

# **Impact of changes in the population of local government voivodeships in Poland on the amount of financial transfers received - a targeted subsidy from the state budget**

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**Abstract:** *The performance of public tasks by the voivodeship local government in Poland is determined by a number of factors including economic points. A decisive part of the revenues of the budgets of the local government voivodeships are target subsidies and subventions from the state budget. These revenues play an important economic and social role in the financial management of the voivodeship local government. The aim of this article was to present the results of our own research into the impact of population changes in the local government voivodeships on the amount of financial transfers transferred - a targeted subsidy from the state budget. The time period of the research was 2004-2020. The results of the research show that in some voivodeships there is a strong relationship between changes in population and the amount of vertical redistribution instruments.*

**Key words:** *targeted subsidy, local government budget, local government voivodeship, decentralisation, population*

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## **I. INTRODUCTION**

The voivodeship local government is an important element of the public finance sector. Like other levels of local government in Poland, the voivodeship local government was established to perform specific public tasks. It should be borne in mind that public tasks include both tasks of an administrative nature and tasks of a typical public service nature (Malinowska - Misiąg, Misiąg, 2020, p. 18). Due to the legal-administrative system, the scope of public tasks of the voivodeship local government is completely different from that of the powiat or municipal local government. Pursuant to the provisions of the Act of 5 June 1998 on the voivodeship local government, it performs public tasks specified in statutory provisions on its own behalf and on its own responsibility. A special feature of the local government voivodeship is the performance of tasks of general interest that have not been statutorily reserved for performance by government administration bodies. The tasks commissioned to be performed by government administration and the voivodeship local government's own tasks are financed or subsidised from the state budget in the form of targeted subsidies.

The research problem was to determine whether population changes in individual local government voivodeships had an impact on the amount of the targeted subsidy transferred from the state budget for the implementation of public tasks. Due to large demographic changes in individual local government voivodeships in Poland - it was reasonable to determine whether there was a relationship between the population of local government voivodeships in the years 2004-2020 and the amount of the targeted subsidy from the state budget. The realisation of the research problem required Pearson's  $r$  correlation analysis.

## **II. FINANCIAL SUBSIDY TRANSFERS AS INSTRUMENTS SUPPORTING THE IMPLEMENTATION OF TASKS OF GENERAL INTEREST OF VOIVODSHIP LOCAL GOVERNMENT**

In the science of public finance, the topic of granting and accounting for financial transfers such as subsidies is one of the most important and still topical subjects. There are always many reasons for this state of affairs. But first and foremost this state of affairs can be substantively justified by the importance of subsidies in ensuring the fulfilment of public utility tasks, public services, both at the level of government administration as well as at the level of activity of regional governments and other levels of local government. The term "subsidy" etymologically derives from medieval Latin. Literally translated, the term *dotatio* means "supplying", "equipping" another person with certain goods - of significant material or financial value (Sołtyk, 2018, p.324).

In other words, a targeted subsidy can also be defined as a payment transferred from the state budget to finance or supplement the lacking financial resources for financing activities of significance for the implementation of the tasks of the regional local government, unilaterally determined in a strictly specified amount, non-returnable and free of charge (Wernik, 2011, p. 39).

In the Polish system of public finances, legal norms have been created for the transfer of earmarked subsidies from the state budget to the budgets of local government units. A targeted subsidy is a special type of financial transfer that is received by provincial local governments. Such financial means, despite the fact that they play an important role in the implementation of public tasks by the voivodeship local governments, have unfortunately not been worked out by the state in any objective - (technical) criteria creating the basis for their reliable calculation and determination of the actual amount of the target subsidy, necessary for the performance of diverse public utility tasks by the authorities of the voivodeship local government. The earmarked subsidies from the state budget transferred to the budget of the voivodeship local government are determined according to various principles and criteria, whereby discretionary procedures prevail (Patrzałek, 2005, p.76).

A review of the scientific literature leads to the conclusion that earmarked subsidies as a transfer of funds have a strictly defined purpose in the spending sphere. This means that there is a legal necessity to use the funds transferred to the regional local government for specifically designated tasks (Korberger-Sokołowska, 2012, p. 197). The earmarked subsidies transferred from the state budget to the regional government are limited by law. These limitations result from the provisions of the Public Finance Act 2009, which literally lists public tasks financed through subsidies transferred from the state budget. In the case of ensuring the current implementation of public utility tasks by the voivodeship local government, targeted subsidies from the state budget are provided for:

- financing or co-financing of own tasks covered by the voivodeship contract;
- tasks from the scope of government administration;
- implementation of tasks resulting from international agreements
- tasks performed under agreements concluded with government administration bodies.

It should be noted that earmarked subsidies from the state budget in the scope of government administration and other tasks assigned by laws are to be transferred to local government units in an amount ensuring the implementation of these tasks, in accordance with the principles adopted in the state budget for the determination of expenditures by type, in a manner enabling the full and timely performance of these tasks (Grzeškiewicz, 2014, p. 315). Bearing in mind the continuity and quality of the public tasks performed by the voivodeship local government, only in the case of earmarked subsidies transferred for the said tasks - local governments have the right to claim the due monetary benefit before common courts.

### **III. STATISTICAL METHOD USED IN OWN RESEARCH**

In order to answer the research questions posed, statistical analyses were carried out using the IBM SPSS Statistics 27 package. Pearson's r correlation analysis was performed using this package. The level of significance in this chapter was considered to be  $\alpha = 0,05$ .

### **IV. THE RELATIONSHIP BETWEEN THE POPULATION IN THE LOCAL GOVERNMENT VOIVODSHIPS IN 2004-2020 AND THE AMOUNT OF EARMARKED SUBSIDIES FROM THE STATE BUDGET IN THESE VOIVODSHIPS**

In the first step of the analysis, it was checked whether the population in the individual local government voivodeships in 2004-2020 is related to the amount of earmarked subsidies transferred from the state budget in these years. Pearson's r correlation analysis was performed to meet the research objectives. This analysis correlated data within voivodeships, i.e. e.g. the population of the Dolnośląskie voivodeship from 2004-2020 was correlated with earmarked subsidies from this voivodeship from 2004-2020, then the population of the Kujawsko-Pomorskie voivodeship from 2004-2020 was correlated with earmarked subsidies from 2004-2020 (Table 1).

**Table no 1**

*Relationship between the level of earmarked subsidies from the state budget in 2004-2020 and the population in these years in individual voivodeships*

		Target subsidy from the state budget
Dolnośląskie	Pearson's r	0,19
	significance	0,473
Kujawsko-pomorskie	Pearson's r	0,46
	significance	0,061

Lubelskie	Pearson's r	0,074
	significance	0,777
Lubuskie	Pearson's r	0,69
	significance	<b>0,002</b>
Łódzkie	Pearson's r	0,16
	significance	0,549
Małopolskie	Pearson's r	0,30
	significance	0,240
Mazowieckie	Pearson's r	0,18
	significance	0,495
Opolskie	Pearson's r	0,15
	significance	0,556
Podkarpackie	Pearson's r	0,02
	significance	0,930
Podlaskie	Pearson's r	0,07
	significance	0,793
Pomorskie	Pearson's r	0,14
	significance	0,581
Śląskie	Pearson's r	0,71
	significance	<b>0,001</b>
Świętokrzyskie	Pearson's r	0,16
	significance	0,540
Warmińsko-mazurskie	Pearson's r	0,58
	significance	0,015
Wielkopolskie	Pearson's r	0,17
	significance	0,525
Zachodniopomorskie	Pearson's r	0,53
	significance	<b>0,028</b>

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Source: own work on the basis of the Main Statistical Office (GUS) data.

Statistical analysis showed a statistically significant and positive relationship between the population of the Lubuskie Voivodship and the amount of earmarked subsidies from the state budget in this Voivodship in the years 2004-2020. A positive relationship between the population of the voivodship and earmarked subsidies in this voivodship also occurred in the Śląskie, Warmińsko-Mazurskie and Zachodniopomorskie Voivodships. This means that as the population in these voivodeships increased between 2004 and 2020, the amount of earmarked subsidies transferred from the state budget also increased. The effect size for these variables was large.

## **V. THE RELATIONSHIP BETWEEN THE POPULATION IN THE LOCAL GOVERNMENT VOIVODSHIPS IN 2004-2020 AND THE AMOUNT OF THE EARMARKED SUBSIDY FOR OWN TASKS**

Further research was carried out to analyse whether the population in individual local government voivodeships in the years 2004-2020 is related to the amount of the subsidy for own tasks in these voivodeships. For this purpose, Pearson's r correlation analysis was conducted. The obtained results of the statistical analysis can be found in Table 2.

**Table no 2**

*Relationship between the level of subsidies for own tasks in the years 2004-2020 and the population in these years in individual voivodeships*

		Subsidies for own tasks
Dolnośląskie	Pearson's r	-0,61
	significance	<b>0,010</b>
Kujawsko-pomorskie	Pearson's r	-0,23
	significance	0,381
Lubelskie	Pearson's r	0,104
	significance	0,691
Lubuskie	Pearson's r	0,44
	significance	0,079
Łódzkie	Pearson's r	0,42
	significance	0,091
Małopolskie	Pearson's r	-0,58
	significance	<b>0,016</b>
Mazowieckie	Pearson's r	-0,62
	significance	<b>0,008</b>
Opolskie	Pearson's r	0,09
	significance	0,737
Podkarpackie	Pearson's r	-0,39
	significance	0,124
Podlaskie	Pearson's r	0,15
	significance	0,560
Pomorskie	Pearson's r	-0,32
	significance	0,211
Śląskie	Pearson's r	0,56
	significance	<b>0,020</b>
Świętokrzyskie	Pearson's r	0,15
	significance	0,570
Warmińsko-mazurskie	Pearson's r	-0,22
	significance	0,387
Wielkopolskie	Pearson's r	-0,48
	significance	0,053
Zachodniopomorskie	Pearson's r	-0,09
	significance	0,724

Source: own work on the basis of the Main Statistical Office (GUS) data.

Statistical analysis showed that the relationship between the amount of subsidies for own tasks in individual voivodeships and the population in individual voivodeships was positive and strong for the Śląskie Voivodeship. In this case, the amount of targeted subsidies increased with increasing population in successive years. In contrast, the relationship was negative for the Mazowieckie, Małopolskie and Dolnośląskie voivodeships. This indicates that as the population of the voivodeships increased from 2004 to 2020, the amount of subsidies decreased. All these relationships were strong.

**VI. THE RELATIONSHIP BETWEEN THE POPULATION OF THE LOCAL GOVERNMENT VOIVODSHIPS IN 2004-2020 AND THE AMOUNT OF THE EARMARKED SUBSIDY FROM THE SCOPE OF GOVERNMENT ADMINISTRATION**

In the last part of the analysis, it was checked whether the size of the government administration subsidy in 2004-2020 is related to the population in these years, in individual voivodeships. For this purpose, Pearson's r correlation analysis was conducted. The results can be found in Table 3.

**Table no 3**

*Relationship between the population of the voivodeships in 2004-2020 and the amount of government subsidies*

		Subsidies for government administration tasks
Dolnośląskie	Pearson's r	0,41
	significance	0,099
Kujawsko-pomorskie	Pearson's r	0,74
	significance	<b>&lt;0,001</b>
Lubelskie	Pearson's r	-0,021
	significance	0,936
Lubuskie	Pearson's r	0,66
	significance	<b>0,004</b>
Łódzkie	Pearson's r	-0,40
	significance	0,112
Małopolskie	Pearson's r	0,14
	significance	0,589
Mazowieckie	Pearson's r	0,31
	significance	0,227
Opolskie	Pearson's r	-0,37
	significance	0,149
Podkarpackie	Pearson's r	0,27
	significance	0,286
Podlaskie	Pearson's r	-0,03
	significance	0,920
Pomorskie	Pearson's r	0,37
	significance	0,149
Śląskie	Pearson's r	0,12
	significance	0,658
Świętokrzyskie	Pearson's r	0,05
	significance	0,851
Warmińsko-mazurskie	Pearson's r	0,76
	significance	<b>&lt;0,001</b>
Wielkopolskie	Pearson's r	0,19
	significance	0,477
Zachodniopomorskie	Pearson's r	0,66
	significance	<b>0,004</b>

Source: own work on the basis of the Main Statistical Office (GUS) data.

The research shows that the population in the years 2004-2020 in the Zachodniopomorskie, Warmińsko-Mazurskie, Kujawsko-Pomorskie and Lubuskie voivodeships was significantly, positively and strongly related to government administration subsidies in the years 2004-2020 in these voivodeships. This implies that as the population in these voivodeships grew, government administration subsidies also grew, from 2004 to 2020.

## VII. CONCLUSION

The research carried out has unambiguously shown that there is a statistically significant relationship between the size of the population and the amount of financial transfers from the state budget. An example of such a relationship is the Lubuskie, Śląskie and Warmińsko-Mazurskie and Zachodniopomorskie Voivodeships. On the basis of statistical analyses performed, it should be noted that as the population in these voivodeships grew in the years 2004-2020, the amount of targeted subsidies also increased. The research shows that the relation between the amount of the targeted subsidy for own tasks in individual voivodeships and the number of population in individual voivodeships was positive and strong for the Śląskie Voivodeship. This means that an increase in population also resulted in an increase in the targeted subsidy. In the years 2004-2020 in the Zachodniopomorskie, Warmińsko-Mazurskie, Kujawsko-Pomorskie and Lubuskie voivodeships, there was a significant, positive and strong relationship between population numbers and subsidies for government administration tasks.

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