

Is There Thematic Concentration of Public Finance in Czech Regions?

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Abstract

The goal of this paper is to analyze the thematic decomposition of public revenues and expenditures, considering the regional dimension. The Czech regions and also their categorization according to their economic performance are the subject of analysis for the year 2015. The findings of this paper point out some relations between the categorization of regions on the basis of their economic performance on one hand and thematic concentration of public finance on the other. However, there is also some evidence against this thesis; therefore the relationship between the amount of public revenues and expenditures and the categorization of regions cannot be regarded as unambiguous.

Keywords: public finance, thematic focus, lagging regions, the Czech Republic

1. Introduction

Public finance is understood as a crucial element of regional economy not only in the Czech Republic. It is desirable to efficiently concentrate public finance on the most important problems of regional economies. The issue of public finance and regional budgeting is of a complex nature. Therefore, this paper is focused on one aspect of the issue, trying to reveal the pattern of public finance management according to its thematic concentration. Following this idea, the goal of this paper is to analyze the thematic decomposition of public revenues and expenditures, considering the regional dimension. The Czech regions and the year 2015 are the subject of the further analysis. Moreover, the paper takes economic performance of Czech regions into account. Finally, the intent of the paper is to contribute to the research on public finance management in Czech regions. The structure of the paper is as follows. The first part introduces the theoretical framework. The second part presents the applied methodology. The third part provides empirical results of our analysis and the last part concludes.

2. Theoretical framework

This section introduces the theoretical framework of public finance and budgeting, relevant for this paper. In this regard, several important theoretical concepts are connected with public sector administration and public finance (see, e.g., Bogason & Toonen 1998 for the discussion). One of these concepts is also new public management (see, e.g., Dan & Pollitt 2015). Essig & Batran (2005) introduce the characteristics of this concept which include constitution of new management structures, the emphasis on key competencies of public workers, new ways of quality measuring and efficiency evaluating, cooperation between particular public and private actors, and wide application of modern ICT technologies. Generally, public sector administration faces several challenges, resulting from the requirements of modern society. Thus, we can speak about the concept of smart administration (see, e.g., Ochraha & Půček 2011), about the shift of public sector administration perception into the position of public service (Denhardt & Denhardt 2000) and about the perception of a citizen as a client of public sector (see, e.g., Svensson, Trommel & Lantink 2008).

The above mentioned challenges are present also on the regional level of public sector administration. Regarding this idea, Czech regions use public finance and the tools of public budgeting to fulfil the requirements of modern society (see, e.g., Provazníková 2009). In this regard, public finance is an important source to satisfy the needs of society when it cannot be achieved by private sector. However, the amount of public finance on the regional level is limited. Keeping this in mind, there is an important issue of efficiency of public finance management, in accord with the performance budgeting concept (see, e.g., Jordan & Hackbart 1999). Wang (2000) introduces the idea of the evaluation of regional government budgeting, emphasizing especially the issues of performance and efficiency. Concerning this paper, the idea about thematic and regional concentration of limited public finance in the Czech Republic is crucial.

In the Czech Republic, regional budgeting and regional public finance management are closely related to national tax policy and are legally treated especially by the Act on the Budgetary Determination of Taxes (see, e.g., Slováková 2013). Thus, a significant part of regional budgets is saturated by taxes (see, e.g., Peková 2008). The expenditure side of regional public budgets consists of the expenditures on public goods and services (see, e.g., Wokoun et al. 2011). These expenditures are designed by regional public governments and should be allocated according to the particular needs of regions (see, e.g., Wokoun et al. 2011; Peková 2008). The most common decomposition of the both sides of regional public budgets – revenues and expenditures – is as follows (see, e.g., Wokoun et al. 2011; Peková et al. 2008; Nekolová 2014). Regional public revenues include:

- tax revenues, connected with tax determination according to legislation,
- non-tax revenues,
- capital revenues, usually connected with public asset sales,
- received transfers, traditionally from national budgets and funds;

Regional public expenditures include:

- current expenditures, usually connected with financing of provision of public goods and services and with common mandatory expenditures,
- capital expenditures, usually connected with investments.

3. Methods

The goal of this paper was designed, following the methodological framework introduced in the previous section. The goal of this paper is to analyze the thematic decomposition of public revenues and expenditures, considering the regional dimension and using Czech regions and the year 2015 for further analysis⁵. Moreover, the thematic decomposition of public finance is also confronted with type of regions according to their socioeconomic performance. This approach clarifies the question on the accord between the thematic concentration of public finance and the needs of specific types of regions. Note that socioeconomic performance of regions may be defined politically or through relevant indicators of socioeconomic performance. The growth poles are then understood as the regions with high economic performance measured by their regional GDP and by their urbanization rate. The proxy indicator of urbanization rate is population density.

Reflecting the above mentioned considerations, the hypotheses about thematic concentration of public finance, the amount of public finance and types of regions are formulated in table 1. The thematic concentration of public finance is supposed to respect the needs of the both types of regions – lagging regions and growth poles. Hence, more public finance is supposed to be earmarked for basic infrastructure, for social services, for management of environmental burdens and for agriculture in lagging regions. On the other hand, public finance in growth poles is expected to be more concentrated on progressive industries, such as education and science, and industry, mainly high-tech industry and ICT technologies. Additionally, the total amount of public revenues is supposed to be relatively low in lagging regions while public expenditures relatively high. On the contrary, high public expenditures or public revenues are assumed to be typical for growth poles.

Table 2 illustrates the inclusion of particular regions either between lagging regions or between growth poles. In this regard, the first group of regions includes the regions with low value of GDP per capita and simultaneously with a negative population change. Moreover some of these regions are mentioned also by the Czech regional policy as lagging regions. On the contrary, the second group is characterized by high GDP per capita values and by positive and high population changes. The breakdown of the regions into two groups is the initial step for further evaluation of public finance management on the regional level.

Table 1: Hypotheses regarding regional public finance – thematic concentration and types of regions

| Type of regions | Thematic concentration | Public finance |
|-----------------|--|---|
| Lagging regions | Basic infrastructure Social service Environment Agriculture | Low public revenues and high public expenditures |
| Growth poles | Education and science Industry | High public revenues and high public expenditures |

Source: own elaboration

⁵ The time period was chosen to smooth the influence of public finance received from EU Structural Funds when closing the programming period 2007-2013.

Table 2: Hypotheses regarding regional public finance – thematic concentration and types of regions

| Type of regions | Regions |
|-----------------|---|
| Lagging regions | Moravia-Silesia region (MSK) Ústecký region (ÚSK) Karlovarský region (KVK) Highland region (VYS) |
| Growth poles | Prague (PHA) Central Bohemia (SCK) South Moravia (JMK) Plzeňský region (PLK) |

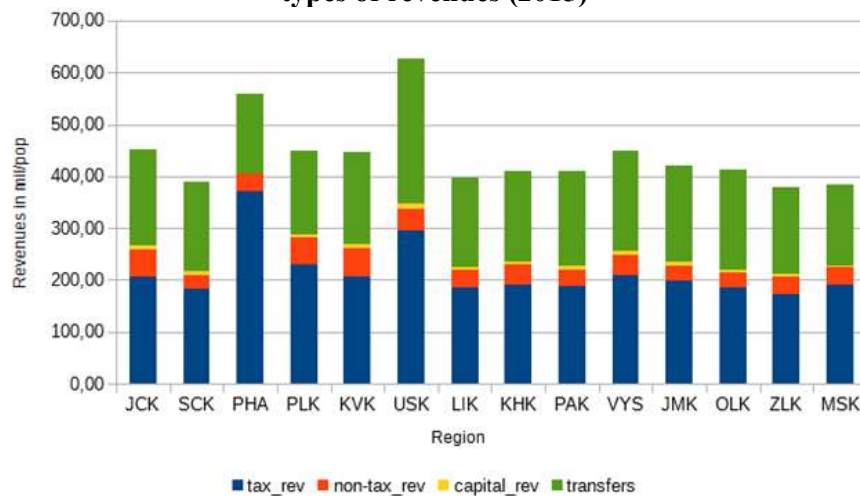
Source: own elaboration

Note that the source of information was Czech Statistical Office and that the data about public revenues and public expenditures of the Czech regions were standardized either by total population of the region and either by regional GDP. This approach was chosen to ensure a comparability of particular regions.

4. Results and discussion

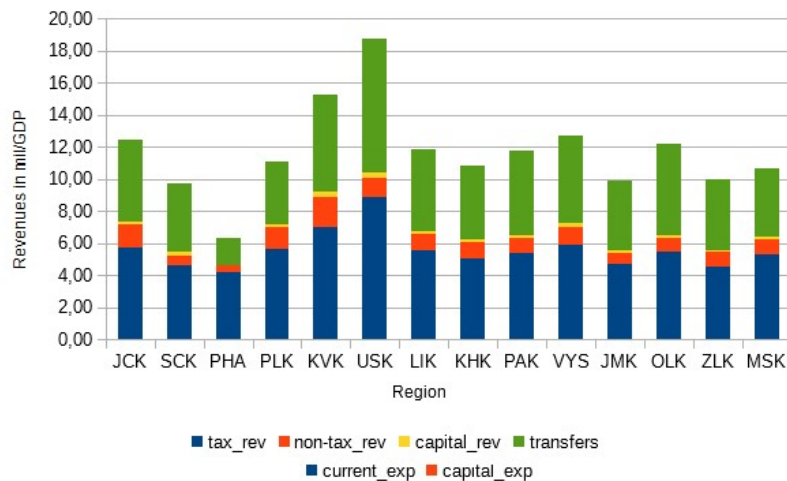
This part of the paper introduces the main empirical research results. Figures 1 and 2 provide information about revenues of regional public budgets. In this regard, revenues were standardized either by the total population of particular regions (Figure 1) or by regional GDP (Figure 2). The results are decomposed on the basis of four categories of revenues – tax revenues, non-tax revenues, capital revenues, and received transfers.

Figure 1: Revenues of Czech regions – standardized per population of regions; types of revenues (2015)



Source: own elaboration based on the data from the Czech Statistical Office

Figure 2: Revenues of Czech regions – standardized per regional GDP; types of revenues (2015)



Source: own elaboration based on the data from the Czech Statistical Office

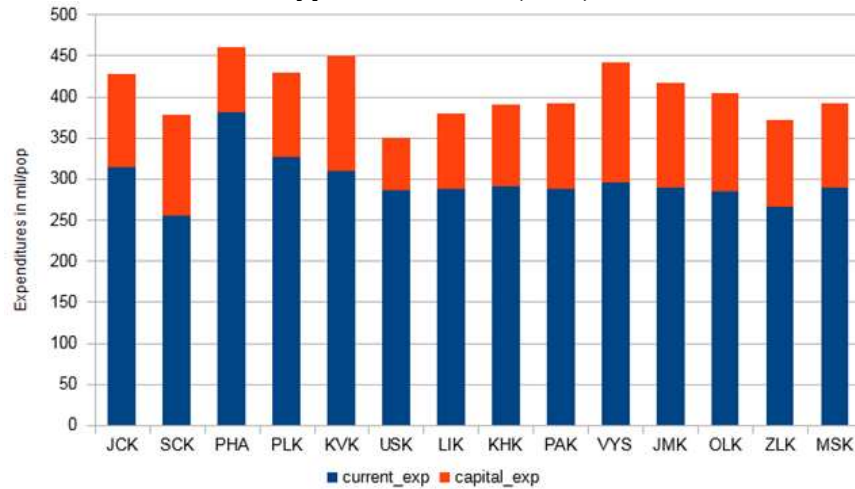
Figure 1 shows that the Ústecký region, the capital city of Prague, the South Bohemia region and the Highland region have the highest values of public revenues in total, standardized by their total population. On the contrary, the Zlínský region, the Moravia-Silesia region and the Central Bohemia region are at the end of ranking. Concerning the decomposition of regional revenues into the defined categories, the highest tax revenues can be observed for the capital city of Prague and for the Ústecký region. The amount of received transfers is also of interest when the Ústecký region, the South-Bohemia region, the Central-Bohemia region and the Highland region are at the top of ranking. The lowest values of this part of public revenues can be observed for the Plzeňský region and for the Zlínský region.

The situation significantly differs, regarding the standardization on the basis of regional GDP. The Ústecký region again indicates the highest total public revenues and there are relatively high but also in the Karlovarský region, in the South Bohemia region and in the Highland region. On the contrary, the lowest public revenues are observed in the capital city of Prague, in the Central Bohemia region and in the South Moravia region. The evaluation of regional public revenues according to the defined revenue types provides similar findings.

Figures 3 and 4 show public expenditures of Czech regions, standardized again either by total regional population or by regional GDP. Figure 3 depicts the first situation. In this respect, the highest public expenditures are spent in the capital city of Prague, in the Karlovarský region and in the Highland region. On the contrary, the lowest public expenditures are distributed in the Ústecký region, in the Zlínský region, in the Liberecký region and in the Central Bohemia region. The situation is similar, when considering the different expenditure types, i.e. current expenditures and capital expenditures.

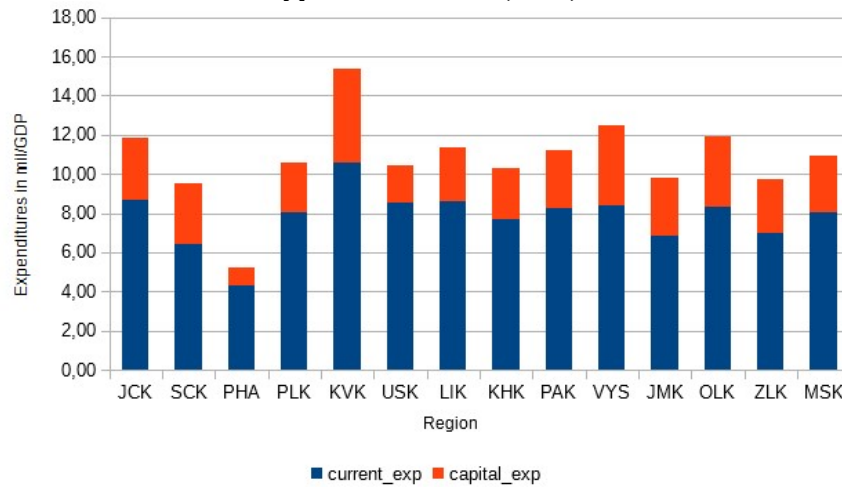
Figure 4 provides the comparison of regions based on their public expenditures standardized by GDP. In this case, the highest expenditures are typical for the Karlovarský region, for the Highland region and for the Olomoucký region. The opposite is true for the capital city of Prague, for the Zlínský region and for the South Moravia region. Concerning the values of current expenditures and the values of capital expenditures, the ranking of Czech regions is similar in the both evaluations, based on regional population and based on regional GDP.

Figure 3: Public expenditures of Czech regions - standardized per population of regions; types of revenues (2015)



Source: own elaboration based on the data from the Czech Statistical Office

Figure 4: Public expenditures of Czech regions - standardized per regional GDP; types of revenues (2015)



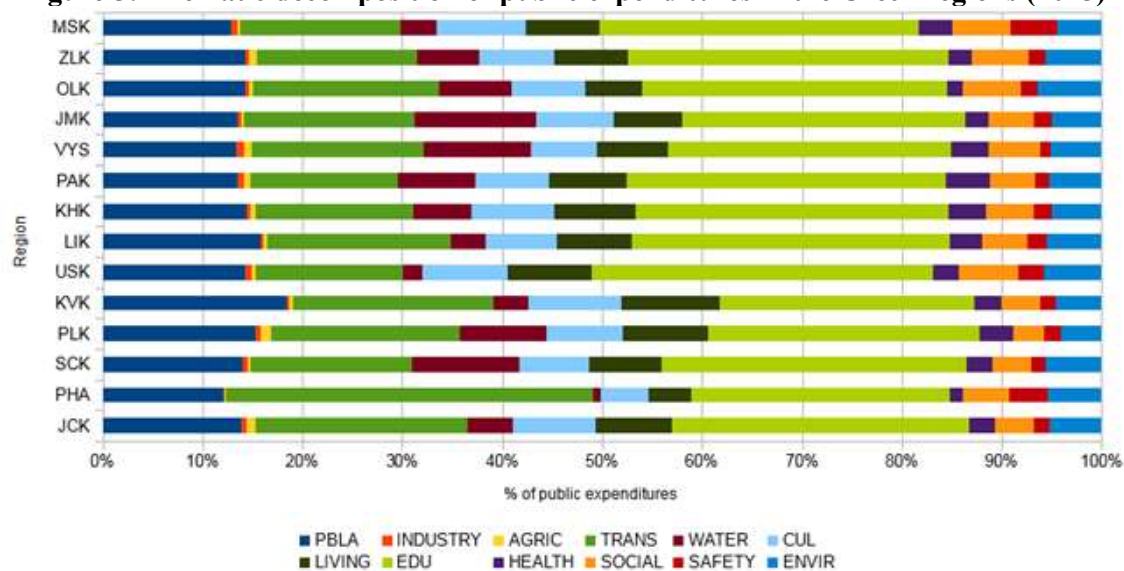
Source: own elaboration based on the data from the Czech Statistical Office

Finally, figure 5 introduces thematic decomposition of public expenditures in Czech regions, providing findings as follows:

- The Karlovarský region indicates a rather high share of expenditures spent for public administration, comparing the shares of all the regions.
- The Ústecký region and the Moravia-Silesia region have the highest share of expenditures spent in industry, comparing the shares of all the regions.
- The Highland region, the South Bohemia region, the Plzeňský region and the Zlínský regions have the highest share of expenditures spent in agriculture, comparing the shares of all the regions.
- The capital city of Prague has highest share of expenditures spent in transportation, comparing the shares of all the regions. The opposite is true for the Ústecký region.

- The capital city of Prague and the Ústecký region indicate a rather low share of public expenditures spent in water management, comparing the shares of all the regions.
- The Ústecký region, Moravia-Silesia region and the capital city of Prague have the highest share of public expenditures spent in safety, comparing the shares of all the regions.
- The Ústecký region, the Olomoucký region and the Central Bohemia region have the highest share of public expenditures spent in environmental management, comparing the shares of all the regions.

Figure 5: Thematic decomposition of public expenditures in the Czech regions (2015)



Source: own elaboration based on the data from the Czech Statistical Office

5. Conclusion

The main conclusions of the paper are summarized here. However, remind firstly that the goal of this paper was to analyze the thematic decomposition of public revenues and expenditures, considering the regional dimension and that Czech regions and the year 2015 were the subject of analysis.

The hypothesis concerning the amount of public revenues seems to be confirmed in the case of the Moravia-Silesia region (low), and the capital city of Prague and the Plzeňský region (high) when this amount was standardized by total regional population. Nevertheless, the hypothesis was not confirmed for the regional GDP standardization.

The hypothesis concerning the amount of public expenditures seems to be confirmed in the case of the growth pole regions (high), and also in the case of the Karlovarský region and of the Highlands region (high). This thesis holds when public expenditures are standardized by total regional population but the situation differs in the case of the regional GDP standardization when the capital city of Prague and also the Plzeňský region have relatively low public expenditures. On the contrary, lagging regions indicate relatively high public expenditures.

The thematic decomposition of public expenditures confirms the hypothesis about the thematic concentration of public finance in particular types of regions with some exceptions. The following findings are especially noteworthy:

- The regions dealing with the structural change in their economy (e.g., the Moravia-Silesia region and the Ústecký region) have relatively high expenditures spent in environmental management and in industry which is important part of regional economy.
- The Moravia-Silesia region, the Ústecký region and the capital city of Prague have relatively high shares of public expenditures spent in safety. This is closely related to crime characteristics of these regions.
- The public expenditure spent in education, social sector and healthcare are comparable across all the regions. No thematic concentration of public finance is, therefore, observed in these cases.
- The prominent role and importance of public sector is revealed in lagging regions. Hence, lagging regions have relatively high public expenditures spent in public administration.

The above mentioned findings point out some relations between the categorization of regions on the basis of their economic performance on one hand and thematic concentration of public finance on the other. However, there is also some evidence against this thesis; therefore the relationship between the amount of public revenues and expenditures and the categorization of regions cannot be regarded as unambiguous.

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