



Politicians' Remuneration and Budgetary Behaviour in Czech Municipalities

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Abstract

This paper aims to bridge a gap in public finance research by investigating the impact of remuneration increases for local politicians on various budgetary indicators in Czech municipalities using the regression discontinuity design method. Building on prior studies from Italy and the Netherlands, this research examines how remuneration influences budgetary behaviour. Focusing on municipalities with populations ranging from 5 to 20 thousand inhabitants, divided by a threshold of 10 thousand, where remuneration increases occur automatically, the analysis reveals significant effects on budget allocations. Particularly notable are increases in current and total expenditures, alongside a decrease in investment expenditures. The study also explores resource allocation across different sectors, highlighting the influence of remuneration on areas such as culture and public administration.

Keywords: Politician, remuneration, municipality, budget, public finance

JEL Classification: D72, G28, H72

1. Introduction

Public finance and budgetary decision making at the municipal level are fundamental elements in the functioning of local self-government and have a significant impact on the living conditions of citizens, services, infrastructure and overall development of the local community. The decisions of elected representatives in allocating public financial resources reflect not only political preferences, institutional mechanisms and current societal needs but also other incentives. This

paper will examine the influence of remunerations. Remunerations of municipal politicians are often overlooked, although they can have a crucial impact on the functioning of the municipality and the behaviour of representatives.

This study employs the regression discontinuity design (RDD) method to examine the impacts of remuneration increases in municipalities ranging in size from 5 to 20 thousand inhabitants on various budgetary indicators. These municipalities are divided by a threshold of 10 thousand, at which representatives' remunerations automatically increase. This threshold value is crucial for investigating the remuneration increase. Various bandwidths around the threshold value are established in the paper to provide a broader understanding of the influence of remuneration on various budgetary indicators. It follows on two previous studies conducted in Italy (Gagliarducci and Nannicini, 2009) and the Netherlands (van der Linde *et al.*, 2014). The method and a considerable portion of the indicators examined for the impact of remuneration increase are derived from these studies. Additionally, it provides insight into the sectors to which budgetary resources are directed. Previous studies have concluded that higher remunerations have positive effects on the budgetary behaviour of municipalities; however, the results in this paper are equivocal and sometimes rather contradictory. Therefore, the present paper expands the perspective to Czech realities and reaffirms the current understanding that universal conclusions cannot be drawn in this topic across countries.

The Czech environment is specific in several respects, and the aforementioned authors also acknowledge that local specifications play a significant role in the question of the influence of municipal politicians' remunerations on the budgetary behaviour of the municipality. In addition to the calculations themselves, the paper includes descriptive statistics of the monitored variables and a description of the system for determining the remunerations of Czech representatives.

The aim of the paper is to analyse how the increase in remunerations of representatives in Czech municipalities can affect the municipality's budgetary indicators in line with previous research. The paper concludes that the impact is quite significant and is manifested primarily in the increase in current and total expenditures at the expense of investment expenditures. However, impacts can also be observed in other areas. Sections of the paper include the current state of knowledge, which introduces the entire issue, followed by a description of the remuneration allocation system in municipalities in the Czech Republic, including an overview of remuneration increases according to the size of the municipality. Subsequently, the results are presented with appropriate commentary and interpretation.

2. Related Literature

The whole topic of politicians' salaries is very extensive and there are a variety of perspectives from which to approach it. It is seen both as motivation for entering politics and as an incentive for the work of politicians themselves.

The remunerations for elected representatives differ from standard employments due to their temporary nature associated with the uncertainty of re-election. In municipalities, one must also assume that the potential competition among candidates increases with the size of the municipality, hence the risk of non-election, which higher remunerations should offset. Moreover, there is a risk of dismissal from higher positions (*e.g.*, mayor or council member), leading to a decrease in remuneration during the electoral term. This aligns with the findings of Shapiro and Stiglitz (1984).

Nevertheless, many characteristics remain the same; primarily, remuneration determines the qualities of candidates, where higher remunerations lead to higher quality (Weiss, 1980). Applied to representatives, it can be said that higher remunerations enhance the qualities of candidates and, in conjunction with the risk of re-election, drive better discipline and performance. Besley and Schumpeter (2004), in their model examining alignment with voters, pointed out that the issue of re-election is the strongest motivator for politicians. Hoffman and Lyons (2014) approached the subject similarly, concluding that there are evidently other motivators for entering and working in politics. To sum up, the entire principle perceives that when remuneration increases competition, it reduces the chances of re-election, thus indirectly pushing for better performance by politicians and willingness to act according to the voters' will, thereby enhancing their chances of re-election.

Caselli and Morelli (2004) further provided an insight into less qualified politicians in terms of labour market employability. They look at it from the perspective of opportunity costs, suggesting that a less qualified candidate may be more motivated to enter politics because their remuneration in the private sector is lower than that of a more qualified candidate. Messner and Polborn (2003) also highlighted this, adding that increased competition, even among less qualified candidates, leads to less willingness to stand as candidates among qualified candidates, as they may perceive it as lower chances of election. This theme was further developed by Poutvaara and Takalo (2004), who argued that political parties do well in this regard by making some pre-selection of candidates, reducing the confusion in elections, selecting the best candidates and generally reducing the information asymmetry between candidates and voters.

Looking at empirical studies, for instance, Di Tella and Fisman (2004) tracked gubernatorial remunerations in the USA and found correlations over a 40-year timeframe between remunerations and the tax rate and related tax revenues. Diermeier *et al.* (2005) further noted that remunerations significantly increase after leaving politics as a congressman in the USA, which can lead to a higher value of the political function itself. A slightly different perspective was provided by Salomon (2013), who observed among German politicians that a significant portion are career politicians, starting at lower municipal levels and gradually ascending to higher levels of politics. Top politicians then resist leaving politics because they consider their positions to be career goals. These conclusions expand the perspective on politicians' remuneration to include a factor derived from future benefits.

In connection with this paper, it is worth mentioning three studies that have also used the same method. The first one is Ferraz and Finan (2009). They applied RDD to Brazilian municipalities and found that increasing remuneration not only leads to higher quality candidates (primarily in education) but also enhances legislative performance (more bills passed). Improvement was generally visible in the quality of education and healthcare; however, higher remuneration did not manifest, for instance, in the availability of quality water or an impact on household quality of life. Gagliarducci and Nannicini (2009) partially followed up in part with their research; they examined Italian municipalities from 1993 to 2001 using RDD to investigate the impact of a 33% increase in remunerations. They concluded that higher remunerations lead to a reduction in the size of the office, decreasing the current expenditures of municipalities, as well as local taxes and investments. Overall, they regarded it as a path to improvement and interpreted it as a reduction in the public sector; there was mainly a reduction in both income and expenditures of the municipality, but no significant deficits. Following the Italian study, van der Linde et al. (2014) built upon it and applied the RDD method to municipalities in the Netherlands as well. However, they reached a different conclusion, as higher remunerations are associated with an increase in municipal debt, which they also interpreted as a positive impact because municipalities make significant investments. The present paper, primarily based on the Italian and Dutch research, applies the same method to Czech municipalities and draws appropriate conclusions from the results, which differ significantly from the previous ones.

3. Institutional Setting

There are 6,254 municipalities in the Czech Republic, placing it among the countries with the highest number of municipalities per capita. The calculation of remunerations has undergone significant changes since 1 January 2018. In the period from 1994 to 2017, the remuneration was determined exogenously by the Czech government as a fixed base, to which a fixed component was added for every 100 inhabitants living in the municipality, with the increment gradually decreasing. This relatively complicated mechanism was replaced on 1 January 2018 by Government Regulation no. 318/2017 Coll., where remunerations were divided into 11 intervals and thus determined exogenously according to the population of the municipality. This simplified the calculation mechanism and also allowed the use of the RDD method for this paper, as such categorization of remunerations is a necessary condition.

The local government is composed of the mayor, deputy mayors and members. Furthermore, the representatives may also appoint its members to the council, which could be defined as the executive body of the local government. Representatives may also be integrated into committees and commissions, and additionally, committees and commissions may have other nominated members. The first four mentioned positions may be either released (full-time) or unreleased (part-time) depending on the decision of the council. Unlike released positions, unreleased positions

have a lower remuneration rate. Remuneration rates are adjusted slightly each year by the Czech government reflecting inflation; no list of changes in individual years is provided because it is not relevant for the calculation itself and consists of relatively minor adjustments.

Table 1: Remunerations of released council members as of 1 January 2019 (in CZK)

| Population | Mayor | Deputy mayor | Council member | Representative | Increase |
|-----------------|---------|-----------------|-------------------|----------------|----------|
| <300 | 39,054 | 34,367 | 30,462 | 26,557 | _ |
| 301-600 | 43,858 | 38,595 | 34,209 | 29,823 | 12.3% |
| 601–1,000 | 49,169 | 43,269 | 38,352 | 33,435 | 12.1% |
| 1,001–3,000 | 54,715 | 48,149 | 42,677 | 37,206 | 11.3% |
| 3,001–5,000 | 60,260 | 53,029 | 47,003 | 40,977 | 10.1% |
| 5,001–10,000 | 65,806 | 57,909 | 51,329 | 44,748 | 9.2% |
| 10,001–20,000 | 71,312 | 62,755 | 55,624 | 48,492 | 8.4% |
| 20,001–50,000 | 77,834 | 68,494 | 60,711 | 52,927 | 9.1% |
| 50,001–100,000 | 84,552 | 74,406 | 65,950 | 57,495 | 8.6% |
| 100,001–200,000 | 91,777 | 80,764 | 71,586 | 62,408 | 8.5% |
| >200,000 | 111,304 | 97,947 | 86,817 | 75,687 | 21.3% |

Source: Annex to Government Regulation no. 202/2018 Coll.

Data and Methodology

It is evident from the above that the sharp RDD method can be applied because the cutoffs are clearly defined and given through the remuneration intervals, which representatives (population) cannot influence arbitrarily. Consequently, situations arise where, for example, a municipality with 5,020 inhabitants has 9.2% higher representatives' remuneration compared to a municipality with 4,980 inhabitants. This factor will be the subject of investigation into the impact of higher financial compensation.

Data for the RDD are collected online from publicly available data in the Information Portal of the Ministry of Finance – Monitor database (MFCR, 2024). The database contains data on selected variables for the observed period. Data are selected for municipalities with a population size ranging from 5,000 to 20,000 inhabitants during the monitored electoral term from 2018

to 2022, constituting a sample of 217 municipalities. The data include two remuneration categories (municipalities with 5,000 to 10,000 inhabitants and municipalities with 10,000 to 20,000 inhabitants).

These categories of municipalities were chosen because there are significantly fewer municipalities in the higher categories in the Czech Republic, which would greatly affect the statistical significance. Conversely, while there are more municipalities in the lower categories, they have smaller budgets, which gives them considerably fewer options to influence their structure in relation to fulfilling standard functions. The size and composition of the council also change; in smaller municipalities, the positions tend to be unreleased, and smaller municipalities cannot be expected to have council members (according to the Municipal Act no. 128/2000 Coll., only municipalities with 15 representatives or more can have a municipal council).

Since municipal elections traditionally take place in the autumn (in 2018, they were held on 5–6 October), only data from 2019 to 2022 are considered, as the influence of the newly elected council on the 2018 budget is minimal.

Due to the methodology used, several municipalities are excluded, specifically those where the population changed during the observed period, resulting in the council transitioning to a higher or lower remuneration tariff. The sample of municipalities is thus reduced by 10 municipalities to a total of 207 municipalities. The data are on an annual basis, so the total sample consists of 828 observations (number of municipalities × number of years in the electoral term).

The RDD method assumes that representatives cannot influence the running variable, which in this case is the population size. To verify this assumption, a so-called McCrary test (McCrary, 2008) is conducted. The test rejects the tested hypothesis, indicating a discontinuity in density around the threshold of 10 thousand. This discontinuity was demonstrated at a significance level of 5% (test criterion value = -1.163853, p-value = 0.0017).

The selected variables for discontinuity calculation are chosen as budget items. They largely follow van der Linde *et al.* (2014), specifically total budget, total revenue and total expenditures. These same variables were also used by Gagliarducci and Nannicini (2009) in Italy. According to the Italian research, data on capital and current expenditures (item classes 5 and 6), expenditures on additional salaries in municipalities (subgroup of items 501), municipality transfer revenues (item class 4) and tax revenues (item class 1) are also utilized. It is assumed that transfers from higher levels of public administration reflect expenditures within the devolved powers fulfilled by municipalities. Therefore, the difference between current expenditures and non-investment transfers (group of items 41) is also utilized, creating cleaned current expenditures, thus reducing differences across similarly sized municipalities that may have arisen due to subsidies, devolved powers, *etc.* This cleaning results in a more comprehensive and fairer comparison of municipalities.

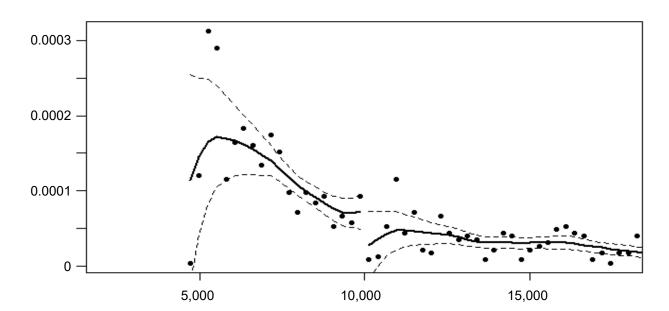


Figure 1: McCrary test (828 observations)

Note: Weighted density estimation density (y-axis) performed separately on either side of the 10,000 threshold. Source: Author's own elaboration

Table 2: Selected expenditures and revenues per capita for the observed municipalities in CZK per capita

| | | | · | · |
|----------------------|----------|----------|----------|----------|
| | 2019 | 2020 | 2021 | 2022 |
| Current expenditures | 19,041.4 | 19,407.8 | 20,478.2 | 23,583.3 |
| Capital expenditures | 8,924.7 | 8,401.8 | 8,043.7 | 9,993.3 |
| Total revenues | 28,649.4 | 29,073.3 | 30,626.0 | 34,312.5 |
| Tax revenues | 18,106.9 | 17,092.9 | 18,871.5 | 22,459.1 |
| Received transfers | 6,476.4 | 7,753.1 | 6,724.1 | 6,271.9 |

Source: MFCR (2024)

Furthermore, the so-called sectoral division of the budget allows us to examine differences in expenditures across selected areas. Beyond the aforementioned data, the calculation also utilizes data by areas, where the data are collected as total expenditures, and and the second category is these areas, but only current expenditures are considered. Specifically, this includes data from sections of budget paragraphs Transport (section 22), Water Management (section 23), Education (section 31), Culture, Churches and Media (section 33), Sports and Recreational Activities (section 34), Housing, Community Services and Territorial Development (section 36) and Public

Administration (section 61). Furthermore, subsections of budget paragraphs and groups of budget paragraphs Social Affairs and Employment Policy (subsection 4) and State Security and Legal Protection (subsection 5) are considered.

All the data are calculated per capita; descriptive statistics for the selected variables are provided in Table 4 for the observed period. They represent all the data collected in the range of 25% around the threshold value of 10,000 inhabitants (7.5–12.5 thousand inhabitants).

Table 3: Descriptive statistics for the observed municipalities within the range of 25% around the threshold (in CZK per capita)

| | Below the threshold | | | | Above the threshold | | | | |
|------------------------------------|---------------------|----------|-----------|----------|---------------------|----------|-----------|----------|--|
| | Mean | Median | Min | Max | Mean | Median | Min | Max | |
| Current expenditures | 19,147.1 | 19,291.6 | 3,869.9 | 40,104.3 | 22,241.3 | 21,979.7 | 12,939.6 | 40,765.3 | |
| Cleaned Current expenditures | 15,216.2 | 15,965.2 | 2,494.3 | 33,615.8 | 21,177.2 | 21,461.4 | 7,207.0 | 39,781.9 | |
| Capital expenditures | 9,329.9 | 8,517.9 | 2,291.8 | 29,469.9 | 9,001.8 | 8,270.3 | 6,881.4 | 15,949.2 | |
| Total expenditures | 28,477.0 | 27,809.5 | 6,161.7 | 69,574.2 | 31,243.1 | 30,250.0 | 19,821.0 | 56,714.5 | |
| Total revenues | 30,518.3 | 29,330.7 | 19,123.4 | 62,113.1 | 32,113.8 | 31,243.3 | 20,724.2 | 51,603.6 | |
| Tax revenues | 18,716.8 | 18,433.9 | 14,442.8 | 25,569.6 | 19,531.0 | 18,620.7 | 15,295.1 | 39,691.2 | |
| Transfers | 6,847.4 | 6,113.1 | 1,241.1 | 38,859.7 | 6,953.3 | 6,566.5 | 1,363.3 | 14,043.5 | |
| Salaries | 4,191.6 | 4149.1 | 1,204.8 | 9,399.0 | 4,532.9 | 4,402.4 | 2,037.6 | 8,046.2 | |
| Budget balance | 469.1 | 836.5 | -16,483.7 | 8,438.6 | 1,487.2 | 2,009.7 | -15,588.2 | 10,046.8 | |

Source: MFCR (2024)

Descriptive statistics for data segmented by industry can be found in Tables 4 and 5 in the Appendix. According to Table 4, there is a visible increase in practically all values except for capital expenditures, when it comes to average and median values. However, focusing on maximum and minimum values, changes in both directions can be observed. Thus, there is a wider range among municipalities with over 10,000 inhabitants. From the descriptive statistics for the budget balance, it can be inferred that deficit budgets of municipalities will not be common, and municipalities are likely to primarily manage with a surplus or only with small deficits.

In the observed sample of municipalities, there is also no other change in terms of other rules affecting the budget, such as budgetary tax allocation.

For the calculation, the RDD method is used, which appears to be the most suitable for testing the influence of representatives' remuneration levels on budgetary variables. The method allows us to use population thresholds as exogenous determinants for the remuneration of representatives, while also making use of the fact that part of the sample reaches a higher remuneration and the other does not. Variables are generally randomly distributed above and below the threshold of 10,000 inhabitants and cannot decide arbitrarily to move to another remuneration category. The same method was also used by Gagliarducci and Nannicini (2009) and van der Linde *et al.* (2014) and, to a certain extent, by Feraz and Finan (2009).

The calculation method is based on the procedures described by Jacob *et al.* (2012) and in this paper, it can be determined by the formula:

$$y_{it} = \mu_i + \beta_1 z_{it} I(q_{it} \le \gamma) + \delta_1 I(q_{it} \le \gamma) + \beta_2 z_{it} I(q_{it} > \gamma) + \varepsilon_{it}$$

$$\tag{1}$$

where y_{ij} is the dependent variable expressed as annual expenditures or income per capita, x_{ij} is the explanatory variable representing the number of inhabitants, c is the cutoff at which the remuneration level changes, the index i represents the year, the index j represents the municipality and D is a dummy variable that takes on the values:

$$D = 0 \text{ when } x \ge c \tag{2}$$

$$D = 1 \text{ when } x < c \tag{3}$$

In the method, it is necessary to determine the observed bandwidth around the cutoff. Van der Linde *et al.* (2014) considered variants for bandwidths of 5%, 10%, 15%, 20% and 25% around the cutoff, and these bandwidths are also considered here. For example, a bandwidth of 10% means that municipalities within a range of 1,000 inhabitants around the cutoff are included. Additionally, a so-called robust nonparametric interval, according to the method of Calonico *et al.* (2014), was added beyond, which is designed for the RDD method. This method establishes the appropriate bandwidth depending on the dataset, so the bandwidth will vary for each variable and may differ for the right and left sides. However, in general, on the data used here, it ranges from 10-15%. Results in this interval will be denoted by the authors' initials as CCT (Calonico—Cattaneo—Titiunik).

Results

The tables below present the results of applying the RDD method. They are divided into three tables (6–8), the first representing general indicators and the others representing budget indicators by sector.

Table 6: Results of general variables

| Bandwidth | 5% | 10% | 15% | 20% | 25% | ССТ |
|------------------------------|-----------------------|----------------------|----------------------|-----------------------|-----------------------|-----------------------------------|
| n | 37 | 90 | 156 | 203 | 260 | |
| Cleaned Current expenditures | 11,878.7 | 13,442.3*** | 13,096.9*** | 11,714.7*** | 9,289.6*** | 13,724.8** |
| | (9,387.2) | (6,057.8) | (4,309.3) | (3,023.1) | (2,236.8) | (5,583.3) |
| Current | 12,918.1*** | 15,660.8*** | 14,689.6*** | 13,249.4*** | 11,223.8*** | 15,840.2 ^{**} ; |
| expenditures | (9,311.4) | (5,905.3) | (4,221.6) | (2,989.6) | (2,241.1) | (5,695.5) |
| Capital expenditures | -6,169.6 | -5,571.8* | -3,939.7* | -2,137.3** | -2,027.1** | 4,570.3* |
| | (4,843.9) | (2,913.5) | (2,409.9) | (2,009.7) | (1,754.1) | (2,589.7) |
| Total | 6,748.5 | 10,089.0* | 10,749.9*** | 11,112.0*** | 9,196.7*** | 10,993.9 ₁₁₃ (4,639.5) |
| expenditures | (8,508.6) | (5,260.5) | (3,932.4) | (2,986.8) | (2,416.1) | |
| Total revenues | 11,874 | 13,549.4** | 13,083.5*** | 11,917.2*** | 9,625.2*** | 13,735.7 ₁₀₁ ** |
| | (10,682.5) | (6,716.6) | (4,908.4) | (3,525.7) | (2,654.4) | (6,295.1) |
| Salaries | 1098.4 | 775.4 | 1,226.0** | 1,417.4*** | 1,595.3*** | 924.6 ₉₉ |
| | (1,368.6) | (813.2) | (624.0) | (519.7) | (451.3) | (780.1) |
| Tax revenues | 9,814.5 (11,385.1) | 8,215.8 (7,110.2) | 7,307.5 (4,936.2) | 5,728.8* (3,360.3) | 4,178.1* (2,380.4) | 7,924.2 ₁₂₂ (5,851.8) |

Notes: *, ** and *** represent significance levels of 10%, 5% and 1%, respectively. The other variables were not statistically significant; the values in parentheses represent the standard error. In the CCT column, the subscript values represent the number of observations according to this method.

Source: Author's own calculations

The data in Table 6 describe the results according to the method used and are divided into bandwidths. In the CCT column, the number of variables monitored and determined by the method of Calonico *et al.* (2014) is indicated in parentheses. This method determines the optimal bandwidth for each variable separately, so the values in parentheses show the number of observations included in the bandwidth. Generally, the 5% bandwidth was not statistically significant except in one case. The 20% and 25% bandwidths appear to be the most suitable for the calculation. The results show the annual difference between remuneration levels adjusted per capita.

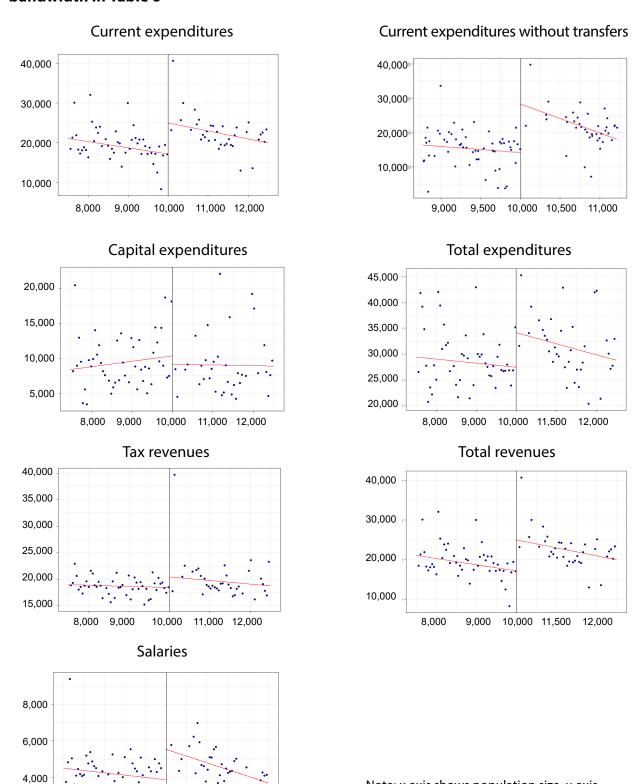
2,000

8,000

9,000

10,000

Figure 2: Graphical representation of statistically significant results for the 25% bandwidth in Table 6



Note: *x*-axis shows population size, *y*-axis shows variable per capita.

Source: Author's own elaboration

11,000 12,000

The data in Table 6 above show that the impact of remuneration increases on budgetary behaviour is clear in the majority of the variables observed here. It was statistically insignificant in any bandwidth only for two variables: municipality budget balance and transfers. Therefore, they are not displayed in the table.

Current expenditures show a difference of 11,223.8 to 15,840.2 CZK per capita per year depending on the bandwidth, indicating that higher salaries lead to higher current expenditures. This is in direct contrast to the Italian results of Gagliarducci and Nannicini (2009). If current expenditures are adjusted by transfers, the increases range between 9,289.6 and 13,724.8 CZK per capita depending on the bandwidth, which is still a significant difference. However, it should be noted that the increase is significantly greater than the difference in means in the descriptive statistics between values below and above the cutoff. This is due to the higher concentration of outlier values at the cutoff. This is evident from the graphical representation as well.

Capital expenditures decrease, contradicting the results of van der Linde *et al.* (2014), who reported an increase. The decrease ranges from -2~027.1 to -6~69.6 CZK, or -5~571.8 CZK if only statistically relevant values are considered.

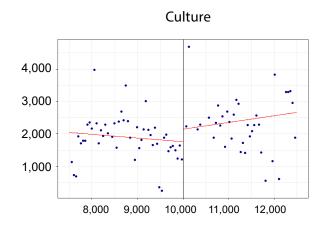
Table 7: Relevant statistically significant results of total expenditures by sector

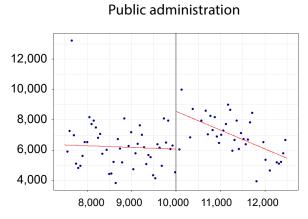
| Bandwidths | 5% | 5% 10% | | 20% | 25% | сст | |
|--------------------------|-----------------------|----------------------|------------------------|-------------------------|-------------------------|-------------------------------------|--|
| n | 37 | 90 | 156 | 203 | 260 | | |
| Culture | 2,160.2* (1,314.5) | 1,715.5** (858.6) | 1,502.2** (620.1) | 1,357.6*** (446.4) | 1,015.2*** (363.0) | 1,702.1 ₉₄ ** (850.4) | |
| Public administration | 2,002.9 (2,231.2) | 1,666.8 (1,398.6) | 1,864.9* (1,014.6) | 1,889.7** (749.3) | 2,202.3*** (587.7) | 1,781.9 ₉₉ (1,333.4) | |
| Housing policy | -3,961.5 (6,250.3) | 3,605.3 (3,459.2) | 5,301.0** (2,657.8) | 6,786.9*** (1,975.5) | 5,074.9*** (1,527.1) | 4,683.3 ₁₂₈ (2,926.7) | |

Notes: *, ** and *** represent significance levels of 10%, 5% and 1%, respectively. The other variables were not statistically significant; the values in parentheses represent the standard error. In the CCT column, the subscript values represent the number of observations according to this method.

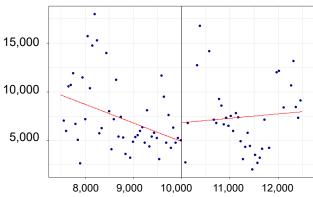
Source: Author's own calculations

Figure 3: Graphical representation of statistically significant results for the 25% bandwidth in Table 7





Housing policy



Note: x-axis shows population size, y-axis shows variable per capita.

Source: Author's own elaboration

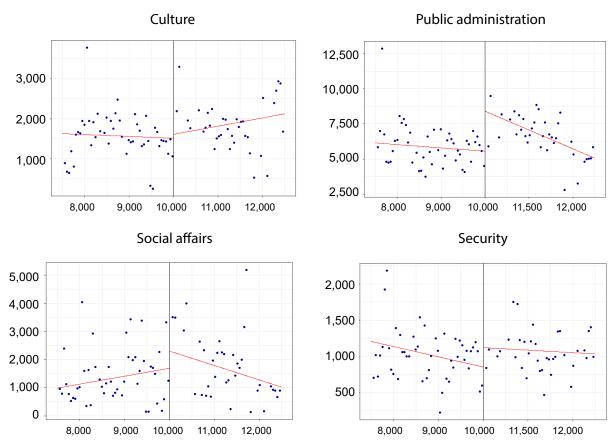
Table 8: Relevant results of current expenditures by sector

| Bandwidths | 5% | 10% | 15% | 20% | 25% | ССТ |
|----------------|-----------|------------|------------|------------|------------|----------------------------|
| n | 37 | 90 | 156 | 203 | 260 | |
| Culture | 1,660.6** | 1,284.6*** | 1,227.9*** | 1,033.6*** | 730.3*** | 1,265.8*** |
| | (664.8) | (439.3) | (332.3) | (259.6) | (221.5) | (379.3) |
| Public | 2,134.9 | 1,786.7 | 1,965.0*** | 2,037.3*** | 2,420.7*** | 1,851.796 |
| administration | (1,999.6) | (1,253.3) | (906.2) | (668.3) | (526.3) | (1,222.9) |
| Social affairs | 1,579.7* | 2,446.1*** | 1,518.7*** | 811.6* | 652.2 | 1,613.0 ₁₄₇ *** |
| | (880.0) | (610.0) | (526.0) | (475.3) | (420.3) | (1,612.9) |
| Security | 257 | 95.6 | 279.0** | 360.5*** | 351.8*** | 171.5106 |
| | (211.8) | (138.2) | (127.8) | (129.3) | (125.7) | (134.3) |

Notes: *, ** and *** represent significance levels of 10%, 5% and 1%, respectively. The other variables were not statistically significant; the values in parentheses represent the standard error. In the CCT column, the subscript values represent the number of observations according to this method.

Source: Author's own calculations

Figure 5: Graphical representation of statistically significant results for the 25% bandwidth in Table 8



Note: x-axis shows population size, y-axis shows variable per capita.

Source: Author's own elaboration

Tables 7 and 8 along with Figures 3 and 4 once again demonstrate that the 20% and 25% bandwidths prove to be statistically the most suitable. It is evident from the results that representatives with higher remunerations tend to allocate expenditures more towards culture, where expenditures are reflected in both total and current expenditures.

Expenditures directed towards municipal administration areas are also a surprising finding. Logically, it could be assumed that better-paid representatives would have lower tendencies to employ additional personnel in the municipality, but the opposite is true, which again highlights the results of previous research.

Areas such as transportation, water management, education, sports, social policy and security were found to be statistically insignificant within total expenditures. Within current expenditures, statistical significance was not proven for transportation, education, sports and housing. Overall, it can be concluded that there are not too significant differences in behaviour across expenditure areas except for culture and public administration.

Moreover, for current expenditures in the security area, the values only range in the lower hundreds per capita, which cannot be considered a significant difference that would have relevant significance for municipalities.

6. Discussion

The topic of the influence of politicians' remunerations has been successfully expanded to the context of Czech municipalities. Following the procedures of previous studies, it has been demonstrated that an increase in remuneration leads to discernible changes in the budgetary behaviour of representatives. However, it must be noted that previous authors often reached opposite conclusions, which can be explained primarily by various factors and local specifics.

In the case of Italy, Gagliarducci and Nannicini (2009) worked with municipalities that adhere more to a presidential model of governance, whereas the Czech model is of a party type, similar to that in the Netherlands, where van der Linde *et al.* (2014) conducted their research. In Italy, an increase in remunerations led to a reduction in the budget, whereas in the Netherlands, it led to an increase. However, both were interpreted as improvements, with the increase in the Netherlands primarily through investments. This cannot be said about the Czech environment, where there is an increase in total expenditures, primarily through higher current expenditures, while investments are actually lower. In this regard, the Czech results deviate from foreign findings, which speak of higher efficiency, which cannot be unequivocally stated in the Czech Republic. This is well illustrated by the growth in expenditures (both current and total) directed towards public administration.

However, it must be noted that the quality of a politician is not necessarily evaluated based on the structure of expenditures but primarily according to generally accepted theories, based on whether their behaviour aligns with the demand of voters. From this perspective, any result can potentially be evaluated as socially beneficial. Specifically, it can be said that better-paid politicians, rather than favouring significant changes, evidently prioritize functioning mechanisms in municipal administration, which ensure the constant and smooth operation of the municipality and provide residents with seamless contact with public administration and the utilization of public services. Better-paid representatives therefore evidently focus more on ensuring the smooth functioning of the municipality in areas that they consider appropriate, and they are less inclined towards seeking investments.

The Czech Republic generally has a high level of solidarity and provision of public services (such as public education and healthcare predominantly without co-payment), thus emphasizing functional current expenditures that ensure the operation of public services. This may also come from voters, who may want greater certainty of functioning services rather than significant changes through investments.

On the other hand, there is another factor mentioned by van der Linde *et al.* (2014), which is citizens' trust in politicians. Generally, this trust in the Czech Republic, as well as in Italy, is lower compared to the rest of Europe (Data Europa, 2024); conversely, politicians are more trustworthy in Western European countries. Citizens' trust and expectations can shape, to a large extent, politicians' behaviour regarding budgetary responsibility, investments in municipal development, but also local taxation.

If we look at the influence by sector, the greatest influence was demonstrated in culture and public administration. In the field of culture, it can be expected to play a significant role in the question of re-election. It influences the mood and overall life satisfaction of voters, and cultural events and expenditures are highly visible even with relatively little funding.

Housing policy has been among the main societal issues in the Czech Republic for several years. From the results, it is evident that municipalities primarily address this issue through their own budgets, allowing them to respond to voter demand and reflect on publicly debated topics.

Overall, it can be said that the influence of increasing politicians' remunerations is significant based on the calculations performed, and the results differ significantly from those previously published abroad. It is therefore apparent that universal conclusions regarding budgetary behaviour cannot be drawn from the increase in remunerations of local politicians, which can be applied in every European country. On the contrary, everything needs to be interpreted in a national context and local conditions.

7. Conclusion

Local representatives' remunerations remain a relatively underexplored topic; this paper expanded it with another empirical perspective. The paper builds loosely on previous findings from Italy and the Netherlands. In the Czech Republic, remunerations are also determined exogenously based on the population of the municipality, or they are divided into bands. This allows the appropriate use of the RDD method to determine the relationship between remunerations and observed variables, which in this case were items in municipal budgets.

The findings on a sample of Czech municipalities are consistent with previous studies in the fact that remunerations matter in several aspects, and quite significantly so. However, they differ in specific impacts. Gagliarducci and Nannicini (2013) concluded that an increase in remuneration leads to a reduction in the budget, while van der Linde *et al.* (2014) found an increase, primarily through investments. In Czech municipalities, there is an increase in current expenditures and a decrease in investments, which is a completely different result. While the authors consider changes in Italian and Dutch municipalities positive, the same cannot be unequivocally said about Czech municipalities. This paper also analysed the impacts on various budget areas, revealing a significant increase in current expenditures, including those directed towards municipal administration. This could be explained by different demands from the median voter, who may prefer stable and adequately provided municipal services over municipal development through investments. Generally, the level of services provided by public administration in the Czech Republic is very high.

Moreover, it is necessary to note that systems of municipal governance are different across countries, and local voter preferences and trust in politics can also have an effect, as noted by van der Linde *et al.* (2014). Therefore, applying findings from one country to another is very limited, and the topic needs to be approached highly individually and from a broader perspective. However, this is the task for further study of the relationship between representatives' remunerations, their work and other motivators that come into play in the whole topic.

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Appendix

Table 4: Descriptive statistics for total expenditures in the observed municipalities by sector

| | | Below the threshold | | | | Above the threshold | | | | |
|-----------------------|---------|---------------------|---------|----------|---------|---------------------|---------|----------|--|--|
| | Mean | Median | Minimum | Maximum | Mean | Median | Minimum | Maximum | | |
| Transportation | 2,329.2 | 1,651.0 | 32.0 | 11,726.1 | 1,994.8 | 1,602.3 | 7.0 | 11,095.2 | | |
| Water management | 1,333.8 | 630.5 | 0 | 15,014.8 | 2,187.6 | 1,032.2 | 0 | 14,683.1 | | |
| Education | 4,290.3 | 3,151.3 | 1,291.9 | 34,426.5 | 3,391.4 | 2,970.6 | 1,422.1 | 12,797.3 | | |
| Culture | 1,907.4 | 1,730.9 | 224.1 | 5,663.4 | 2,430.0 | 2,113.3 | 557.1 | 7,851.8 | | |
| Sport | 1,972.6 | 1,390.6 | 120.6 | 12,264.3 | 2,798.3 | 2,063.6 | 154.8 | 25,353.6 | | |
| Housing policy | 7,357.0 | 6,048.3 | 1,144.0 | 37,901.6 | 7,448.4 | 6,808.0 | 1,289.5 | 22,949.3 | | |
| Public administration | 6,218.9 | 6,099.1 | 2,693.0 | 13,233.1 | 6,882.5 | 6,912.8 | 3,446.4 | 11,252.4 | | |
| Social policy | 1,716.7 | 1,059.3 | 27.3 | 8,256.4 | 1,936.1 | 1,204.3 | 124.3 | 8,039.4 | | |
| Security | 1,260.1 | 1,150.3 | 136.2 | 4,898.5 | 1,286.6 | 1,260.4 | 59.4 | 2,971.9 | | |

Source: MFCR (2024)

Table 5: Descriptive statistics for current expenditures in the observed municipalities by sector

| | | Below the threshold | | | | Above the threshold | | | |
|-----------------------|---------|---------------------|---------|----------|---------|---------------------|---------|----------|--|
| | Mean | Median | Minimum | Maximum | Mean | Median | Minimum | Maximum | |
| Transportation | 1,257.3 | 1,098.1 | 114.2 | 5,105.7 | 1,307.5 | 1,078.1 | 8.3 | 4,991.7 | |
| Water management | 244.4 | 91.7 | 0 | 2,529.0 | 444.1 | 72.5 | 0 | 4,332.5 | |
| Education | 2,289.9 | 2,210.3 | 1,220.4 | 4,584.3 | 2,153.2 | 2,107.8 | 1,209.1 | 3,680.2 | |
| Culture | 1,568.0 | 1,557.3 | 168.7 | 4,008.1 | 1,885.6 | 1,707.5 | 523.8 | 7,829.5 | |
| Sport | 964.0 | 813.6 | 66.8 | 3,146.5 | 1,330.3 | 1,296.4 | 135.0 | 3,210.1 | |
| Housing policy | 2,535.2 | 2,205.0 | 566.5 | 8,666.9 | 2,324.3 | 2,033.0 | 465.8 | 7,511.1 | |
| Public administration | 5,858.7 | 5,831.9 | 2,647.1 | 12,851.6 | 6,583.6 | 6,560.7 | 2,797.4 | 11,064.4 | |
| Social policy | 1,326.7 | 814.7 | 5.8 | 5,943.8 | 1,604.5 | 1,126.8 | 124.3 | 5,190.9 | |
| Security | 1,035.4 | 990.9 | 112.0 | 3,784.6 | 1,073.8 | 1,097.4 | 52.7 | 2,717.7 | |

Source: MFCR (2024)

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