Financial Self-Sufficiency and the Position of Selected Types of Small Municipalities in the Region of South Bohemia in 2013 - 2016 (A Case Study)

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Abstract

In recent years, small municipalities have been gaining an increasing research interest, most notably in the areas of sociology and geography, yet the economic standpoint has not been sufficiently examined. Presented is an introductory case study on selected types of small municipalities of the South Bohemian Region (the Czech Republic) discussing their financial self-sufficiency and dependence on grants in a certain period under review (2013 - 2016). As regards the Czech Republic’s settlement structure, a specific category, considering small municipality as a unit with 500 - 9999 inhabitants, was established for the research purposes. The main part of the study encompasses a financial analysis of the corresponding municipalities, included in the category. Financial self-sufficiency and dependence on grants were assessed based on particular ratio indicators, i.e. own revenues and selected own revenues in relation to total revenues, and covering capital expenditures by investment transfers. It was found that the majority of municipalities have sufficient revenues to cover their expenditures. For the small municipalities concerned, however, this is at the expense of capital expenditure limitations, and in order to cover their investment projects, it is necessary to increase own revenues by grants.

Keywords: small municipalities, Region of South Bohemia, financial self-sufficiency of municipalities, investment transfers.
Introduction

This article presents a case study that focuses on the position of selected types of small municipalities in the Region of South Bohemia. It includes an analysis of grant opportunities according to the specifics of these municipalities in comparison to larger municipalities nationwide and in Europe. The main purpose of the research was to conduct a detailed analysis of the grant drawdown by the aforementioned municipalities for the period 2013 - 2016. In doing so, particular attention was paid to a variety of criteria, as well as the classification and quantification of transaction costs related to grant programmes that may be used by these municipalities.

The case study is a follow-up to a previous analysis carried out by one of the authors into the use of grants by selected municipalities (a representative sample set of municipalities determined by size) in the Region of South Bohemia during the period 2009 - 2015. Overall, the findings revealed that there were significant disparities in terms of the administrative demands connected to grant applications and the actual grant administration itself, but that this was not dependent on the size of the municipality. However, the hypothesis that regional grants are mainly drawn down by medium-sized and large municipalities, but inconsistently by very small municipalities, was confirmed. The results also revealed that such grants are primarily utilized to fund non-investment expenditures, with minimum funding for investment projects.

Theoretical Basis

Urban and rural municipalities have evolved differently over many years, whereby the former have become centres of crafts, trade, industry and services, and the latter of agricultural production. In the past, large numbers of people from rural areas moved to cities/towns and became the source of their growth and urbanisation (Novotný 2016). However, the differences have been eliminated in recent years. At present, the boundaries between the designations “town” and “country village” have tended to become less clear as towns have expanded into surrounding areas, whereby the urban and rural elements have blended together. Indeed, a transitional form of both designations has also emerged, as a result of which it is often not possible to clearly determine which settlement structure a built up area belongs to (Vaishar 2013).

The sociological and geographical issues related to settlement structures in the Czech Republic and in the European Union have been discussed by a wide range of authors. Within this context, current sociological research is primarily focused on the detailed examination of the dichotomy of two basic types of settlement structures (i.e. towns and villages), and monitors, in particular, the emerging regional disparities at higher geographical levels (notably the differences in the achieved socio-economic level and the dynamics of changes in socio-economic growth). The assumption is that varied aspects of living conditions in different types of environment or territories (such as the provision of services, economic opportunities, physical and social environment) influences the
population and its quality of life and may therefore lead to disadvantages for certain population groups in some locations (Macešková et al. 2009).

In contrast, small municipalities, both in terms of their position and definition, have not been given enough attention, and their role in sociological research has been somewhat neglected (Malý 2016). The structural omission of small municipalities from social science research is all the more surprising when European settlement structure is taken into consideration, which is characterised by a dense network of small territorial units (Steinführer et al. 2016; Vaishar et al. 2016). The situation has begun to change in recent years. In 2013, systematic research was launched into smaller urban areas within the European Union. For example, the ESPON TOWN project focuses on the characteristics of small and medium-sized municipalities in individual EU member countries (Sýkora and Mulíček 2017; Servillo et al. 2017). The position of small towns in Slovakia was addressed by Novotný et al. (2016), who state that such units are specific settlement structures which have certain elements of towns and villages and which maintain their position as important centres due to the service functions they fulfil for their residents. Meili and Mayer (2017) examined small towns in Switzerland and gave an overview of their economic characteristics and developmental dynamics, and conceptualised their links to neighbouring towns and surrounding areas. Vaishar, Zapletalová and Nováková (2016) looked into the position of small towns within the Czech settlement system and concluded that the role of such units varies due to their historical development, regional differences, distances from regional centres, accessibility and human capital. A specific analysis of small towns in the Moravian-Silesian Region, conducted in 2012 by a group of scientists led by Prof. Vaishar (2012), claimed that small towns had become the foundation of the rural settlement system because they provide rural areas with essential functions in the spheres of employment (job opportunities), urban services and social contacts.

With regards to current geographical research, the position of small towns in the global economy was assessed by Knox and Mayer (2013) and by Kresl and Ietri (2016). According to them, such towns may become significant areas, particularly in regional economies, provided they take full advantage of their opportunities and focus on their specific characteristics. Their strengths lie in their own identity, the social life, residential quality of life, traditions, urban amenities and the viability of public spaces. Other authors came to the conclusion that the social characteristics of populations differs more considerably within territorial units than between these units themselves (Perlín et al. 2010; Kubeš and Kraft 2011; Šimon 2017). The most important geographical factors for regional differentiation include settlement hierarchy, macro positional attractiveness and inherited economic specialisation (Hampl 2015). Additionally, the geography of small towns is the geography of small areas that form parts of the regional geography. Due to their size and the number of residents, small towns allow detailed explorations of reality and the testing of certain methods that could be applied in both rural environments and large cities alike (Vaishar 2012).
Methods and Data

Territorial Structure of the Region of South Bohemia

The Czech Republic is characterised by a fragmented settlement structure, which within the European Union is also the case in Slovakia and France (Půček et al. 2015). Both within the European context and that of the objective reasons for the fragmented settlement structure, the number of Czech municipalities can be considered to be very high (Hampl 2007). A specific characteristic of Czech settlement structure is the existence of a large number of municipalities that combine elements of rural and urban municipalities. At times, the differences between urban and rural settlements cannot be clearly defined. In some cases, the municipalities neither meet the requirements for qualifying as a town, nor those for qualifying as a village, whereas in other cases, they are classified as towns, even though they do not comply in terms of the number of inhabitants. Another characteristic element of settlements in the Czech Republic is the significant differences between the numbers of inhabitants of individual municipalities and the existence of a large number of very small municipalities with less than 500 inhabitants (Czech Statistical Office 2016).

In view of the location of the authors’ workplace and their very good knowledge of the surrounding environment, the Region of South Bohemia was selected as the area of research interest. With the selection came better opportunities for obtaining information and cooperating with local entities. The region’s position in the regional system of the Czech Republic is quite specific. It covers an area of 10,058 km\(^2\) and is the second largest region in the Czech Republic, although this is not reflected in the number of inhabitants, which stood at 638,782 as of 31.12.2017 (according to data from the Czech Statistical Office). The population density (63.5 inhabitants per km\(^2\)) of the Region of South Bohemia is the lowest among the regions of the Czech Republic, with large differences between the border areas and those areas further inland. However, the number of small municipalities in the region is above average when compared with other Czech regions. In connection with the recent nationwide suburbanisation process, the total percentage of the urban population has gradually declined. As of 2016, the number of municipalities in the region totalled 624, of which 55 were towns, in which 63.6% of the regional population live. There are also considerable differences between several regional towns in terms of the number of inhabitants, e.g. 350 inhabitants in the town of Rožmberk nad Vltavou in comparison to 93,470 in České Budějovice. The category of smallest (or very small) municipalities in the region by population (with up to 500 inhabitants) currently stands at 436, representing 70% of the total number of municipalities. This compares sharply to the number of municipalities (155, representing 25% of the total number of municipalities) that are classified as small (with 501 - 3,000 inhabitants). There are also 33 larger municipalities (towns) in the region, including České Budějovice, which is a statutory city as well as the largest regional unit (Czech Statistical Office 2017).
Prior to commencing the research, it was necessary to define the term “small municipality”, even more so because the term “small town” is specifically used in professional literature. Such a settlement unit in the Central European area is usually defined according to the number of inhabitants.

When considering specific settlement hierarchy analyses, it can be stated that they predominantly deal with structuring based on the typology of municipalities, which are subsequently seen as basic spatial units. Individual municipalities may therefore have the following status: capital city, statutory city, city, town, township, small town, and village, with special status accorded to military districts. However, when assessing spatial hierarchy, it is, within the settlement context, more appropriate to use the criterion of population size for structuring the municipalities in the Czech Republic, rather than the regular division used by the Czech Statistical Office.

The size of municipalities, as determined by the number of inhabitants, can be regarded as one of the basic parameters for the comparative study of municipalities. In terms of financial analysis, it is then possible to compare certain indicators of a particular municipality with the figures for the national level or with those for other municipalities within a given size category (Půček et al. 2015).
As previously stated, the underlying basis for the results presented in this article is the settlement system in the Region of South Bohemia. This system is characterised by a large number of very small municipalities of a mostly rural (village) nature, and which includes only one city and six former district towns (categorised as medium-sized - see below). Given the fact that rural and urban elements have gradually merged in several small(er) municipalities, no distinction is made with regards to their settlement character. As a result, when taking into account the territorial structure of the Region of South Bohemia, small municipality for the purposes of the primary research is determined according to size on the basis of the number of inhabitants.

In addition to this and on account of possible comparisons with other units in Europe, the following categorisation of municipalities (in contrast to the regular statistical division nationwide) will apply: very small municipality (up to 499 inhabitants); small municipality (500 - 9,999 inhabitants); medium-sized municipality (10,000 - 49,000 inhabitants); large municipality (more than 50,000 inhabitants). Since the defined set of small municipalities is diverse, a detailed typology of the categories according to additional criteria will be carried out in follow-up studies, whereby different categories of municipalities will be selected and further assessed, e.g. rural municipalities vs. towns, peripheral municipalities vs. suburban municipalities, border municipalities vs. inland municipalities, etc. A modified division of the municipalities in the Region of South Bohemia based on the categorisation above is given in Table 1.

Table 1: Modified structure of municipalities in the Region of South Bohemia as of 31.12.2016

<table>
<thead>
<tr>
<th>Category of Municipality</th>
<th>Number of Municipalities</th>
<th>Percentage of Category</th>
<th>Total Number of Inhabitants in Category</th>
<th>Number of Inhabitants in Category in Relation to the Total Number (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Small</td>
<td>434</td>
<td>69.5%</td>
<td>91,275</td>
<td>14.3%</td>
</tr>
<tr>
<td>Small</td>
<td>183</td>
<td>29.3 %</td>
<td>321,029</td>
<td>50.3 %</td>
</tr>
<tr>
<td>Medium-Sized</td>
<td>6</td>
<td>1 %</td>
<td>133,008</td>
<td>20.8 %</td>
</tr>
<tr>
<td>Large</td>
<td>1</td>
<td>0.2 %</td>
<td>93,470</td>
<td>14.6 %</td>
</tr>
<tr>
<td>Total</td>
<td>624</td>
<td>100 %</td>
<td>638,782</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Source: Authors based on data from Czech Statistical Office (Public Database)

Although small municipalities represent only 29.3% of the total number of municipalities, more than 50 % of population of the Region of South Bohemia live in them.

**Methodology**

The entire set of municipalities in the selected category will be taken into account and an aggregate statistical analysis conducted based on quantitative data. The subsequent focus will then be on the positioning of the municipalities according to their individual
elements. Although statistical analysis in general enables us to examine entire sets of municipalities, when interpreting the results it is necessary to take into consideration that the reporting of the determined values depends on a number of factors.

The main sources of data for the statistical analysis were the Czech Statistical Office database and, in particular, a database application called MONITOR. MONITOR is a specialised information portal of the Ministry of Finance of the Czech Republic that allows free public access to budget and accounting information from all levels of state administration and self-government. Additional information came from the Czech Republic’s Central Accounting Information System and the Integrated Information System of the State Treasury, which is updated quarterly (Půček et al. 2015).

With regards to scientific literature, the financial self-sufficiency of municipalities has been addressed by a number of authors. Within the context of the European Economic Area, authors like Kološta and Flaška conducted detailed analyses of the development and measurement of the financial autonomy of municipalities in Slovakia (see Flaška et al. 2017; Kološta et al. 2013). Padovani et al. (2018) analysed specific indicators of the financial health of municipalities for the purpose of making cross-border comparisons. A specific evaluation of financial performance in public administration was discussed by Zafra-Goméz et al. (2009). In the Czech Republic, assessments of the financial self-sufficiency of municipalities were also made by, for example, Kraftová (2002) and Otrusinová (2011), whilst Pavlas (2015) sought to determine an aggregate financial stability indicator (index). The partial indicators used in the latter’s calculations include: self-financing capacity; capital budget balance; and the coverage of capital expenditures through investment transfers. Opluštilová (2012) also conducted specific financial analyses and assessed the financial stability of municipalities. On the basis of the research referenced above, the following ratio indicators were selected as the most appropriate for this study:

- own revenues in relation to total revenues - this indicates the independence of municipalities on transfers;
- adjusted own revenues (revenues whose amounts municipalities can influence) in relation to total revenues (i.e. own revenues less shared tax revenues);
- coverage of capital expenditures by investment transfers - this indicates how successful municipalities are in obtaining transfers to cover their capital expenditures.

In order to assess the suitability of the indicators, and given the assumed varied positions of small municipalities within the region, specific municipalities were selected for each district so that different settlement structures were represented according to the established categories. The indicators were calculated for the selected municipalities on the basis of data obtained from a statement of the aggregate budget for the individual municipalities in the MONITOR database and the development thereof during the period 2013 - 2016. The reasons for choosing the period under review were twofold. Firstly, the MONITOR database was only launched in 2013. Secondly, at the time this study was
instigated, the database did not contain data for the year 2017. When selecting representative municipalities, consideration was given to whether they were a town, township, or village. With regards to towns, an additional sub-category was defined, i.e. towns (municipalities of 3rd type) which are municipalities with extended competences, or towns that perform a wider range of tasks as part of delegated competences in their administrative district (Provazníková 2015). Interestingly, all former district towns in the Region of South Bohemia fall under this category. It should also be noted that the selection of representative municipalities was made randomly so that all categories, in terms of municipality sizes and districts in the Region of South Bohemia were represented (see Table 2).

Table 2. Selected representative municipalities in the Region of South Bohemia

<table>
<thead>
<tr>
<th>Name of Municipality</th>
<th>Type of Municipality</th>
<th>Number of Inhabitants as of 31.12.2016</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choustník</td>
<td>Rural</td>
<td>510</td>
<td>Tábor</td>
</tr>
<tr>
<td>Adamov</td>
<td>Suburban</td>
<td>821</td>
<td>České Budějovice</td>
</tr>
<tr>
<td>Hořice na Šumavě</td>
<td>Township</td>
<td>830</td>
<td>Český Krumlov</td>
</tr>
<tr>
<td>Strunkovice nad Blanicí</td>
<td>Township</td>
<td>1,225</td>
<td>Prachatice</td>
</tr>
<tr>
<td>Bavorov</td>
<td>Town</td>
<td>1,595</td>
<td>Strakonice</td>
</tr>
<tr>
<td>Nová Bystřice</td>
<td>Town (Municipality of 3rd type)</td>
<td>3,316</td>
<td>Jindřichův Hradec</td>
</tr>
<tr>
<td>Milevsko</td>
<td>Town (Municipality of 3rd type)</td>
<td>8,540</td>
<td>Písek</td>
</tr>
</tbody>
</table>

Source: Authors based on data from Czech Statistical Office (Public Database)

**Results and Discussion**

The aforementioned indicators were calculated for the selected municipalities in the Region of South Bohemia to assess their financial self-sufficiency. The results are presented graphically. For the sake of greater clarity, the municipalities were placed in order of their population size - from the smallest (Choustník) to the largest (Milevsko). Each value is expressed as a percentage and presented for each of the years under review.

**Indicator 1 - Own Revenues in Relation to Total Revenues**

This indicator was used to assess the financial stability of the selected municipalities. It expresses a certain level of municipal dependence on transfers as opposed to the ability of municipalities to self-finance without grant aid. The values calculated are given in % and presented in Figure 2.
Indicator 1 = \[
\frac{\text{Tax revenues} + \text{Non - tax revenues} + \text{Capital revenues}}{\text{Total revenues after consolidation}}
\]

Figure 2: Own revenues in relation to total revenues

Source: Authors based on data from the MONITOR database

As is evident from Figure 2, the level of self-financing among all the assessed municipalities is comparable, ranging from 65% to 95%. This can be considered to be a very good result. Not surprisingly, the highest level of dependence on transfers was found to be in the largest municipality, whereas the lowest level of dependence was observed in the smallest municipality. This result can be linked to the scope of delegated competences, which is higher in larger municipalities. Hence the higher proportion of transfers required in relation to total municipal revenues. Another reason may be the higher capital expenditures of larger municipalities, which is mostly financed through grants. In general, it may be argued that the higher the percentage value of the indicator, the more financially stable the given municipality is because they are better able to cover their expenditures from own revenues. However, the indicator in itself does not have sufficient reporting value in this respect. Own revenues were therefore adjusted for shared tax revenues and Indicator 2 calculated.

**Indicator 2 - Adjusted Own Revenues in Relation to Total Revenues**

Under this indicator, shared tax revenues are deducted from own revenues. The adjusted figure for own revenues is subsequently compared with total revenues. For this purpose, value added taxes and income taxes on legal and natural persons (with the exception of municipal business tax paid by municipalities and directed to their budgets) were
subtracted from the tax revenues of the municipalities. The values calculated are given in % and presented in Figure 3.

\[
\text{Indicator 2} = \frac{(\text{Tax revenues} + \text{Non-tax revenues} + \text{Capital revenues}) - \text{Shared taxes}}{\text{Total revenues after consolidation}}
\]

Figure 3: Adjusted own revenues in relation to total revenues

Source: Authors based on data from the MONITOR database

The adjustment of own revenues for shared taxes (an item which is stated in Act No. 243/2000, on the Budget Allocation of Taxes, and which municipalities cannot influence through their own activities) reveals significant differences between the individual municipalities. These differences are not related to the size of the municipalities, but are determined by additional factors that influence their economies. On the basis of the selected sample, it is not possible to clearly determine what specific factors play a role in this. Further research is therefore required into the typology of the municipalities, for example, their geographical location, historical and economic development, distance from statutory cities, transport services, proximity to national borders, etc.

**Indicator 3 - Coverage of Capital Expenditures by Investment Transfers**

This indicator was selected to assess what sources the given municipalities use to fund their investment projects, since capital expenditures are mainly expended on long-term investment needs. The values calculated are given in % and presented in Figure 4. Certain values exceed 100%. This is related to the fact that, in some cases, particular grants for municipalities are provided for their entire investment plans, which may have a long-term
character. As a result, capital expenditure in individual years can be lower than the investment transfers provided.

\[
\text{Indicator 3} = \frac{\text{Investment transfers}}{\text{Capital expenditures}}
\]

Figure 4: Coverage of capital expenditures by investment transfers

![Figure 4: Coverage of capital expenditures by investment transfers](image)

Source: Authors based on data from the MONITOR database

The results not only show significant differences within each municipality in the period under review, but also between the municipalities themselves. For the correct assessment of the results, further information on capital expenditures is presented in Table 3.

Table 3: Capital expenditures (in TCZK)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Choustník</td>
<td>357</td>
<td>2,266</td>
<td>3,445</td>
<td>2,820</td>
</tr>
<tr>
<td>Adamov</td>
<td>1,441</td>
<td>1,168</td>
<td>1,886</td>
<td>2,621</td>
</tr>
<tr>
<td>Hořice na Šumavě</td>
<td>8,475</td>
<td>6,509</td>
<td>9,175</td>
<td>4,059</td>
</tr>
<tr>
<td>Strunkovice</td>
<td>2,768</td>
<td>4,078</td>
<td>12,004</td>
<td>4,692</td>
</tr>
<tr>
<td>Bavorov</td>
<td>329</td>
<td>1,731</td>
<td>7,908</td>
<td>7,111</td>
</tr>
<tr>
<td>Nová Bystřice</td>
<td>17,673</td>
<td>44,545</td>
<td>26,554</td>
<td>21,929</td>
</tr>
<tr>
<td>Milevsko</td>
<td>13,397</td>
<td>61,969</td>
<td>40,137</td>
<td>47,686</td>
</tr>
</tbody>
</table>

Source: Authors based on data from the MONITOR database

An overall comparison of the indicator values reveals, yet again, a very uneven use of transfers by the municipalities. Nevertheless, it may be stated that the smallest municipality with 500 inhabitants made the least use of transfers to fund its investment activities. This despite the fact that the capital expenditures were relatively high with respect to the size of the municipality, which covered its capital expenditures through
own revenues. At the same time, the two largest municipalities (3rd type) drew down very low levels of transfers to cover their capital expenditure needs. As for the other types of municipalities, transfers were rather used for individual activities and did not constitute a regular source of revenue with which to cover their capital expenditure needs. Overall, the lowest drawdown of investment transfers to cover capital expenditures was in 2016. This corresponds with the nationwide downward trend in investment transfers, which, according to Kameničková (2017), is related to the start of a new programming period of grants from the EU.

Conclusion
This article presents a case study of the financial self-sufficiency and dependence on grants of selected types of small municipalities in the Region of South Bohemia. Although the interest in research into small municipalities has been growing in recent years, most notably in the fields of sociology and geography, the interest from the economics point of view has remained relatively restrained.

Considering the settlement structure in the Czech Republic, and in view of possible comparisons with other EU member countries, a consolidated group of municipalities was defined for the research purposes, namely small municipality with 500 - 9,999 inhabitants. Seven municipalities in the Region of South Bohemia from the sub-categories within this consolidated group were subsequently selected and subjected to a financial analysis. Their financial self-sufficiency and dependence on grants was assessed on the basis of ratio indicators, namely: own revenues and adjusted own revenues in relation to total revenues; and coverage of capital expenditures by investment transfers, of which the development of the latter were also assessed.

On the basis of the results, it can be concluded that the selected municipalities have sufficient revenues to cover their expenditures and that the achieved values for own revenues in relation to total revenues corresponds to the values nationwide. However, this is at the expense of capital expenditure limitations in smaller municipalities, who must seek additional financial support in the form of grants to boost their own revenues in order to cover their investment projects. When assessing the use of investment transfers, there were significant differences between the municipalities, as well as between the years under review. However, these disparities were not related to the size of the municipalities. To determine the reasons for the low drawdown of grants, a more detailed typology of the selected municipalities and their differences is required. This includes an analysis of their geographical location, historical development, transport services, the scope of their functions within the context of delegated competences, and their distance from statutory cities. For each category of municipality, a separate assessment of the selected economic indicators should follow. In order to be able to comprehensively assess the economic position of the categories selected, empirical data gathered through a field survey is required. Statistical data processing is not sufficient.
References


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