Voluntary Associations of Municipalities as One of the Technical Infrastructure Development Instruments in the Czech Republic

D Hrabincová, G Kocourková, A Tichá, Z Sedlaříková and D Linkeschová

Institute of Structural Economics and Management, Faculty of Civil Engineering, Brno University of Technology, Veveří 331/95, 602 00 Brno, Czech Republic

kocourkova.g@fce.vutbr.cz

Abstract. The aim of the article is to present findings gained from the specific research focused on the activities of voluntary associations of municipalities in the Czech Republic which ensure operation and development of technical infrastructure. Voluntary associations of municipalities represent one of the forms of interregional cooperation through which municipalities provide public services to their citizens. Similarly to municipalities, voluntary associations of municipalities are public corporations that can be created by municipalities for the purpose of mutual co-operation, environmental protection and promotion of their common interests. Associations of municipalities provide both fulfilment of public administration tasks in the sphere of education, social care, healthcare, culture, fire protection, public order and environmental protection and the needs of self-government in the areas of transport services, promotion of the region, development of tourism, municipal waste management, construction of water supply, sewerage systems including wastewater treatment plants and other technical infrastructure facilities. The article introduces the insight in the number of voluntary associations of municipalities as well as the analysis of voluntary associations of municipalities in the Czech Republic with focus on their impact on the development of technical infrastructure in the regions.

1. Introduction

Voluntary associations of municipalities (VAM) represent one of the entities involved in the interregional co-operation. Change in legislation adopted at the beginning of the 1990s contributed to their establishment by restoring municipal self-government and enabling municipalities to join together to address common needs in predefined areas [1]. Despite the fact that the original range of possible activities was specifically aimed at the fields of education, social and health care, culture, management and maintenance of public facilities, municipal cleanliness, waste collection and disposal, it also enabled to deal with some requirements in the area of civic amenities, especially connected to water supply, wastewater drainage and treatment.

Great experience with municipal cooperation has been reported for example by Israel. The findings suggest that regional cooperation can be an efficient tool in promoting advanced wastewater treatment and has several advantages: an efficient use of limited resources (financial and land); balancing disparities between municipalities (size, socio-economic features, knowledge and ability of local
leaders); and reducing spillover effect [2]. The risk and the efficiency of big infrastructure projects have been already solved in [3].

The amendment to the Municipal Law, adopted in 2000, extended the range of activities to those aimed at providing transport services, managing local roads and forests, residential and housing capacity, quarry and sandpits operation, mineral extraction and treatment facilities and air protection for the voluntary associations of municipalities [4].

Within the technical infrastructure created and operated by voluntary associations of municipalities, the research focused on municipal amenities as public water supply, sewage system (WWT) and wastewater treatment plant (WWTP). This area proved to be one of the most important for the voluntary associations of municipalities to provide for their citizens. Of the total number of 774 functional associations of municipalities, 26% are focused on meeting these needs. Creation of technical infrastructure allows them to implement construction investments through the membership in a voluntary association of municipalities. With some exceptions, the first voluntary associations of municipalities began to be established for the purpose of operating water supply in the early 1990s, as well as the construction of sewerage systems and wastewater treatment plants at the beginning of the 21st century, at the time when environmental protection became a major priority.

2. Voluntary associations of municipalities in the Czech Republic

Since the beginning of their establishment, voluntary associations of municipalities have been established as individual legal entities associating several municipalities or towns. Their purpose was to fulfil a common public interest. Legislation also allowed them to implement co-operation through private-law contracts or by participation of municipalities in other public or private companies. In addition, municipalities have been able and still are able to continue in developing co-operation with municipalities or associations of municipalities from other countries, possibly through membership in international associations created by territorial self-governing units.

The purpose of the establishment and existence of all voluntary associations of municipalities is ensuring and providing public services to the citizens of the associated municipalities. Although their legal form is determined by law, the internal conditions, i.e., the types and number of bodies, the funds, the scope of delegated powers, the subject of the services provided, the responsibility and the way of financing may be adapted according to mutual needs and conditions, as the law does not determine them strictly. This variability enables municipalities to create an organizational structure and focus on their activities in a way that fully suits their situation. Establishment of a voluntary association of municipalities is according to the law conditioned by adoption of two obligatory documents, firstly the contract for the establishment of an association of municipalities and secondly the statutes which form its annex. Voluntary association of municipalities must then be entered in the relevant regional register and the corresponding documents entered into the collection of documents.

The original idea of the harmonious development has been completed by the idea of the equality of opportunity and creation of common financial funds for financing investment activities. The requirement for efficiency in invested funds became a new implemented mechanism [5].

Besides the setting of internal relations, the documents also deal with the property relations as the way of management is regulated by the law and the rules, which are binding for the associations of municipalities. Monitoring the management of association of municipalities is provided by both the obligatory audit or through the employees of the corresponding regional authority as well as the citizens of associated municipalities, who can express their opinion on the draft budget and the final account. In addition, monitoring the activity of associations of municipalities can be carried out by citizens of the member municipalities themselves by their personal participation in the meetings of the authorities.
3. Methodology

In order to obtain the necessary background for the research, recherché based on various scientific sources was carried out first. It was not possible to obtain data characterizing voluntary associations of municipalities from the published reports of the Czech Statistical Office as the central register of voluntary associations of municipalities at the national or regional levels is not published. Nor the use of the Administrative Register of Economic Entities (ARES) led by the Ministry of Finance which allows the search of entities according to their legal form did not provide help in determining the actual status of voluntary associations of municipalities. The necessary data could only be obtained from the websites of the individual regional offices providing access to the public registers of their associations. The work consisted of finding substantial data from the registers and its subsequent analysis.

4. Register of voluntary associations of municipalities

Establishment of a voluntary association of municipalities is subject to the law by its entering in the register of association of municipalities. These registers are kept by individual regional authorities and associations of municipalities are registered in them according to the location of their seat. Register of associations of municipalities is a public register enabling the persons interested to obtain information especially on the existence of the association (date of establishment, cancellation and termination), its identification data (name, address and identification number), activity orientation, contact details of the persons representing the statutory body (their name, surname, including their residence address and the way of dealing with, the date of establishment or termination of their position). A part of the register is also formed by the collection of documents in which both a contract for the establishment of a voluntary association of municipalities, statutes and amendments to these documents are stored. Despite the fact that keeping registers is mandatory for all regions, there is no uniform way of recording or publishing data.

There are currently 13 registers of voluntary associations of municipalities administered by the relevant regional authorities, which register 837 entities (May 2018). There is no voluntary association of municipalities registered in the capital city of Prague and therefore Prague does not keep any register. The number of voluntary associations of municipalities in individual regions can be seen from the following Figure 1. It represents the situation of the first quarter of 2018 [6–18].

![Figure 1. Numbers of VAM in individual regions [authors’ own work according to 6 -18].](image-url)
The biggest number of voluntary associations of municipalities, out of the 13 monitored regions, was established in three regions – South Moravian, Central Bohemian and Vysočina regions. The population of these regions represents less than one third of the population of the Czech Republic, yet they account for more than 42% of the registered voluntary associations of municipalities. Table 1 below shows the data for these regions.

Table 1. Data for the South Moravian, Central Bohemian and Vysočina regions [19].

| Region            | Number of VAM | Number of municipalities in the region | Number of inhabitants in the region | Area [km²] |
|-------------------|---------------|----------------------------------------|-------------------------------------|------------|
| Central Bohemian  | 131           | 1,144                                  | 1,338,982                           | 10,928     |
| South Moravian    | 128           | 673                                    | 1,178,812                           | 7,188      |
| Vysočina          | 86            | 704                                    | 508,952                             | 6,796      |
| Total             | 345           | 2,521                                  | 3,026,746                           | 24,912     |

On the contrary, there are regions where municipalities use this possibility of co-operation only minimally, for example in Karlovy Vary region with 20 VAM and Liberec region with 30 VAM. On average, 7 municipalities are associated in a voluntary association of municipalities; higher number is the South Bohemian region (9.4 municipalities) and the lowest number in South Moravian region (5 municipalities). A general overview of the number of municipalities and voluntary associations of municipalities in the Czech Republic can be seen from the following Figure 2. Although there is a large number of VAM in the Central Bohemian Region, their number is almost half of that of the South Moravian region in proportion to the number of inhabitants and the number of municipalities.

Figure 2. Number of VAM in individual regions [authors’ own work according to 6 -18].

5. Analysis of the technical infrastructure

The following Figure 3 shows that the largest number of VAM managing water supply, sewerage and wastewater treatment plants was established in the South Moravian (31 VAM), Central Bohemian (30 VAM) and Vysočina regions (18 VAM).

When comparing VAM aimed at water and sewerage (WaS) and WWTP with the total number of VAM operating in the corresponding region, it can be found out that most VAM aimed at WaS and WWTP operate in Zlín (37%), Moravian-Silesian (30%) and Olomouc regions (27%).
From the point of view of technical infrastructure, voluntary associations of municipalities are mostly aimed at the operation of water supply and wastewater treatment plants. 65 VAM, only the water supply is provided by 55 VAM, sewerage and wastewater treatment plant by 46 VAM, WaS and WWTP by 27 VAM and only 12 VAM WaS, 8 WWTPs and 7 sewerage out of the total of 199 VAM aimed at this part of technical infrastructure, see Figure 4.

Figure 4. Focus of VAM according to the type of technical infrastructure [authors’ own work].

6. Results and discussion

Voluntary associations of municipalities play an important role in the development of area. One of the most important areas of interest is the construction and operation of water supply, sewerage and wastewater treatment plants. Nevertheless, there are still municipalities which do not currently have public water supply or sewerage systems. One of the possible solutions for the municipality to such situation is joining the already existing, territorially close, voluntary association of municipalities or building the missing infrastructure using the subsidies from the Ministry of Agriculture, the Ministry of Environment or subsidies from the EU. Subsidies from the state budget and the National Fund for the 2014-2020 period are aimed at financial support of 10 national operational programmes at a total amount of nearly € 24 billion [20].

Another option of funding is the "Integrated Territorial Investment" programme. It is announced for the period 2014-2020 and is co-financed by the European Structural Funds [21]. Integrated Territorial Investment (ITI) is a new tool of the European Union. It enables metropolitan areas to use...
new approaches to strategic planning and financing of their development over the 2014-2020 period. To finance these intentions, European Commission recommends using a combination of finances from different funds. This new programme will enable cities and municipalities to be funded from more than one operational programme and to implement projects within a wider city area, i.e. an agglomeration territory. 7 agglomerations have already joined the Integrated Territorial Investment Programme in the area of the Czech Republic. The prerequisite for the application of ITI for the selected projects is the existence of an integrated metropolitan development strategy [22].

If the municipalities used these recommendations more, they would be more prosperous. In the Czech Republic in the past, drawing of subsidies was insufficient, but after 2013 there was a turning point and the Czech Republic fell within the best countries in the EU in drawing subsidies. Each step that will contribute to greater awareness, especially of the municipality mayors, will be the next step towards a better life in the municipalities. After all, the main task of the municipality is to provide welfare to its citizens. This cannot happen until the mayors are more interested in innovative ways of using subsidies or possible co-operation with the public or private sectors.

7. Conclusion
In conclusion, it seems to be clear from the above text that voluntary associations of municipalities represent important entities of interregional cooperation. They provide a wide range of services for citizens of associated municipalities through their scope and focus. This form of associations allows them to accumulate funds for joint investment which small municipalities could not finance in terms of their limited budget. Focus of a quarter of all VAM on the construction and operation of the technical infrastructure involving the connection of municipalities to the public water supply, sewerage and wastewater treatment plant has been related to this fact. This type of provided services contributes to the improvement of civic amenities and the protection of the environment of municipalities.

In the future, building up further research on the knowledge gained on voluntary associations of municipalities that focus on providing the supply of drinking water, the operation of sewage systems and wastewater treatment plants is planned. A comparison of the water and sewerage levels of the municipalities, which operate water supply, sewerage systems and wastewater treatment plants is going to be made. They will be compared to those whose service is provided by another subject. Then the obtained values are going to be compared with the national average.

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References
[1] Law no. 367/1990 Coll. On municipalities, §20a-§20d (in Czech)
[2] Hophmayer-Tokich S and Kliot N 2016 Inter-municipal cooperation for wastewater treatment: Case studies from Israel Journal of Environmental Management 0802 86(3) pp 554–65 DOI: 10.1016/j.jenvman.2006.12.015
[3] Hromádka V, Korytárová J, Kozumplíková L, Bártů D, Špiroch M and Adlofová P 2015 Risk of Megaprojects in Transport Infrastructure Advances in Civil Engineering and Building Materials IV (Hongkong: Taylor and Francis Group) pp 223–7
[4] Law no. 128/2000 Coll. On Municipalities (municipal establishment) (in Czech)
[5] Vaňková L, Puchýř B and Korytárová J 2016 Impact of construction activities on GDP in the Czech Republic amd its regions Advances and Trends in Engineering Sciences and Technologies II (Netherlands: CRC Press) pp 495–500
[6] Rejšťík svazku obcí (Associations of Municipalities Index in Czech) Portál Jihomoravského kraje [online] Brno: Jihomoravský kraj 2018 Available at http://www.kr-
[7] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál Středočeského kraje [online] Brno: Jihomoravský kraj 2018 Available at https://www.kr-stredocesky.cz/web/urad/rejstrik-dobrovolnych-svazku-obci access 2018.03.13

[8] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál Jihočeského kraje [online] Brno: Jihomoravský kraj 2018 Available at http://www.kraj-jihocesky.cz/1936/rejstrik-dobrovolnych-svazku-obci.htm access 2018.03.13

[9] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál Plzeňského kraje [online] Brno: Jihomoravský kraj 2018 Available at http://www.plzensky-kraj.cz/cs/kategorie/dobrovolne-svazky-obci access 2018.03.13

[10] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál Karlovarského kraje [online] Brno: Jihomoravský kraj 2018 Available at http://www.kr-karlovarsky.cz/samosprava/Stranky/Registr-svazku-obci access 2018.03.13

[11] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál Ústeckého kraje [online] Brno: Jihomoravský kraj 2018 Available at http://www.kr-ustecky.cz/rejstrik-svazku-obci/ds-99592 access 2018.03.13

[12] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál Libereckého kraje [online] Brno: Jihomoravský kraj 2018 Available at http://www.strukturalni-rozvoj.kraj-lbc.cz/page1874/regiony-a-oblasti-lik/mikroregiony access 2018.03.13

[13] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál Královéhradeckého kraje [online] Brno: Jihomoravský kraj 2018 Available at http://www.kr-kralovehradecky.cz/cz/krajsky-urad/vnitrni-sprava/dobrovolne-svazky-obci--94208/ access 2018.03.13

[14] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál Pardubického kraje [online] Brno: Jihomoravský kraj 2018 Available at https://www.pardubickykraj.cz/svazky-obci access 2018.03.13

[15] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál kraje Vysočina [online] Brno: Jihomoravský kraj 2018 Available at https://kevis.krvysocina.cz/index.php?action=evidence&lang=cz&akce=tabulky_akce&id_evidence=149 access 2018.03.13

[16] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál Olomouckého kraje [online] Brno: Jihomoravský kraj 2018 Available at https://www.kr-olomoucky.cz/rejstrik-svazku-obci-cl-1456.html access 2018.03.13

[17] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál Zlínského kraje [online] Brno: Jihomoravský kraj 2018 Available at https://www.kr-zlinsky.cz/seznam-dobrovolnych-svazku-obci-cl-2755.html access 2018.03.13

[18] Rejstřík svazku obcí (Associations of Municipalities Index in Czech) Portál Moravskoslezského kraje [online] Brno: Jihomoravský kraj 2018 Available at https://www.msk.cz/vnitro/rejstrik_so.html access 2018.03.13

[19] Czech statistical office 2017 Česká republika v číslech. (Czech Republic in figures in Czech) [online] Praha. Available at https://www.czso.cz/cs/czso/ceska-republika-v-cislech-2017 access 2018.03.03

[20] Programy pro programové období 2014 – 2020 (Programs for the 2014-2020 programming period in Czech). Evropská a strukturální fondy [online]. Praha: Ministerstvo pro místní rozvoj, 2012 Available at http://www.strukturalni-fondy.cz/cs/Fondy-EU/2014-2020/Operačni-programy access 2018.03.18

[21] Integrované teritoriální investice (Integrated Territorial Investment in Czech). Evropská komise [online] Praha Available at http://ec.europa.eu/regional_policy/sources/docgener/informat/2014/iti_cs.pdf access 2018.05.03

[22] Florkowska L and Bryt-Nitarska I 2018 The requirements for implementing Sustainable
Development Goals (SDGs) and for planning and implementing Integrated Territorial Investments (ITI) in mining areas. 

E3S Web of Conferences 36 DOI: 10.1051/e3sconf/20183601004