

THE IMPACT OF PUBLIC SERVICE CAPACITY ON MUNICIPAL COOPERATION IN HUNGARY¹²

Éva Margit Kovács (kovacseva@uni-nke.hu)
Assistant Professor of National University of Public Services

Abstract

Inter-municipal cooperation (hereinafter: IMC) is an important element of local government reforms across Europe. There is a growing attention both in academic literature and on governments' reform agendas to examine the forms and results of different IMCs. This wide-spread phenomenon did not avoid Hungary either. There has been a long discussion since the early 90s – the establishment of the current local government system including almost 3200 local governments with extremely broad scope of responsibilities – on the adequate forms of IMC. Despite of this permanent debate and the introduction of many government policies intending to stimulate the greater cooperation on local level, the rationalities behind IMC and the factors that might trigger local governments to engage in increased cooperation with their neighbors have not been systematically analyzed yet. Hence, this study aims to explore what factors explain the different levels of cooperation among local governments. There is strong evidence underlined also by previous studies that service delivery infrastructure (organizational factors), spatial factors and economic constraints are significant drivers (or barriers) of IMC. Our study presents an analysis explaining the effect of these factors on the actual number of formalized IMCs among Hungarian local governments in the field of service delivery. In particular, we test the effect of three potential explanatory factors: local government size (as measured by the number of their inhabitants), the economic and the infrastructural capacity of local government. The specific question under discussion is how this series of causal factors together offer an



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explanation for the IMC phenomenon in Hungary. We assume that the three factors (measured by four independent variables) under investigation are correlated and there is a causal influence chain between them. To explore the direct and indirect relationships and provide a better understanding on the causal mechanism we develop and conduct a path analyses as a statistical technique. The analysis aims to investigate the hypothesized relationships among multiple- variables and investigate causal relationships. By this our study provides a better understanding of the factors driving IMC. Based on the preliminary results of this study future empirical research should give more elaborated attention and a deeper understanding on how these factors might affect the cooperation arrangements and its results themselves

Keywords: service delivery, inter-municipal cooperation, local government, Hungary, path analysis

Inter-municipal cooperation in Service Delivery: a Spreading Phenomena

Inter-municipal cooperation (IMC) in many ways and forms has been a wide - spread phenomenon of local government reforms in the last decades. The increasing cooperation in service provision on the local level was triggered by various contextual conditions. These included the growing pressure on municipalities including the declining fiscal conditions, the increasing, or at least transforming nature of service obligations required by central government, the increasing public needs, and inhabitants' expectations for better services and more effective government operations. Most often these factors forced local governments' political leaders and managers to search for new forms for providing public services. One of the possible solutions to replace the traditional "one town - one public service provider" is cooperating with other local governments. According to Hilvert and Swindell cooperation in service delivery might result a number of positive effects (Hilvert – Swindell 2013). These include cost savings by the division of the construction and operating costs of public service delivery infrastructures (Spitzer 2015), ,overcoming resource scarcity, the creation of opportunities for new and innovative ways to achieve high quality and less expensive service delivery, and, in the final analysis, enabling local governments to better meet citizens' expectation. Another clear advantage of increasing the extent of local governments' cooperation it provides an alternative solution for optimizing the economic scale of service provision without the execution of either territorial reorganizations (amalgamation of local governments) or the centralization of local tasks to upper government level. With less intervention to local governments autonomy, municipal cooperation implies less radical changes for local governments and still provide more flexibility to take into consideration the special needs and characteristics of the municipalities. According to the literature municipal cooperation is much easier to adapt to new circumstances and developments (Hulst - van Montfort 2007).

Local governments can cooperate in service provision in many different forms and with many different actors – either other local governments or corporate as well as NGO entities. But the cooperation between local governments, in particular, provides a form enabling them to avoid outsourcing the services to external provider. Academics identified two common forms of cooperation between local governments in public service delivery. These are, firstly, IMCs and, secondly, contracting out the provision of service delivery to other municipalities (cf. Spitzel 2015, Siegel 1999). In our study, we focus on the former groups that is IMCs, because recently the relevance of this issue in the Hungarian reform agenda is growing. In the last years, the government has introduced new initiatives that enable to increase the mandatory and quasi mandatory cooperation between local governments.

According the definition of Council of Europe, IMCs involve two or several local authorities (local governments) "having a status of legal persons, endowed with competences, powers and resources in accordance with the European Charter of Local Self-Government" (Council of Europe 2013).

In our understanding the forms of IMC cannot be simplified to the commonly created legal entities. The forms of inter-municipal cooperation might be very heterogeneous.

With regards to its form, IMCs can range from the formal relationships – usually based on contractual relations –, through inter-municipal agreements prescribed by the law, to the more ad hoc, sometimes not even institutionalized informal cooperation forms (Teles 2016 :19-20). It also relevant to consider the direction of cooperation and the participants' level in the government structure.

Another classification of IMCs is based on the drivers of the cooperation. In some cases, local governments are required by law or central authorities to engage in IMCs. There are however voluntary forms of IMC too, in which case local governments' agreement to cooperate represents their mutual interest and negotiations.

The forms of IMCs can be classified according to the main tasks or aims for which they were created. Cooperation involving municipalities can spread from single purpose to multipurpose arrangements. The main goals of IMC range from the exchanges of information through mutual consultation through to the more formal interactions between bodies, mutually making decisions, creating plans, and even municipalities working together to jointly operate public service infrastructures or to co-creation shared services (cf. Council of Europe 2007, Blair – Janousek 2013).

Municipal cooperation structures also vary on the heterogeneity and numbers of participants involving small and large numbers of municipalities and including municipalities with various size and capacity or sometimes involving private or civil sector organizations and upper level government. (Hulst – Montfort 2007).

In most cases municipalities decide to cooperate on the basis of their internal characteristics. One of these internal characteristics is the service delivery capacity of municipalities. When there is a lack of resources and institutions - that would originate municipal service delivery capacity – and the local government's goal is unreachable alone cooperation is likely to occur. According to Bel and Warner's (2015) a meta-regression analysis based on the existing empirical literature explaining the rationalities behind the inter – municipal cooperation three main explanatory factors were identified, namely the fiscal constraints, spatial and organizational factors (Bel and Warner 2015) These factors are often referred and verified as significant drivers of cooperation. Recent researches (Gerber – Loh 2014, Carr, Gerberm, Luper 2009) suggest that fiscal pressures play a role in support for cooperation between local governments. Municipalities with lower property and lower tax bases may consider the inter- municipal cooperation as a potential way of cost savings and cooperation means a higher value for them in comparison with the wealthier communities (cf. Gerber – Loh 2014). This economic factor as a main motive of IMC was also justified by Spicer (2015). According his research the crucial financial incentives for IMC is “reducing cost for services through shared administration and/or delivery” and “overcome challenges with local capacity” (Spicer 2015).

With regards to the spatial factor, the literature on local government often pays attention to the optimal size for service provision. The most common measure in the empirical literature for economies of scale is population. “When municipal boundaries do not match the service area, some form of municipal cooperation is a natural alternative to achieve both economies of scale and fiscal equivalence” (Bel - Warner, 2015). Most studies find that IMC is negatively related to the size of municipalities. (Arntsen - Dag Torjesen - Karlsen 2018, Hefetz - Warner - Vigoda- Gadot 2012; Bel- Fageda - Mur 2014).

As a third explanatory variable - with some restriction - we are focusing on the organizational factor, namely the availability of infrastructure (asset) in the territory of the municipality that is necessary to deliver services. The possibility of joint production

with neighboring municipalities is to some degree determined by the availability of the number of service delivery infrastructures. According to Bel and Warner (2015) inter-municipal “cooperation is typically found to be higher when services are more asset specific” in general.

These explanatory factors are closely related - however cannot be fully restricted (cf. Gargan 1981) – to the public service capacity of the local governments, which is usually understood as those institutional, financial, organizational, human resources that enable local governments to perform their given task effectively and on a sustainable basis and with reduced dependence on external resources (Nwankwo et al.). Therefore, in this study the above mentioned three factors are investigated that likely affect the public service delivery capacities of municipalities.

Research questions, research design, data and method

The aim of this study is to explore what factors explain local governments’ varying degree of engagement in IMCs. In particular, we test the effect of three (above mentioned) potential explanatory factors: local government size (measured on the number of their inhabitants), the economic and the infrastructural capacity of local government.

To do so, we constructed a database including all Hungarian municipalities (altogether the data base contains 3154 municipalities. This number excluding Budapest and its districts)³. As a dependent variable we measured the extent, to which a local government engages in IMC on the basis of dummies indicating the presence or absence of the most common forms of IMC. In Hungary there are no comprehensive database on IMCs. Therefore, our data were collected from different, publicly available government registers^{4,5}. These data bases are restricted to formalized IMCs, therefore informal IMC arrangements – extending beyond the scope of the above typology – are not covered in our analysis. Our dependent variable – the extent/number of local government cooperation- were calculated on the following forms of IMC (They are further investigated in the following section):

- Joint municipal offices (Közös hivatal)
- Inter-municipal agreement on service delivery involving the creation of a new legal entity (Társulás)
- Cooperation in the LEADER local action groups (LAGs/ Helyi Akciócsoport HACS)
- Cooperation in short – term projects (Konzorcium)– running for 4-6 years – for improving service delivery in specific certain field of local services within the region. These projects are often funded by the European Union and beyond inter – municipal cooperation it requires further engagement of the civil society, NGOs, local entrepreneurs and an active consultation with local citizens.

Our database comprised also different independent variables⁶ possibly influencing the number of IMCs. The set of explanatory variables that we analyzed were selected on the

³ Budapest and its districts were excluded from the further analyses because of their special geographical and legal status that effects their behavior on co-operation.

⁴ Hungarian State Treasury (Magyar Államkincstár) register on inter-municipal agreements on service delivery; Hungarian National Statistical Office

⁵ New Hungarian Rural Development Program Website (Új Magyarország Vidékfejlesztési Program) - LEADER local action groups (LAGs)

⁶ Data collected by the Hungarian National Statistical Office

basis of theoretical concerns and observing the empirical findings of previous studies. We define our independent variables as follows:

- The infrastructural capacity in this research refers to the number of available organizations providing basic public services in the given municipality. As a public service infrastructure, we considered the nursery, kindergarten, elementary school, general practitioner's services, outpatient clinics, elderly care facilities, public transportation services, public utility, water supply services, sports center, fire station.
- The size of the municipality calculated on the number of inhabitants is identified as the second explanatory variable in our study.
- Economic condition and fiscal scarcity is also seen as an important drivers of local government service delivery reform, particularly as a driver for greater cooperation. Therefore, we also analyze role of local governments' economic situation. This feature is often measured by the indicator based on the local tax on company sales per capita⁷ in Hungary. Although the indicator based on the local tax on company sales per capita might provide a limited – sometimes also biased – picture of the actual economic situation of the municipality, it is the most widespread and major economic indicator in Hungary that has been taken into consideration during the allocation of central resources and benefits. Another cumulative index describes the local governments' economic situation is the total income from the service operation. It might refer the income generating capacity of local governments⁸, and its effect was also analyzed as an economic indicator.

However, these characteristics of municipalities are often referred in the literature as the triggering (or hindering) factors of IMC, the previous researches often neglected the fact that these factors might highly correlated, moreover there might be multicollinearity between these independent variables. In order to evaluate the relationship between the explanatory variables we use path analysis (Tacq 1997) to evaluate the plausibility of correlational relationships and explore the causal chain of IMC.

Path analyses is one of the statistical techniques have been developed to deal with researches that involve the analysis of hypothesized relationships among multiple-variables and investigate causal relationship between number of factors that involved into the analyses for a better and complex understanding of phenomena (Stage – Carter – Nora 2004). The benefit of path analysis is to enable investigating direct and indirect effects simultaneously with multiple independent and dependent variables. A direct effect occurs when an independent variable affects a dependent variable. An indirect effect occurs when an independent variable affects a dependent variable through a mediating variable (Baron and Kenny 1986). Another strength of path analysis is that it allows the researcher to visualize a set of hypothesized relationships that can be translated directly into equations needed for the analysis (Stage – Carter – Nora 2004).

The objective of this study is to analyze which of the relevant causal (independent) variables significantly affected the variables of interest, namely the extent of IMC. Although, it worth to mention that the path analysis has the limitation that cannot establish

⁷ In Hungarian: "Egy főre jutó adóérőképeség"

(http://www.allamkincstar.gov.hu/files/2014_szamvitel/2014_02_25/AD%C3%93K_TAX.XLSX) The calculation method: local tax on company sales per capita x 1,4.

⁸ This index was provided by National Statistical Office in Hungary. It was calculated on four elements of the local government budget: Revenues gained from operating service delivery insititutions + central budget fundings and assets received for operational purposes and based on the service delivery + incomes from outside of the public sector + other revenues from administratives fees and others. In Hungarian: „Működési bevételek mindösszesen”

absolutely the direction of causality. A causal path between two variables is given direction by the researcher based on theoretical consumption (Webley and Lea 1997)

The Hungarian local government system. Basic characteristics, structural features and responsibilities

The Hungarian administrative structure comprises three levels: the central, the territorial (county) and the local level. The current Hungarian municipal system was established in 1990, immediately after the transition. The municipalities were granted a large degree of discretion in their own actions. Decentralized self-government operate on two levels: on the territorial level one can find 19 county local governments and the local government of the capital city, Budapest. On the lower level there are 3178 local governments. These local governments operate in towns and villages with a relatively broad scope of competences in providing services. They are responsible for a broad variety of public services, including municipal development, kindergarten services and education (until 2012), social and childcare services, basic health care services (GPs), cultural services (library, support of art and theatre etc.), local environmental and nature protection, water supply management, housing management, disaster management, coordination of public employment programs in their towns or villages financed and created by central government, supporting local businesses and tourism, supporting sport activity and promoting youth policy, handling minority and ethnicity policy issues, waste management, and maintaining district heating services. In addition – until 2013 – the chief administrative officers exercised a broad variety of administrative tasks delegated to them by the central government.

In the light of the fact that the Hungarian municipal system is dominated by very small villages with a population of less than 1000 inhabitants (more than 50% of the municipalities are in this category) and endowed with very restricted resources, one would find this broad scope of task portfolio very contradictory. Throughout the post-transition years there were some legislative acts⁹ enacted with the intention of stimulating IMC. They created additional financial incentives for IMCs. Still, no significant changes were achieved until 2011.

The historically stable and seemingly inalterable scope of local governments' autonomy and authority – both on the territorial and local level – underwent significant changes from 2012.

This overarching administrative reform was triggered not only by power related motives. "The harsh external (macroeconomic, financial and social) conditions set, from 2008 onwards, by the economic crisis and the related requirements of the EU and IMF with regards to the containment of public deficit and debt posed a serious additional challenge" (Hajnal – Kovacs 2013). On the municipal level there was a permanent fiscal and operational problem in the last two decades, but especially after 2008. The major root causes of the problems can be tracked back to the structural and operational features of local government system:

The major root causes of the problems can be tracked back to the structural and operational features of local government system:

⁹ The Act CXXXV of 1997 on the Associations and Co-operation of Local Governments and the Act CVII of 2004 on Multi-Purpose Associations of Local Governments in the region

Firstly, every municipality had the right by the Constitution to create its self-government¹⁰. Around 3178 local governments were created by the establishment of local government system. This system was highly and permanently criticized for the inefficient manner of service provision, being rigid in adapting central government initiatives and ineffective to cooperate. The system often referred as “difficult to manage both from administrative and financial aspects” (Dobos 2014).

Secondly, the phenomena of significant decentralization of tasks from the state to local level started in 1990 was not followed rationally and consciously by decentralization of central financial to the municipalities. It became quite common for municipalities to use loans for the daily operation. As a consequence of the combination of small size and resource scarcity of local government with the broad task portfolio many local governments turned to external sources of finance, loans for maintain their day-to-day service operation – obliged by the municipal law - or may raise funds for investment projects such as implementing territorial development project or the improvement of local physical infrastructure (cf. Medve-Bálint – Bohle 2016).

Thirdly, another often mentioned problem of Hungarian municipal system is the absence of a strong middle level (local) government system. Originally the county local governments were established to coordinate the complex regional development projects and provide services across municipal borders. Although this initial idea the middle level remained a ‘missing tier’ (Zongor 1999) in Hungary that would have been able to achieve a better coordination of local service delivery.

In the realm of the overarching government reform started in 2011 so many of the reform measures on the municipalities were motivated by consolidating municipalities, balancing the scope of duties with their actual capacities, spreading a higher “paternalistic” central control over the operation and budgeting of municipal system. The mayor elements of this local government reforms are the following:

- Refinement of central government finance on local service delivery and introducing the task-based financial system.
- Central government restriction on taking loans by local governments and a Local Government Debt Consolidation program was introduced between 2012 and 2013.
- One of the major elements of the local government reform was the re-division of tasks and powers of municipalities and increasing the role of the state in local service provision. The majority of public administrative functions – delegated by the state to local government – were taken over by the newly established government administrative offices (“járás”). Also in certain fields the health care services got centralized and taken over by the government administrative offices or by the central government (e.g. operating and maintaining hospitals previously run by county local governments).

An overview on the most common forms of formalized inter-municipal cooperation in Hungary

In Hungary the legal framework for local government allows a relatively large freedom and broad scope of cooperation to choose how and in what forms they will provide services.¹¹ It allows the local governments a greater flexibility to make a choice about

¹⁰ Although a small restriction was introduced in 1994, which allowed the establishment of new local governments only in communities of more than 300 inhabitants, the ageing society produced lots of villages where less than 100 people lived. (Dobos 2014)

¹¹ According the Article 32.1 (c) paragraph of the Fundamental Law (Alaptörvény) the local governments are enabled to manage their tasks and duties by themselves in the frame of obeying the essential rules.

their engagement in any cooperation arrangements, choose the appropriate implementation form taking into consideration their available resources and capacities and being aware of their citizens' needs. In Hungary, basically the local public services can be delivered either independently (in-house service provision), in different forms of IMC or in cooperation with other external actors, usually in cooperation – or sometimes in competition – with social entrepreneurs and religious organizations or with private firms. Our study has the limitation that it only analyses the formalized structures of IMC in Hungary. It is a common practice, either in Hungary, that IMC involves formal agreement establishing coordination arrangement or formal procedures in order to enable joint production with other local governments (Agranoff and McGuire 2003).

One of the wide-spread forms of mandatory IMC is the creation of joint local government offices (*közös hivatal*). The primary function of the joint local government office is to support the work of the local government committee by preparing and implementing the local regulations and providing administrative services in those cases that are delegated to the scope of authority of the mayor and notary. Based on data gleaned from 2017, there are 738 joint offices operate across Hungary and 2633 municipalities – 82.8 percent of the total 3178 municipalities – are engaged in one of them. For municipalities with a population under 2000 joint local government offices has to be created to obey the new rule of the Hungarian law on the local government enacted in 2011.¹² The rationality behind this IMC structure is that the small municipalities are unable to maintain their own administrative apparatus due to their scarce resources.

The other most common, but voluntary form of cooperation is the creation of single- or multi- purposes IMC agreement and local government associations (*társulás*). The Hungarian Local Government Act allows, and based on other sectoral legislation, even supports the local governments to create agreements between local governments in order to implement any of their tasks by increasing the efficiency of their service delivery or creating a more comprehensive way of planning on regional development. These IMCs might comprise only one specific purpose, but it is more common to make an agreement on delivering more than one type of public services jointly. These agreements also create a formalized organizational structure (association) that enables the co – decision making among the local governments. According to the register of the Hungarian State Treasury (data from February 2017), there are 1517 local government associations in Hungary. These associations comprise more than 10765 memberships.

The third analyzed form of IMC is the cooperation in Local Action Group (LAG) in order to qualify for application for European Union's LEADER funds aim to support rural development projects initiated at the local level in order to revitalize rural areas and create jobs. Local Action Group (LAG) is created to implement the Local Development Strategy within a certain region. An interesting feature of this cooperation structure is that it has to compose both public – mainly local governments - and private organizations from rural villages in order to guarantee a broad representation from different socio-economic sectors. This network type of local government cooperation extended to the entire territory of Hungary. 96 LAGs operate across the country encompassing 3020 municipalities out of the 3178. LAGs can be seen as a form of wide-range cooperation both in terms of their territorial scope and also in terms of the heterogeneity of the actors. One LAG most often encompasses 20-40 municipalities and beyond the large number of local governments cooperating in the group, a wide range of social actors (local businesses, NGOs) are also involved in the cooperation.

¹² Act CLXXXIX of 2011 on Local Government of Hungary (Mötv.)

The fourth form of IMC in our investigation is the various cooperation forms in short – term projects for improving service delivery. In these cases, cooperation between local governments are often motivated by economic incentives, which can be seen as an indirect restriction for cooperation. This category might include tenders for government / EU funds where one of the major conditions for application might be creating cooperation across municipalities and integrating a large number and broad scope of public organizations and social actors. In our database, there are two types of such short term cooperation were recorded: the Children’s Chance Programs (CCP), where 473 local governments participating in one of the 24 consortiums across Hungary and the “Developing territorial cooperation programs for local governments in convergence regions” where 1744 municipalities were involved in the 83 regional program.

Problem-relations and modelling the “path” of IMC

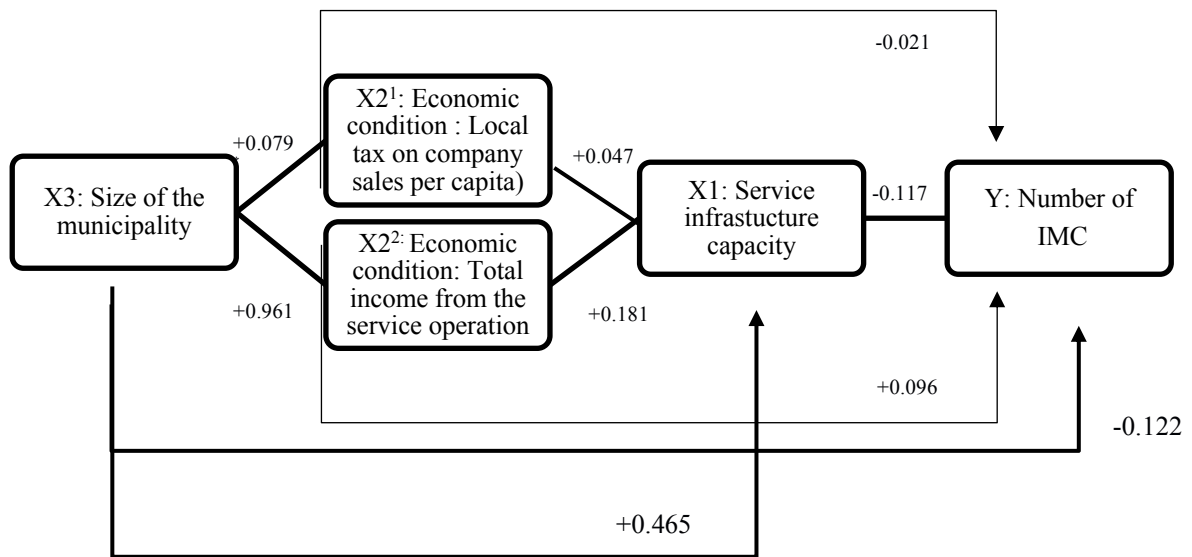
In this section we will design a “path model” by presenting the problem – relation between investigated variables. The question under discussion is whether the correlation between the public service infrastructure capacity measured by the number of service delivery infrastructure availability in territory of the municipality and the number of inter-municipal cooperation can be seen as a direct casual effect. Or it might be possible that other antecedent factors produce public service infrastructure capacity (X1) as well as the increased need for IMC (Y). Four independent variables are involved in our analyses and we assume that all four are correlated. We presume there is strong relationship between the number of IMC and the public service infrastructure capacity, but this strong correlation is rather “spurious” (Tacq1997). The economic and spatial factors of municipalities represent indirect causalities with the extent of cooperation. These background variables effect the likelihood of cooperation via public service infrastructure capacity as an intermediate factor. In that case the relationship between the service infrastructure capacity and IMC can be partly explained by these other factors namely by the economic factors of municipalities that can be described by the local tax on company sales per capita (X2¹) and by the total income from the operation of service (X2²) and by the size of municipality measured on the population. Our analyses can be divided into two phases:

Firstly, on the basis of theoretical concerns and observing the empirical findings of previous studies we designed a path model to describe the possible direct and indirect relationship between explanatory factors. This mechanism of spurious causality represented by Figure 1.

Secondly, we calculated the direct relationship between variables - the service infrastructure capacity (X1) as an organizational factor, the total income from the operation of service (X2²) and local tax on company sales per capita(X2¹) as the economic factors and the size of municipality (X3) as the spatial factor. The four factors – that were operationalized in the above section – are used as the explanatory variables in the partial correlation analysis, which aims to quantify the strength of relationship between the number of cooperation of local governments by conducting partial correlation analyses and controlling spatial variables (The output of several partial correlation analyses listed in the Appendix.)

This mechanism of spurious causality represented by Figure 1.

Figure 1: Path Analyses – The partial correlation between the number IMC and the explanatory factors



- (1) The strength of original relationship between service infrastructure capacity and the number of IMC weakens when controlling the other independent variables (X2¹, X2², X3). However, the correlation still remains significant.
- (2) As we expected there is a positive casual effect of economic condition on the public service infrastructure capacity of municipalities. The more local tax on company sales per capita and the more total income from service operation the municipality has the greater public service infrastructure capacity appear.
- (3) However, the effect of economic condition on the number of inter- municipality cooperation is more complex. The partial correlation analyzes shows negative correlation between the local tax on company sales per capita of municipalities and the number of IMCs. It means the higher the local tax income is the less IMC arrangements the municipality is engaged in.
- (4) But there is positive correlation between the total income from the service operation and the number of IMCs. In our understanding that means cooperation with another municipality by providing access to infrastructures (e.g. citizens can visit school or health center in the neighboring town) can help to increase the economies of scale of services and optimize the operation of service delivery infrastructure. When more service can be produced the municipality, that owns the infrastructure, has a better chance to decrease its costs and also increase the amount of normative funds received through central budget. In sum, IMC can

increase income generating capacity of local government that operates service delivery infrastructure in their territory.

- (5) Finally analyzing the spatial factor, as we expected based on theoretical consumption the size of municipality either has a significant influence on the economic condition and the service infrastructure capacity and also determine the extent of cooperation. The relationship between the size of municipality and the number of IMC is the strongest. The higher population the municipality has the less IMC arrangements are created.

Finding

This study has focused on the investigation of formalized inter – municipal cooperation in Hungary. IMC represents one common form of alternative service delivery in Hungary that local governments might use to maintain service provision in spite of the resource scarcity, to decrease costs by increasing the economies of scale in service delivery and manage boundary-spanning infrastructure. Since the early 2000s the popularity of IMC agreements has increased, and they have become a common tool for cooperative service delivery. However, IMC may provide a better option for local governments than other alternatives because they are highly flexible and less centrally driven instruments, there are significant differences between various types of municipalities as regards the extent of cooperation. This study has analyzed the factors that explain why Hungarian municipalities decide to cooperate or non- cooperate in the delivery of service. In carrying out our empirical analysis we designed and conducted a path analyses. As regards the factors leading to the decision whether cooperate or not on service delivery, our evidence is very much in line with the most frequently reported results in the literature. But our study goes beyond confirming the findings of previous researches: it investigates the causal mechanism between the explanatory factors.

Based on our path analyses model, smaller municipalities are engaged more frequently into IMCs because by sharing the cost and infrastructures of joint service delivery they can deliver services that might be not possible for them due to their poor economic condition and the lack of appropriate infrastructure. According our analyses the size of the municipality determines – or at least strongly effects – the economic condition and the service infrastructure capacity of the municipality.

By contrast, the larger a municipality is, the lower the probability that the municipality chose to cooperate with other municipalities on service delivery. Based on our causal model the largest municipalities can achieve a better economic condition by collecting higher local taxes and generate more income from service delivery by exploiting scale economies and receiving more normative from the central budgets. Due to their greater economic condition the larger municipalities can maintain and operate the sufficient infrastructure to provide public services on their own, so they have less need to cooperate with other municipalities.

But it worth to mention that larger municipalities may also benefit from IMC. There is a positive correlation between the total income from the operation of service and the number of IMC. From this result we conclude that, by providing services for inhabitants of the neighboring smaller municipalities the larger municipalities can optimize their

economies of scale of service provision and they can also benefit from the central budget in a larger extent.

We used the path analyses to evaluate the plausibility of our explanatory hypotheses of IMC and explore the causal relationships between variables, but one should keep in mind that the path analysis has number of limitations. One of these limitations it cannot establish unquestionable the direction of causality. Hence, further qualitative research can provide a deeper understanding of causal mechanisms behind IMCs.

References

- Baron, R. M., and Kenny, D. A. (1986) The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6): 1173-1182.
- Bel, G. – Warner, M. (2015) Inter-municipal cooperation and costs: Expectations and evidence. *Public Administration*, 93(1): 52-67.
- Bjørnulf Arntsen, Dag Olaf Torjesen & Tor-Ivar Karlsen (2018) Drivers and barriers of inter-municipal cooperation in health services – the Norwegian case, *Local Government Studies*, DOI: 10.1080/03003930.2018.1427071
- Blair, R., & Janousek, C. (2013). Collaborative Mechanisms in Interlocal Cooperation: A Longitudinal Examination. *State & Local Government Review*, 45(4), 268-282. Retrieved from <http://www.jstor.org.proxyiub.uits.iu.edu/stable/24639178>
- Bornstein, D. (2004), *How to change the world: social entrepreneurs and the power of new ideas*, Oxford University Press, Oxford.
- Boston, J. (2011). Basic NPM ideas and their development. In T. Christensen & P. Laegreid (Eds.), *The Ashgate research companion in public management* (pp. 17–32). Farnham, U.K.: Ashgate.
- Bovaird, T. (2006), “Developing new relationships with the ‘market’ in the procurement of public services”, in *Public Administration*, vol. 84, no. 1, pp. 81–102.
- Carr, J. B., Gerber, E. R., Luper, E. (2009). Explaining horizontal and vertical cooperation on public services in Michigan: The role of local fiscal capacity. In G. Sands & R. Jelier (Eds.), *Metropolitan affairs in Michigan: Case studies and best practices* (pp. 207–236). East Lansing: Michigan State University Press.
- Comments on Rural Development Program (2015) Retrieved from: <https://www.palyazat.gov.hu/node/56582>
- Council of Europe (2007): *The relationship between central and local authorities*. Report of the European Committee on Local and Regional Democracy (CDLR). <https://rm.coe.int/1680747fbc>
- Council of Europe (2013) *European Charter of Local Self-Government*. Retrieved from: <https://edoc.coe.int/en/index.php?controller=get-file&freeid=6856>
- Dart, R. (2004), “The Legitimacy of Social Enterprise”, in *Nonprofit Management & Leadership*, vol. 14, no. 4, pp. 411–424.
- Ferlie, E., Ashburner, L., Fitzgerald, L., & Pettigrew, A. (1996). *The new public management in action*. Oxford: Oxford University Press
- Ferris, J. M - Graddy, E. (1991): Production Costs, Transaction Costs, and Local Government Contractor Choice. *Economic Inquiry*; Jul 1991; 29 (3)
- GERBER, R. E. - LOH, C. (2014) Spatial dynamics of vertical and horizontal intergovernmental collaboration. *Journal of Urban Affairs*, 37:3, 270-288, DOI: 10.1111/juaf.12139
- Germà Bel, Xavier Fageda, Melania Mur; Does Cooperation Reduce Service Delivery Costs? Evidence from Residential Solid Waste Services, *Journal of Public Administration Research and Theory*, 24 (1) :85–107
- Halligan, J. (2011). NPM in Anglo-Saxon countries. In T. Christensen & P. Laegreid (Eds.), *The Ashgate research companion in public management* (pp. 83–96). Farnham, U.K.: Ashgate.
- Hefetz, A. - Warner, M.E. - Vigoda-Gadot, E. (2012) Privatization and Inter-Municipal Contracting: US Local Government Experience 1992-2007. **Environment and Planning C: Government and Policy**, 30, 4, 675-692
- Hilvert, Cheryl, and David Swindell. (2013): “Collaborative Service Delivery: What Every Local Government Manager Should Know.” Vol. 45, no. 4, 2013, pp. 240–254.,

Hood, C. (1991). A public management for all seasons? *Public Administration*, 69(1), 3–19.

Hulst, R. – Montfort A. V. (2007): Inter-Municipal cooperation a wide – spread phenomena. In Rudie Hulst and Andre van Montfort (eds.). *Inter-Municipal cooperation in Europe*. Dordrecht: Springer, 2010

Lavery, K. (1999), *Smart Contracting for Local Government Services: Processes and Experience* (Westport: Praeger).

Neiman, M. (1989). *Privatization: The Key to Better Government*. By E. S. Savas. Chatham, NJ: Chatham House, 1987. 308p. \$14.95. *American Political Science Review*, 83(1), 300-302. doi:10.2307/1956479

Pálné Kovács Ilona (2008): *Helyi kormányzás Magyarországon (Pécs Dialóg Campus Kiadó, Budapest – Pécs, 2008)*

Pálné Kovács Ilona (2014b): *Az önkormányzati rendszer és a területi közigazgatás átalakulása 2010-2013*. MTA Law Working Papers 2014(02). Budapest, Magyar Tudományos Akadémia, ISSN 2064-4515, Letölthető: <http://jog.tk.mta.hu/mtalwp>

Savas, E. S. *Privatization: The Key to Better Government*. Chatham, NJ.: Chatham House, 1987

Siegel, G. (1999). Where Are We on Local Government Service Contracting? *Public Productivity & Management Review*, 22(3), 365-388. doi:10.2307/3380709

Spicer, Z. (2015). Regionalism, Municipal Organization, and Interlocal Cooperation in Canada. *Canadian Public Policy / Analyse De Politiques*, 41(2), 137-150. Retrieved from <http://www.jstor.org/stable/24365160>

Stage, F. K., Carter, H. C., & Nora, A. (2004). Path analysis: An introduction and analysis of a decade of research. *Journal of Educational Research*, 98(1), 5-12.

Steiner, Erika: *THE CHARACTERISTICS OF THE HUNGARIAN LOCAL AUTHORITY SYSTEM AND THE MUNICIPAL ECONOMIC MANAGEMENT*. Hungarian National Association of Local Authorities (TÖÖSZ). Access: <http://xn--tosz-5qa.hu/uploads/dokumentumok-kiadvanyok/thecharacteristics.pdf>

Tacq, J. (1997). Partial correlation and path analysis the causal influence of christian belief on Anti - Semitism In. *Multivariate analysis techniques in social science research: from problem to analysis*. London: Sage Publications. pp.140-182.

Teles, F. (2016): *Local Governance and Inter- municipal cooperation*. Palgrave Macmillan, 2016.

Thompson, S (Delivery models of local economic development: An analysis of internal and external models in Ontario. *PCED Vol. 12*. pp.85 – 109.

Vando Borghi - Rik van Berkel (2007) "Individualised service provision in an era of activation and new governance", *International Journal of Sociology and Social Policy*, Vol. 27 Issue: 9/10, pp.413-424,

Webley and Lea (1997): *Path analyses*. Available at: <https://people.exeter.ac.uk/SEGLea/multvar2/pathanal.html>

Zongor Gábor (2017) *Sok kicsi sokra megy?*

APPENDIX

Correlations

Control Variables			Number of IMC	Number of service delivery infrastructures
Local tax on company sales per capita & Total income from the service operation & Size of the municipality (population)	Number of IMC	Correlation	1.000	-.117
		Significance (2-tailed)	.	.000
		df	0	3146
	Number of service delivery infrastructures	Correlation	-.117	1.000
		Significance (2-tailed)	.000	.
		df	3146	0

Correlations

Control Variables			Number of IMC	Local tax on company sales per capita
Size of the municipality (population)	Number of IMC	Correlation	1.000	-.021
		Significance (2-tailed)	.	.247
		df	0	3148
	Local tax on company sales per capita	Correlation	-.021	1.000
		Significance (2-tailed)	.247	.
		df	3148	0
	Total income from the service operation	Correlation	.096	-.048
		Significance (2-tailed)	.000	.007
		df	3148	3148

Correlations

Control Variables			Number of IMC	Size of the municipality (population)
Local tax on company sales per capita & Total income from the service operation	Number of IMC	Correlation	1.000	-.122
		Significance (2-tailed)	.	.000
		df	0	3147
	Size of the municipality (population)	Correlation	-.122	1.000
		Significance (2-tailed)	.000	.
		df	3147	0

Correlations

Control Variables			Number of service delivery infrastructures	Local tax on company sales per capita
Size of the municipality (population)	Number of service delivery infrastructures	Correlation	1.000	.047
		Significance (2-tailed)	.	.008
		df	0	3148
	Local tax on company sales per capita	Correlation	.047	1.000
		Significance (2-tailed)	.008	.
		df	3148	0
Total income from the service operation	Correlation	.181	-.048	
	Significance (2-tailed)	.000	.007	
	df	3148	3148	

Correlations

		Local tax on company sales per capita	Total income from the service operation	Size of the municipality (population)
Local tax on company sales per capita	Pearson Correlation	1	.062**	.079**
	Sig. (2-tailed)		.000	.000
	N	3154	3151	3151
Total income from the service operation	Pearson Correlation	.062**	1	.961**
	Sig. (2-tailed)	.000		.000
	N	3151	3151	3151
Size of the municipality (population)	Pearson Correlation	.079**	.961**	1
	Sig. (2-tailed)	.000	.000	
	N	3151	3151	3151