of the sub-region for the dissemination: he was informing the leaders of the localities about the tender possibilities. Interviewees recognized the informational importance of the sub-regional coordinator, yet they also emphasized, that the problem is not in the lack of knowledge, but lies more in not having enough capacity and human resources to prepare the tenders. Network 7 shows the connection between localities and tendering organizations, including regional tendering institutions, red nodes are localities, while blue nodes represent the other institutions.

Although, as tendering activity is considered, the micro regions were primarily all held together by the sub-regional association and local development organizations, because of protracted financing these organizations have had the most significant losses. Personnel changes at the local government brought new interests to the fore, causing protracted tenders to lose their popularity.

The institutional background exists for the proper support of the local governments, but in reality during the tenders it was not these institutions whose help was solicited. In answer to the question *'During the last tender, whose help did you ask for?'* mayors pointed to the tender writing companies. Network 8 shows that while local governments are members of different collaboration networks, typically they work with the tender writer(s) through their operative tendering activity. In the network green represents institutions at the regional-level that help the tendering activity of local governments, while red nodes are for local governments.

Network 8. Organizational collaboration of local governments, reflecting the frequency of collaborations mentioned in interviews



As a conclusion we can say that although there are formal connections between localities, the tender writing and administrative help for local governments was not shared among one another: they either solved it with their own workers, or they asked for help from specialist companies. The lack of collaboration among local governments is seen from the responses of interviewees about the consequences of competition for scarce resources.

Conclusions

On the principle of equal access, information reaches all localities through several channels (newsletter, homepage of NFÜ, tender coordinators) assuming that small and big localities are equally able to use the information. However, the odds of receiving and implementing the information are different for every local government. Being informed or under-informed can highly depend on whether they have their own tendering department. Even if information gathering is fully provided for local governments, especially small localities have difficulties in realizing collaboration for tendering purposes and through tender writing processes.

Regarding the hierarchical structure we experienced a low level cooperation of local governments, based mainly on formal or quasi-formal relations. Two types of key actors were identified: one is the information leader, and the other the information broker.

In the Kaposvár sub-region the information leader role is fulfilled solely by local governments (taking us back to the micro-macro approach of the study). The information brokerage role is not very obvious in the network, where more types of organizations are represented (taking us back to the macro-macro approach of the study): it could be local governments, tendering local institutions, or tender writing companies. Based on the interview results, mayors and notaries reported that the greatest help in tender writing was obtained from outsourced tender writing companies. That is why they can be considered the laughing third parties of the col-

laboration. Actors like the Sub-regional Association (KTKT), or local development organizations have important broker roles in the regional tender activity network, yet the local governments rely first of all on the help of the tender writing companies. It seems that in accessing the financing resources, the tender writers are information brokers, the laughing third parties, who can exploit a bridge between two, otherwise not connected local governments.

Meanwhile, tender collaboration developed in a unique way. The upswing of tender writing companies had started in Hungary after the regime change and more specifically with the appearance of pre-accession funds (Phare, Sapard). By 2004, the year of accession, already prepared mediator actors (mostly tender writing companies, i.e., profit oriented businesses) were expecting the challenges of the allocations of the EU funds and they had a giant role in having Hungary efficiently use the EU support funds among the newly joined countries. After nearly ten years of an open tender writing market, a slow closing down period came. The role of the tender writing companies proved to be ephemeral, lasting only as long as the learning period, in which local governments adapted to the tender system. It seems as if tender writing as an activity is not helping the local governments in the sub-region. Given that the execution of tenders also requires massive human resources, the small communities claim 'package' type of market services: contractor, procurement and tender writer. In their case 'good will' is an extremely important factor that at this point local governments seem to discover only through their lobbying capacity and having acquaintances at 'good places'. Survival in the narrowing tender writing market can only be achieved by companies that offer diversified activities and maintain good relations with local governments.

A special situation developed within tender writing support institutions that are not necessarily market-based. In 2010 we saw that the KTKT had their own tender office (Paktum Office), and they offered help to local governments below the market price. With the demise of this association the office was also closed down. As a quasi replacement at the county notary's office there is a Project office, that offers professional help to the local governments.

After 2010 the local government system and the territorial administration changed, which has affected the tender collaboration network of the local governments as well. Additional interviews made in 2016 revealed that KTKT was discontinued. Without this association, and taking into consideration the changes in administrative duties of local governments, and the relegation of tender writing companies, the formal collaborative network of the localities in the region has changed drastically. One can suppose that excluding the most influential node from the network, the accent will move to the following organizations in the hierarchy of relations: to micro-regional centers. But interviewees from the most integrated and densely connected micro-region reported the lack of any collaboration. The following research steps would be the investigation of collaboration in the sub-region and the comparison of actual network structure with that from 2009–2010. We can only suppose that without the hierarchical pressure quasi-informal and informal relations are on the rise. And it is still a question how the relegated tender writing companies influence the tender collaboration network of the sub-region.

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Annexes

Annex 1. Tender collaboration network data of local governments in Kaposvár sub-region (based on Network 4.)

ID	Degree	Betweenness	Closeness	Harmonic Closeness	Eigen-vector	2-Local Eigenvector
Local governments from Kaposvár sub-region						
Somogyjád (micro-regional and sub-regional center)	21	1448.602	249.000	48.667	0.172	114.000
Igal (micro-regional center)	20	1134.735	263.000	46.500	0.139	106.000
Bőszénfa	16	337.770	297.000	39.917	0.377	109.000
Hetes	15	583.370	285.000	41.250	0.094	64.000
Simonfa	11	93.796	306.000	36.750	0.331	87.000
Taszár	11	582.983	270.000	42.250	0.196	93.000
Nagyberki	10	287.923	295.000	38.450	0.146	71.000
Szentbalázs (micro-regional center)	10	556.304	283.000	39.667	0.301	98.000
Baté	8	233.704	300.000	36.950	0.096	59.000
Mernye	8	277.789	316.000	34.833	0.044	45.000
Gálosfa	7	1.702	337.000	32.067	0.261	68.000
Hajmás	7	1.702	337.000	32.067	0.261	68.000
Kaposgyarmat	7	1.702	337.000	32.067	0.261	68.000
Cserénfa	6	0.000	348.000	30.233	0.219	53.000
Gölle	6	138.188	334.000	32.367	0.026	32.000
Mosdós	6	120.072	290.000	37.500	0.131	69.000
Újvárfalva	6	150.198	304.000	35.500	0.078	47.000
Kaposkeresztúr	5	36.798	346.000	30.783	0.085	40.000
Magyaratád	5	23.781	333.000	32.033	0.035	41.000
Patalom	5	23.781	333.000	32.033	0.035	41.000
Sántos	5	133.989	313.000	33.667	0.127	43.000
Somogyaszaló	5	113.389	299.000	35.667	0.047	48.000
Szentgáloskér	5	10.243	319.000	33.167	0.045	39.000
Büssü	4	70.188	338.000	31.117	0.022	30.000
Csoma	4	0.000	350.000	29.783	0.088	34.000
Juta	4	86.776	315.000	33.500	0.038	40.000
Kaposhomok	4	1.736	328.000	32.000	0.130	43.000
Kaposvár	4	17.995	301.000	35.083	0.064	52.000
Kercseliget	4	0.000	350.000	29.783	0.088	34.000
Orci	4	0.000	338.000	30.867	0.030	34.000
Szabadi	4	0.000	350.000	29.783	0.088	34.000
Várda	4	26.523	311.000	33.917	0.046	44.000
Zimány	4	0.000	338.000	30.867	0.030	34.000
Zselickislak	4	0.000	368.000	28.333	0.148	42.000
Zselicszentpál	4	0.000	368.000	28.333	0.148	42.000
Fonó	3	0.000	372.000	26.867	0.026	16.000
Magyaregres	3	0.000	342.000	30.117	0.027	28.000
Mezőcsokonya	3	52.576	325.000	31.583	0.028	30.000
Osztopán	3	128.067	323.000	31.750	0.023	24.000
Somodor	3	8.033	302.000	34.500	0.045	46.000
Somogygeszti	3	0.000	342.000	30.117	0.027	28.000
Somogysárd	3	8.643	315.000	33.083	0.038	41.000

Alsóbogát	2	0.000	330.000	30.500	0.025	23.000
Csombárd	2	0.000	364.000	27.483	0.018	19.000
Ecseny	2	0.000	397.000	24.500	0.006	10.000
Edde	2	0.000	330.000	30.500	0.025	23.000
Felsőmocsolád	2	0.000	303.000	34.000	0.039	41.000
Gadács	2	0.000	344.000	29.450	0.020	22.000
Kazsok	2	0.000	344.000	29.450	0.020	22.000
Kisgyalán	2	0.000	415.000	23.333	0.006	10.000
Bodrog	1	0.000	405.000	22.900	0.003	3.000
Polány	2	0.000	397.000	24.500	0.006	10.000
Ráksi	2	0.000	344.000	29.450	0.020	22.000
Somogyszil	2	0.000	344.000	29.450	0.020	22.000
Tamási	2	25.473	341.000	29.300	0.028	17.000
Local governments from other sub-region						
Bárdudvarnok	1	0.000	367.000	26.733	0.012	15.000
Kadarkút	1	0.000	430.000	21.933	0.007	7.000
Kaposmérő	1	0.000	367.000	26.733	0.012	15.000
Kapospula	1	0.000	377.000	25.700	0.018	10.000
Kaposújlak	1	0.000	367.000	26.733	0.012	15.000
Kaposszerdahely	1	0.000	430.000	21.933	0.007	7.000
Kisasszond	1	0.000	367.000	26.733	0.012	15.000
Kiskopárd	1	0.000	367.000	26.733	0.012	15.000
Lengyeltóti	1	0.000	379.000	24.850	0.006	4.000
Tender writer companies						
P9	11	112.054	327.000	34.900	0.317	83.000
P2	5	38.382	349.000	30.400	0.032	31.000
P14	4	101.281	297.000	35.667	0.046	50.000
P15	3	1.000	328.000	31.167	0.032	30.000
P3	3	38.881	327.000	31.667	0.047	31.000
P8	3	0.000	372.000	26.867	0.026	16.000
P4	2	0.000	324.000	31.167	0.037	26.000
P5	2	9.000	372.000	26.267	0.006	9.000
P6	2	0.000	415.000	23.333	0.006	10.000
P1	1	0.000	452.000	20.383	0.002	4.000
P11	1	0.000	430.000	21.933	0.007	7.000
P12	1	0.000	430.000	21.933	0.007	7.000
P13	1	0.000	430.000	21.933	0.007	7.000
P16	1	0.000	397.000	23.683	0.005	4.000
P17	1	0.000	398.000	24.000	0.006	8.000
P18	1	0.000	381.000	24.767	0.006	5.000
P7	1	0.000	382.000	25.117	0.012	8.000
P10	7	400.000	348.000	30.850	0.059	20.000
Other institutions						
County local government (Megyei Önkormányzat)	2	0.000	324.000	31.250	0.032	27.000
Notary (Jegyző)	4	82.869	370.000	27.450	0.018	15.000

Annex 2. Number of submitted tenders and the number of those tenders, that were submitted with professional tender writer help
(Own data collection through fieldwork in 2009–2010 period in Kaposvár sub-region)

Settlement	Submitted tenders in the 2009–2010 period in Kaposvár sub-region	Submitted tenders with the help of tender writer or consultancy companies
Baté	8	6
Fonó	4	0
Kaposkeresztúr	2	0
Büssü	4	3
Gölle	4	3
Kisgyalán	1	0
Magyaratád	2	0
Orci	2	0
Patalom	2	0
Zimány	2	0
Igal	18	0
Kazsok	0	0
Ráksi	0	0
Mosdós	6	4
Nagyberki	8	4
Szabadi	3	1
Csoma	3	1
Kercseliget	9	2
Mernye	9	3
Ecseny	0	0
Polány	0	0
Hetes	11	4
Csombárd	0	0
Várda	0	0
Juta	0	5
Bőszénfa	17	17
Simonfa	18	18
Zselicszentpál	14	14
Zselickislak	10	10
Taszár	0	1
Kaposhomok	0	1
Somogyjád	8	2
Alsóbogát	0	0
Edde	0	0
Szentgáloskér	6	2
Somodor	0	0
Somogyaszaló	5	3
Magyaregres	0	1
Somogygeszti	0	0
Felsőmocsolád	0	0
Újvárfalva	7	1
Mezőcsokonya	6	1
Szentbalázs	20	20
Kaposgyarmat	8	8
Hajmás	8	8

Gálosfa	8	8
Cserénfa	7	7
Sántos	11	11
Somogyszil	0	0
Gadács	0	0
Osztopán	6	3
Bodrog	0	2
Somogysárd	11	3
Total number of tenders	268	177

Annex 3. Regional tender collaboration network data of local governments in Kaposvár sub-region (based on Network 4.)

ID	Degree	Between-ness	Close-ness	Harmonic Closeness	Eigen-vector	2-Local Eigen-vector	Density	EffSize	Const-raint	r-Const-raint	Hierarchy
KTKT	55.000	4293.657	487.000	93.333	0.361	426.000	0.083	50.596	0.049	-0.049	0.079
Koppányvölgye Helyi Akciócsoport	55.000	6213.717	538.000	88.383	0.044	103.000	0.007	54.600	0.021	-0.021	0.021
Zselici Lámpások	48.000	2257.143	569.000	82.117	0.316	286.000	0.050	45.792	0.034	-0.034	0.042
Zselica Szövetség	32.000	293.482	652.000	68.600	0.218	186.000	0.052	30.500	0.042	-0.042	0.023
Bányai Panoráma Egyesület	29.000	762.312	583.000	72.833	0.209	193.000	0.052	27.655	0.044	-0.044	0.018
Somogyjád	24.000	1228.659	506.000	79.833	0.158	260.000	0.181	19.833	0.114	-0.114	0.140
Észak-Kaposi Partnerek	24.000	344.153	610.000	67.417	0.106	157.000	0.120	21.250	0.091	-0.091	0.084
Igal	22.000	3103.574	488.000	82.500	0.133	255.000	0.186	18.091	0.119	-0.119	0.139
Bőszénfa	20.000	115.155	565.000	72.833	0.244	316.000	0.395	12.750	0.140	-0.140	0.051
Hetes	17.000	539.098	584.000	68.667	0.107	172.000	0.147	14.606	0.104	-0.104	0.057
Simonfa	15.000	57.837	573.000	69.833	0.214	286.000	0.600	6.417	0.185	-0.185	0.055
Szentbalázs	14.000	373.134	567.000	70.333	0.200	292.000	0.560	7.000	0.163	-0.163	0.011
Taszár	13.000	500.201	519.000	74.083	0.143	220.000	0.321	9.300	0.139	-0.139	0.045
Nagyberki	12.000	493.820	528.000	72.583	0.123	192.000	0.409	7.500	0.180	-0.180	0.035
Gálosfa	11.000	44.439	579.000	67.500	0.178	255.000	0.782	3.500	0.210	-0.210	0.009
Hajmás	11.000	44.439	579.000	67.500	0.178	255.000	0.782	3.500	0.210	-0.210	0.009
P9	11.000	28.391	686.000	55.567	0.133	124.000	0.473	6.636	0.180	-0.180	0.019
Baté	10.000	480.391	531.000	71.417	0.102	174.000	0.422	6.200	0.194	-0.194	0.022
Mernye	10.000	182.152	608.000	62.833	0.070	137.000	0.356	6.800	0.195	-0.195	0.052
Cserénfa	10.000	44.339	580.000	67.000	0.161	236.000	0.756	3.553	0.214	-0.214	0.011
Kaposgyarmat	10.000	36.450	580.000	67.000	0.163	227.000	0.844	2.711	0.228	-0.228	0.010
Sántos	9.000	280.582	576.000	67.333	0.127	215.000	0.306	6.556	0.157	-0.157	0.009
Gölle	8.000	504.131	535.000	71.750	0.048	148.000	0.321	5.750	0.217	-0.217	0.040
Újvárfalva	8.000	218.963	607.000	62.250	0.064	131.000	0.250	6.250	0.191	-0.191	0.030
Mosdós	8.000	60.330	574.000	67.417	0.109	185.000	0.500	4.500	0.194	-0.194	0.014
Zselickislak	8.000	44.172	586.000	65.583	0.136	218.000	0.643	3.500	0.211	-0.211	0.002
Zselicszentpál	8.000	44.172	586.000	65.583	0.136	218.000	0.643	3.500	0.211	-0.211	0.002
P10	7.000	464.661	707.000	51.433	0.033	34.000	0.048	6.714	0.151	-0.151	0.002
Somogyaszaló	7.000	172.025	564.000	65.250	0.065	136.000	0.524	3.857	0.246	-0.246	0.017
Kaposkeresztúr	7.000	47.479	583.000	65.750	0.091	153.000	0.619	3.286	0.273	-0.273	0.015
Magyaratád	7.000	29.090	561.000	65.333	0.066	130.000	0.667	3.000	0.286	-0.286	0.010
Patalom	7.000	29.090	561.000	65.333	0.066	130.000	0.667	3.000	0.286	-0.286	0.010
Szentgáloskér	7.000	20.835	606.000	61.750	0.064	127.000	0.524	3.857	0.248	-0.248	0.050

Büssü	6.000	337.892	537.000	70.750	0.047	146.000	0.600	3.000	0.315	-0.315	0.037
Orci	6.000	240.931	539.000	68.667	0.075	145.000	0.733	2.333	0.317	-0.317	0.006
Zimány	6.000	240.931	539.000	68.667	0.075	145.000	0.733	2.333	0.317	-0.317	0.006
Juta	6.000	172.026	605.000	62.000	0.056	124.000	0.400	4.000	0.218	-0.218	0.020
Kaposvár	6.000	47.394	580.000	65.750	0.085	164.000	0.533	3.333	0.224	-0.224	0.007
Kaposhomok	6.000	11.754	582.000	65.333	0.104	160.000	0.800	2.136	0.257	-0.257	0.038
Kercseliget	6.000	11.504	586.000	64.917	0.091	147.000	0.933	1.333	0.334	-0.334	0.002
Szabadi	6.000	11.504	586.000	64.917	0.091	147.000	0.933	1.333	0.334	-0.334	0.002
Csoma	6.000	11.504	586.000	64.917	0.091	147.000	0.933	1.333	0.334	-0.334	0.002
Várda	6.000	5.623	603.000	62.250	0.063	132.000	0.733	2.333	0.284	-0.284	0.015
Mezőcsokonya	5.000	161.796	611.000	60.583	0.049	112.000	0.300	3.800	0.252	-0.252	0.008
Osztopán	5.000	69.982	614.000	60.167	0.050	108.000	0.400	3.400	0.281	-0.281	0.024
Fonó	5.000	38.627	590.000	63.917	0.066	123.000	0.700	2.200	0.364	-0.364	0.011
Somogysárd	5.000	29.343	605.000	61.583	0.056	125.000	0.600	2.600	0.260	-0.260	0.007
P2	5.000	25.789	727.000	49.167	0.021	39.000	0.300	3.800	0.298	-0.298	0.006
Somodor	5.000	20.336	567.000	64.083	0.061	132.000	0.700	2.200	0.272	-0.272	0.005
Somogygeszti	5.000	15.203	584.000	62.500	0.053	113.000	0.800	1.800	0.354	-0.354	0.002
Magyaregres	5.000	15.203	584.000	62.500	0.053	113.000	0.800	1.800	0.354	-0.354	0.002
Kazsok	4.000	261.787	542.000	69.250	0.043	136.000	0.833	1.500	0.386	-0.386	0.008
Ráksi	4.000	261.787	542.000	69.250	0.043	136.000	0.833	1.500	0.386	-0.386	0.008
Kisgyalán	4.000	261.787	541.000	69.500	0.037	124.000	0.833	1.500	0.383	-0.383	0.003
Gadács	4.000	261.787	542.000	69.250	0.043	136.000	0.833	1.500	0.386	-0.386	0.008
Somogyszil	4.000	261.787	542.000	69.250	0.043	136.000	0.833	1.500	0.386	-0.386	0.008
P14	4.000	163.400	586.000	60.583	0.027	57.000	0.333	3.000	0.280	-0.280	0.004
Jegyző	4.000	155.263	748.000	46.250	0.010	19.000	0.333	3.000	0.352	-0.352	0.014
Kaposszerda-hely	4.000	36.510	687.000	54.717	0.058	116.000	0.000	4.000	0.250	-0.250	0.000
Kadarkút	4.000	36.510	687.000	54.717	0.058	116.000	0.000	4.000	0.250	-0.250	0.000
Felsőmocsolád	4.000	15.203	568.000	63.583	0.056	125.000	0.667	2.000	0.288	-0.288	0.001
Kaposújlak	4.000	12.271	664.000	57.067	0.063	126.000	0.000	4.000	0.250	-0.250	0.000
Bárdudvarnok	4.000	12.271	664.000	57.067	0.063	126.000	0.000	4.000	0.250	-0.250	0.000
Kisasszond	4.000	12.271	664.000	57.067	0.063	126.000	0.000	4.000	0.250	-0.250	0.000
Kiskopárd	4.000	12.271	664.000	57.067	0.063	126.000	0.000	4.000	0.250	-0.250	0.000
Alsóbogát	4.000	2.236	616.000	59.500	0.050	107.000	0.833	1.500	0.392	-0.392	0.007
Edde	4.000	2.236	616.000	59.500	0.050	107.000	0.833	1.500	0.392	-0.392	0.007
Csombárd	4.000	2.236	628.000	58.833	0.047	102.000	0.833	1.500	0.361	-0.361	0.002
Polány	4.000	2.236	633.000	57.917	0.043	93.000	0.833	1.500	0.419	-0.419	0.005
Ecseny	4.000	2.236	633.000	57.917	0.043	93.000	0.833	1.500	0.419	-0.419	0.005
Kaposmérő	3.000	9.344	666.000	56.400	0.048	97.000	0.000	3.000	0.333	-0.333	0.000
Bodrog	3.000	2.236	636.000	57.167	0.038	84.000	0.667	1.667	0.445	-0.445	0.006
P3	3.000	2.121	654.000	53.267	0.025	37.000	0.333	2.333	0.382	-0.382	0.004
Csököly	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Gige	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Hedrehely	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Hencse	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Jákó	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Kaposfő	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Mike	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Patca	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Rinyakovácsi	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Szenna	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Szilvásszent-márton	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Visnye	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000
Lad	3.000	0.660	695.000	53.300	0.055	109.000	0.000	3.000	0.333	-0.333	0.000

P15	3.000	0.500	658.000	52.583	0.021	37.000	0.667	1.667	0.432	-0.432	0.023
P8	3.000	0.000	680.000	49.750	0.019	22.000	1.000	1.000	0.560	-0.560	0.002
P5	2.000	6.061	664.000	50.883	0.007	13.000	0.000	2.000	0.500	-0.500	0.000
Tamási	2.000	2.135	618.000	55.033	0.014	21.000	0.000	2.000	0.500	-0.500	0.000
Kőkút	2.000	0.257	722.000	50.750	0.040	80.000	0.000	2.000	0.500	-0.500	0.000
Zselikisfalud	2.000	0.257	722.000	50.750	0.040	80.000	0.000	2.000	0.500	-0.500	0.000
P4	2.000	0.000	654.000	52.583	0.019	30.000	1.000	1.000	0.621	-0.621	0.204
P6	2.000	0.000	689.000	49.000	0.007	14.000	1.000	1.000	0.657	-0.657	0.001
Megyei Önkormányzat	2.000	0.000	656.000	52.500	0.016	32.000	1.000	1.000	0.588	-0.588	0.004
P1	1.000	0.000	903.000	35.133	0.001	4.000	0.000	1.000	1.000	-1.000	1.000
P7	1.000	0.000	686.000	48.333	0.008	10.000	0.000	1.000	1.000	-1.000	1.000
P11	1.000	0.000	862.000	37.717	0.002	7.000	0.000	1.000	1.000	-1.000	1.000
P12	1.000	0.000	862.000	37.717	0.002	7.000	0.000	1.000	1.000	-1.000	1.000
P13	1.000	0.000	862.000	37.717	0.002	7.000	0.000	1.000	1.000	-1.000	1.000
P16	1.000	0.000	760.000	43.533	0.004	6.000	0.000	1.000	1.000	-1.000	1.000
Lengyeltóti	1.000	0.000	741.000	43.383	0.002	4.000	0.000	1.000	1.000	-1.000	1.000
P17	1.000	0.000	763.000	43.617	0.005	10.000	0.000	1.000	1.000	-1.000	1.000
Kapospula	1.000	0.000	683.000	48.750	0.009	12.000	0.000	1.000	1.000	-1.000	1.000
P18	1.000	0.000	719.000	45.467	0.005	7.000	0.000	1.000	1.000	-1.000	1.000
Nagybajom	1.000	0.000	724.000	50.083	0.023	48.000	0.000	1.000	1.000	-1.000	1.000
Pálmajor	1.000	0.000	724.000	50.083	0.023	48.000	0.000	1.000	1.000	-1.000	1.000
Patosfa	1.000	0.000	724.000	50.083	0.023	48.000	0.000	1.000	1.000	-1.000	1.000
Balatonszemes	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Balatonőszöd	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Balatonszárszó	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Szólád	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Nagycsepely	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Teleki	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Kötcse	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Balatonföldvár	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Szántód	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Kőröshegy	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Kereki	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Bálványos	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Pusztaszemes	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Zamárdi	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Balatonendréd	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Ságvár	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Som	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Nagyberény	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Balatonszabadi	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Ádánd	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Nyim	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Koppányszántó	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Értény	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Tab	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Bábonymegyer	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Kisbárapáti	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Fiad	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Bonnya	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Somogyacsa	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Somogy-döröcske	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Szorosad	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000

Törökkoppány	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Kára	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Miklósi	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Zics	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Nágocs	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Andocs	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Somogy-meggyes	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Kapoly	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Zala	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Kánya	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Tengőd	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Sérsekszőlős	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Torvaly	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Lulla	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Somogyegres	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Bedegkér	1.000	0.000	693.000	52.767	0.003	55.000	0.000	1.000	1.000	-1.000	1.000
Somogyfajsz	1.000	0.000	765.000	44.717	0.008	24.000	0.000	1.000	1.000	-1.000	1.000
Kaposvári Egyetem	1.000	0.000	642.000	55.583	0.027	55.000	0.000	1.000	1.000	-1.000	1.000