

# Brief Report on Public Spending on Inland and Maritime Waterways in Particular Country in Certain Period of Time

## *Kratko izvješće o javnom trošenju u unutarnjim i morskim vodenim putevima u pojedinoj državi u određenom vremenskom razdoblju*

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### Summary

This paper is focused on the public financing of inland and maritime waterways in the Czech Republic. Text clarifies which public budgets are the most important for inland and maritime waterways. It also concentrates on regions where Czech public expenditures are located. The paper describes the importance of municipal and regional budgets in this sector.

### KEY WORDS

Public sector, Government spending, Regional spending, Municipal spending, Inland and maritime waterways

### Sažetak

Članak se koncentrira na javno financiranje kopnenih i vodenih plovni putova u Češkoj Republici. Tekst objašnjava koji javni budžeti su najvažniji za kopnene i morske vodene puteve. Također se usredotočuje na područja gdje je smještena javna potrošnja. Članak opisuje važnost gradskih i regionalnih budžeta u ovom sektoru.

### KLJUČNE RIJEČI

Javni sektor, vladina potrošnja, regionalna potrošnja, gradska potrošnja, kopneni i morski plovni putevi

## 1. INTRODUCTION

The paper is focused on the financing of inland and maritime waterways in the Czech Republic in last five years (from year 2010 to year 2014). The author examines public spending on waterways (central government spending, regional spending, municipal spending and Prague as a special case of spending). Attention is also paid to the geographical location of public spending and budget levels of public spending.

All is based on theoretical review. Paper includes chapters focused on public sector in the Czech Republic, system of public budgets in the Czech Republic, efficiency, effectiveness and efficacy of public spending and inland and maritime waterways in the Czech public budgets.

## 2. REVIEW

### 2.1. Public sector in the Czech Republic

The public sector is one part of the whole economy. It is providing public services. "The issue of the public sector is explored by a variety of disciplines. One of them is the theory of public sector financing. Its peculiarity is that it analyzes the flows of finances in the public sector, the issue of financing of public goods and public services and examining various economic aspects of the functioning of public institutions" [1].

According to Classification of the Functions of Government (hereinafter COFOG), government has numerous functions [2]:

- General public services.
- Defense.

- Public order and safety.
- Economic affairs.
- Environmental protection.
- Housing and community infrastructure.
- Health.
- Recreation, culture and religion.
- Education.
- Social Affairs.

### 2.2. System of public budgets in the Czech Republic

System of public budgets has several partial budgets [3]:

- Transnational budget – in the case of the Czech Republic, it means the EU budget.
- The budget of central government – in the case of the Czech Republic, it means the central government budget.
- Budgets of local governments – in the case of the Czech Republic, it means regional and municipal budgets.
- Budgets of parafiscal funds<sup>1</sup> – in the case of the Czech Republic, it means State Environmental Fund and budgets of other parafiscal funds.
- Budgets of public enterprises – in the case of the Czech Republic, it means budgets of health insurance and others.

This paper will follow slightly different groups of public spending. It will be the budget of the central government

<sup>1</sup> A parafiscal fund is part of the system of public budgets. It is mostly special-purpose fund. Its incomes are mandatory fees and taxes, its expenditures are strictly prescribed by law and it is managed by a public institution.

(government spending) represented by Ministry of Transport in the first group. The second group will be represented by local governments in regional level (regional spending) represented by 13 regions. There is a list of regions in appendix 3. The third group will be represented by local government in municipal level (municipal spending) represented by 12 regional capitals. There is a list of regional capitals in appendix 3. And finally other budgets (special cases of spending) in this case represented by Prague, which is region and municipality simultaneously.

The reason for this change is that these four new groups are consistent, internally homogeneous and sufficiently externally heterogeneous.

### 2.3. Efficiency, effectiveness and efficacy of public spending

Next step of this research will be definition and calculation of efficiency, effectiveness and efficacy of Czech public spending. "In economics in general is referred about the effectiveness as "economic efficiency". This is a situation where resources are deployed in particular economic system in an optimal manner" [3], [4].

According Vochozka [5] optimal resource allocation means:

1. Maximal output.
2. Minimal input for defined output.
3. Fulfillment of the conditions of existence.

Unfortunately for these calculations, there is not enough data available. In current state of knowledge, it is not possible to evaluate outputs, measure maximal output or compare real output with defined plan. It means there is real need for other researches and much more data in this research area.

### 2.4. Inland and maritime waterways in Czech public budgets

If we want to look at public expenditures (public spending) on inland and maritime waterways we need to use budget breakdown by branch [6]. Then it is necessary to find and follow these items:

- 2 – Industrial and other sectors of the economy.
- 22 – Transport.
- 223 – Inland and maritime waterways.

The item Inland and maritime waterways – 223 is exactly that one, we need to follow and analyze. It is divided more detailed:

- 2231 – Waterways.
- 2232 – Operation of inland waterways.
- 2239 – Other matters of inland waterways.

## 3. METHODS

The main source of information is the public budget database, which is published in information portal of Ministry of Finance [10]. Unfortunately, all items are published in current prices. It means they are not comparable in different time periods. For this reason, all values are recalculated to constant prices of 2014. It was used the official inflation values from Czech Statistical Office website [2]. Real values of inflation, inflation index y/y and base inflation index are shown in appendix 1. The values are sometimes recalculated to values per capita for better comparison of dissimilar units.

The year 2015 is not part of analysis for two reasons:

- Budgets are published for 3 quarters only. Season from October 2015 to December 2015 is not available at the time of writing.
- Czech Statistical Office did not show inflation of 2015, so it is not possible to recalculate known part of budgets at constant prices.

For potential international comparison, some values are converted to Euros (EUR) and American dollar (USD). Official exchange rate is in appendix 2 and its data source is Czech National Bank [11].

## 4. RESULTS

### 4.1. Selected public budgets

This paper will follow four groups of public spending as mentioned above:

1. Government spending – 1 central budget.
2. Regional spending – 13 regional budgets.
3. Municipal spending – 12 budgets of regional capitals.
4. Special cases of spending – 1 budget of the Capital city Prague.

Firstly, there is analyzed total public spending from 2010 to 2014 and then it is analyzed public spending per capita. The highest amounts are analyzed in detail.

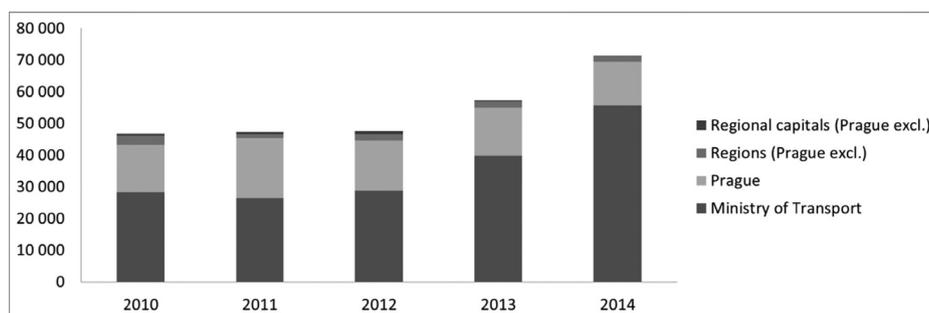
Table 1 shows public spending on inland and maritime waterways from 2010 to 2015. Total public spending was CZK 270.2 mil. (EUR 9.8 mil.; USD 13.0 mil.).

There are two basic information in the table. Firstly, most public funding comes from the central level. Central government (Ministry of Transport) spent CZK 179.1 mil. (EUR 6.5 mil.; USD 8.6 mil.). Secondly, public spending was relatively stable until 2012. Then it started to grow rapidly. The growth rate is more than 20% every year. The reason is the growth of central spending (Ministry of Transport). Look at the graphic interpretation to see the speed of the central spending growth and the spending in total also.

Table 1 Selected public spending on inland and maritime waterways (in thousands CZK)

	2010	2011	2012	2013	2014	Total
Ministry of Transport	28 292	26 503	28 718	39 827	55 732	179 072
Prague	14 979	18 938	15 847	15 184	13 595	78 544
Regions (Prague excl.)	2 860	1 220	2 104	1 968	1 958	10 110
Regional capitals (Prague excl.)	635	579	853	315	90	2 473
Total	46 767	47 240	47 523	57 294	71 375	270 199

Source: author's interpretation; Data source: Information portal of Ministry of Finance of Czech Republic [10]



Source: author's interpretation; Data source: Information portal of Ministry of Finance of Czech Republic [10]

Figure 1 Selected public spending on inland and maritime waterways (in thousands CZK)

Slightly different results are by comparison values per capita. Prague budget spent 63 CZK (2.30 EUR; 3.05 USD) for every Prague citizen in 5 years. Central government (Ministry of Finance) spent 17 CZK (0.62 EUR; 0.82 USD) for every Czech citizen in 5 years. Other public budgets were marginal in this analysis.

#### 4.2. Ministry of transport

Government spending on transport is mostly allocated by Ministry of Transport.

Table 2 Public spending of Ministry of Transport on inland and maritime waterways (in thousands CZK)

	2010	2011	2012	2013	2014	Total
Ministry of Transport	28 292	26 503	28 718	39 827	55 732	179 072
Government spending (total)	28 292	26 503	28 718	39 827	55 732	179 072

Source: author's interpretation; Data source: Information portal of Ministry of Finance of Czech Republic [10]

Central spending in last 5 years was CZK 179.1 mil. (EUR 6.5 mil.; USD 8.6 mil.), it is CZK 35.8 mil. (EUR 1.3 mil.; USD 1.7 mil.) per year in average. Spending of Ministry of Transport was approximately at the same level in years 2010, 2011 and 2012, but then started grow rapidly (39 percent annual growth in 2013 and 40 percent annual growth in 2014).

#### 4.3. Capital city Prague

Prague is in a special position. It is municipality and region at the same time. It means that budget of the capital city is not comparable to other municipal budgets and it is not comparable to regional budgets as well.

Prague public spending on inland and maritime waterways is relatively steady. In average it is about CZK 15.7 mil. (EUR 0.6 mil.; USD 0.8 mil.) every year. There are some years with the budget

slightly higher than average (years 2011 and 2012) and some years with the budget slightly below the average (years 2010, 2013 and 2014).

Table 3 Public spending of the Capital city Prague on inland and maritime waterways (in thousands CZK)

	2010	2011	2012	2013	2014	Total
Prague	14 979	18 938	15 847	15 184	13 595	78 544
Special cases of spending (total)	14 979	18 938	15 847	15 184	13 595	78 544

Source: author's interpretation; Data source: Information portal of Ministry of Finance of Czech Republic [10]

#### 4.4. Regions

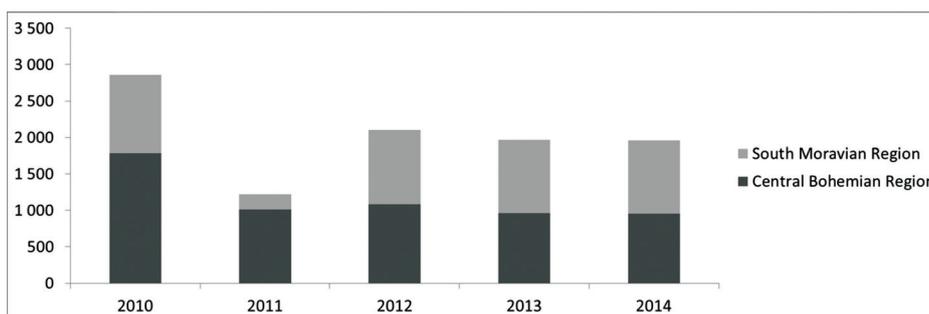
Not every region is spending money on inland and maritime waterways. There are two reasons. First reason: There is no large river in regions like Plzeň Region or Vysočina Region. Second reason: Regional capital subsidizes inland and maritime waterways, so the regional budget is not necessary anymore like in Ústí Region or Pardubice Region [7], [8].

Just 2 of 13 regional budgets calculate with spending on inland and maritime waterways. Namely, it is Central Bohemian Region and South Moravian Region.

Table 4 Public spending of regions on inland and maritime waterways (in thousands CZK)

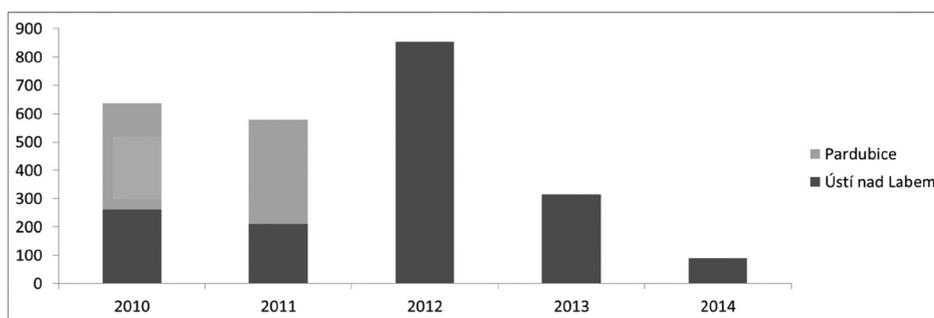
	2010	2011	2012	2013	2014	Total
Central Bohemian Region	1 789	1 010	1 086	964	958	5 806
South Moravian Region	1 072	210	1 018	1 004	1 000	4 304
Regional spending (total)	2 860	1 220	2 104	1 968	1 958	10 110

Source: author's interpretation; Data source: Information portal of Ministry of Finance of Czech Republic [10]



Source: author's interpretation; Data source: Information portal of Ministry of Finance of Czech Republic [10]

Figure 2 Public spending of regions on inland and maritime waterways (in thousands CZK)



Source: author's interpretation; Data source: Information portal of Ministry of Finance of Czech Republic [10]

Figure 3 Public spending of regional capitals on inland and maritime waterways (in thousands CZK)

There are similar conditions in Central Bohemian Region and South Moravian Region. There are large rivers (the Vltava River in Bohemia and the Morava River in Moravia), but there are no large cities with adequate budget nearby. It is, therefore, necessary to apply regional budgets.

The budget of Central Bohemian Region shows no significant changes over time. It is about 1 million Czech crowns a year (EUR 36 320; USD 48 202). There is one exception in the year 2010 when the budget was almost 80% higher. The budget of South Moravian Region is similar it is also around 1 million CZK (EUR 36 320; USD 48 202) and it also has one exception. This time, it is in the year 2011 when it was about 80% lower. These are the reasons for fluctuations in 2010 and 2011 [3], [7-9].

#### 4.5 Regional capitals

Not every regional capital is spending money on waterways. There are 2 main reasons for that:

- Some cities are located outside of large rivers like Karlovy Vary, Liberec or Ostrava.
- Some cities do not subsidize waterways because the regional budget does. This situation is in Central Bohemian Region and South Moravian Region.

Finally, there are only two of twelve regional capital cities with a special budget on waterways – Ústí nad Labem and Pardubice.

Table 5 Public spending of regional capitals on inland and maritime waterways (in thousands CZK)

	2010	2011	2012	2013	2014	Total
Ústí nad Labem	260	211	853	315	90	1 730
Pardubice	375	368	0	0	0	743
Municipal spending (total)	635	579	853	315	90	2 473

Source: author's interpretation; Data source: Information portal of Ministry of Finance of Czech Republic [10]

The situation in both cities is similar. They are decreasing the waterway-budget. Pardubice even stopped financing completely. The only exception is the jump in growth in Ústí nad Labem budget in 2012.

Municipal spending in this area is totally marginal. It is about 0.9% of total public expenditures in average and it is decreasing anyway. In 2014, it was only 0.1%.

#### 5. CONCLUSION

The Czech Republic is landlocked country and its public spending on inland and maritime waterways therefore

relatively low. This kind of public spending was relatively stable until 2012 and then started to grow. Public spending on inland and maritime waterways is mostly located to three largest Czech rivers:

- Elbe (Labe) – Pardubice, Ústí nad Labem, Central Bohemian Region,
- Vltava – Prague, Central Bohemian Region,
- Morava – South Moravian Region.

Some public entities fund waterways. Most public spending comes from the central level. There are not many regions supporting inland and maritime waterways in the regional level. There are 13 regions (without Prague Region) and only two of them have budget on inland and maritime waterways. Similar situation is in the municipal level. There are 12 regional capitals (without Prague) but only two of them support inland and maritime waterways [12], [13].

Furthermore it has been found there is only one dominating public entity in each region [7], [12-15]:

- Pardubice Region – budget of the city Pardubice,
- Ústí Region – budget of the city Ústí nad Labem,
- Prague – budget of the city Prague,
- Central Bohemian Region – regional budget,
- South Moravian Region – regional budget.

There is not enough data available. It is reason for other researches for much more data collection. Special area for these researches is on outputs measuring and input-output comparing.

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## APPENDIX 1

Table 6 Inflation rate

	2010	2011	2012	2013	2014
Inflation	1.5%	1.9%	3.3%	1.4%	0.4%
Index y/y	1.015	1.019	1.033	1.014	1.004
Base index (with basis 2014)	1.072	1.052	1.018	1.004	1.000

Source: author's interpretation; Data source: Czech Statistical Office [2]

## APPENDIX 2

Table 7 Exchange rate

	2014
1 EUR	27.533 CZK
1 USD	20.746 CZK

Source: author's interpretation; Data source: Czech National Bank [11]

## APPENDIX 3

Table 8 List of Czech regions and regional capitals

	Capital
South Bohemian Region	České Budějovice
South Moravian Region	Brno
Karlovy Vary Region	Karlovy Vary
Hradec Králové Region	Hradec Králové
Liberec Region	Liberec
Moravian-Silesian Region	Ostrava
Olomouc Region	Olomouc
Pardubice Region	Pardubice
Plzeň Region	Plzeň
Prague	Prague
Central Bohemian Region	Prague
Ústí Region	Ústí nad Labem
Vysočina Region	Jihlava
Zlín Region	Zlín

Source: author's interpretation; Data source: Association of Regions of the Czech Republic [14]