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# Funding of Public Benefit Activity with 1% of Personal Income Tax Scheme: Empirical Research

Mariola Mamcarczyk[1], Paweł Zieniuk[2]

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## Abstract

**Purpose:** This article seeks to assess the scale of using the funds from Poland's 1% of personal income tax scheme in the funding of public benefit activity conducted by public benefit organizations in the area of promotion of sports and physical culture. Moreover, it attempts to establish the determinants of revenues from this source earned by individual organizations.

**Methodology:** The article presents the results of own research based on a sample of 100 random public benefit organizations. Research conclusions are formulated based on the literature and legislation review, data from the financial statements and technical reports of selected organizations, and statistical methods selected to verify the formulated hypotheses.

**Findings:** The revenues earned by the organizations from the 1% scheme do not depend on conventional factors, such as organization coverage, the number of beneficiaries, and the persons involved in the activity of the organization or duration of public benefit activity.

**Research limitations:** The model developed for research purposes considers no immeasurable factors that may affect the amount of earned revenues, such as recognizability of organization in the society or taxpayer loyalty.

**Originality:** Our research pioneers the issue of determinants of funds acquired by the organizations from the 1% scheme. Research conclusions can be regarded as a voice in the discussion on the sources of funding the operation of foundations and associations.

**Keywords**: technical report, public benefit organizations, foundations, associations, 1% of income tax.

**JEL:** L31, M41

[1] Cracow University of Economics, Dept. of Economics, 27 Rakowicka St., 31-510 Cracow, https://orcid.org/0000-0003-0316-533X; e-mail: mamcarcm@uek.krakow.pl.

[2] Cracow University of Economics, Dept. of Financial Accounting, 27 Rakowicka St., 31-510 Cracow, https://orcid.org/0000-0002-2088-8583; e-mail: zieniukp@uek.krakow.pl.

## Introduction

Since 2003, personal income taxpayers in Poland may support the operation of entities holding public benefit organization (PBO) status in a specific manner. In their tax returns, they may indicate an organization to which they may donate the amount equal to 1% of tax due. Organizations commit funds acquired from this scheme to the exercise of their statutory tasks. Such a method of funding operations forces the organizations to keep a detailed record of revenues and costs in order to meet their reporting obligations.

According to information published by the Ministry of Finance, the National Freedom Institute, and the Klon/Jawor Association, nearly 40% of the total amount from the 1% of personal income tax scheme goes to the 10 largest PBOs operating primarily in the area of charity and social aid (Ministry of Finance, 2018; Charycka and Gumkowska, 2019). The list of PBOs entitled to receive 1% of personal income tax contains 8924 entities (List of public benefit organizations entitled to receive 1% of personal income tax, 2019).

The disproportionate allocation of funds from the 1% of income tax scheme among the entitled organizations constitutes one of the reasons behind our empirical research that seeks to assess the scale of the use of these funds committed to the implementation of socially useful statutory tasks by the organizations. Moreover, our research seeks to determine the factors that affect the amount of revenues earned from this source. Another factor that motivates us to undertake this research topic is the gap in the literature on the subject in terms of empirical research regarding the financing of organizations from the 1% scheme and empirical research dedicated to organizations operating in Poland.

The sources of financing socially beneficial activities conducted by public benefit organizations seldom are the subject of empirical studies. Most analyses are conducted by statistical offices and the community of non-government organizations. The results are presented collectively for the entire sector of non-government organizations, without a division into organizations that operate in specific areas of socially beneficial tasks. The following study was mainly driven by the desire to analyze the sources of fundraising for activities conducted in the area of supporting and promoting sports and physical education. Therefore, we decided to include in our empirical study organizations active in the field of sports and physical culture, which, thanks to their PBO status, can use the 1% mechanism, and at the same time fulfill reporting obligations allowing for universal access to data.

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The study sample consisted of 100 foundations and associations involved in the support and promotion of sports and physical culture, holding the PBO status and entitled to receive 1% of tax, selected on a random basis from the National Freedom Institute database, subject to the constant interval (selection interval). This article aims at assessing the scale of using the funds from the 1% of personal income tax scheme in the funding of public benefit activities carried out by PBOs in the area of promotion of sports and physical culture and attempting to establish the determinants of revenues from this source earned by individual organizations. The main hypothesis of our research was: the revenues earned by organizations from the 1% scheme depend on the conventional set of factors that determine the variability of organizations' revenues. The following factors were taken into consideration: the organization's coverage, the number of beneficiaries and persons involved in the organization's activities, the duration of public benefit activity, and conducting remunerated and economic activity by the organization. Our research pioneers the issue of determinants of funds acquired by organizations from the 1% scheme. Research results may allow us to find the determinants of the amount of revenue generated by organizations.

In order to verify whether the conventional set of factors that determine the variability of the amount of the organization's revenues is sufficient in the case of the variability of revenues from 1% of income tax, we selected the following hypotheses for verification:

**H1**: The greater coverage of the organization affects the increase in revenues from the 1% of personal income tax scheme.

**H2**: The higher number of the organization's beneficiaries affects the increase in revenues from the 1% of personal income tax scheme.

**H3**: The longer duration of the organization's public benefit activity results in higher revenues from the 1% of personal income tax scheme.

**H4**: The higher number of persons involved in the organization's activities affects the increase in revenues from the 1% of personal income tax scheme.

**H5:** Organizations involved additionally in a remunerated or economic activity receive higher revenues from the 1% of personal income tax scheme.

# Theoretical Background

## Legal Framework Underlying the 1% of Personal Income Tax Scheme

The number of PBOs growing year by year demonstrates the dynamic growth of the third sector in Poland and the increasing demand for entities involved in broadly defined activities targeted at the welfare of the entire society. On the other hand, the large number of actively operating organizations imposes on them the need to constantly seek funds to finance the execution of statutory tasks.

Dependent on government funds, closely tied to public sector policies, and often required to adopt state accounting and reporting procedures, organizations began functioning as an important vehicle for the "transfer of bureaucracy" from the government to society at large (Anheier, Toepler, and Sokolowski, 1997). The central feature of PBOs finances is their diverse income sources, equally diverse incentives, and preferences of consumers, donors, and government agencies that provide this income (Young, 2007).

Public benefit organizations in Poland are established for non-profit purposes and base their activities, among other things, on volunteers and social work of their members and other persons. A public benefit activity is a socially beneficial activity carried out by non-government organizations in the area of public tasks defined in the act on public benefit activity and volunteering (Act, 2003). The act also implements the catalog of socially beneficial activities, whose execution fits the area of public benefit activity. One of the possible tasks executed by these organizations concerns the promotion and support of physical education.

The legal framework specifying the rules for PBOs activity in Poland is governed by the Act on public benefit activity and voluntary work, which implements the conditions for obtaining a PBO status, including among other things (Act, 2003, Article 20):

- the performance of public benefit activity for a continuous period of at least two years,
- the allocation of revenue-cost surplus to public benefit activity,
- holding a statutory collegial supervisory or control body,
- holding a statute or any other internal act,
- performing business activity only additionally to public benefit activity.

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The PBO status is obtained upon entering this information into the National Court Register. Holding the PBO status is necessary for the organization to apply for inclusion in the list of organizations entitled to receive funds from the 1% of personal income tax scheme. The PBO status was available for the first time in 2004, while the personal income taxpayers gained the possibility to donate 1% of their tax to organizations when filing a tax return for 2003. The opportunity to benefit from a new source of funding boosted interest in acquiring the BPO status among the Polish foundations and associations.

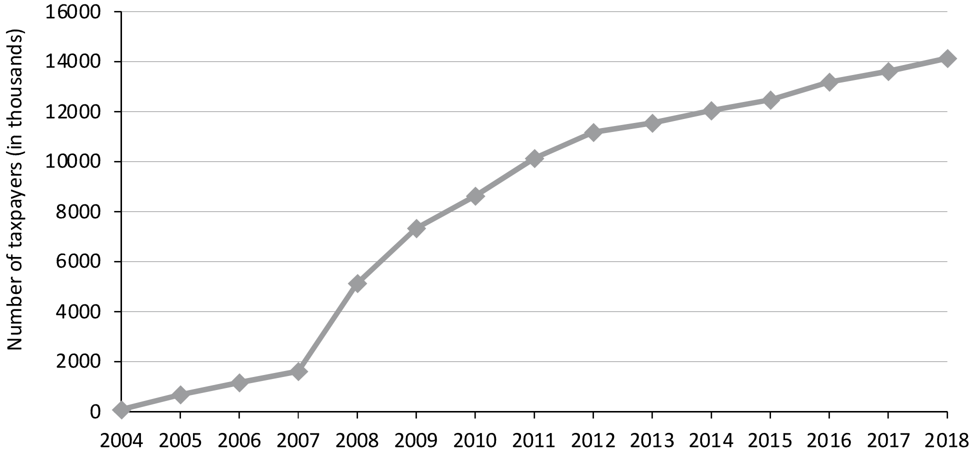
Legal solutions for acquiring the PBO status in Poland are comparable to analogical regulations in other European states (Moore, Hadzi-Minceva, and Bullain, 2008). Generally, the following criteria are considered when granting the PBO status: qualifying activities, organization's eligibility, operating for public benefit, target beneficiaries, and financial and governance requirements.

Legal solutions enabling taxpayers to donate part of their income tax were already implemented in Hungary (1%), Slovakia (0.5–2%), Lithuania (2%), Romania (3.5%), Slovenia (2%), and Moldova (2%).

The analysis of the use of funds from 1% of income tax executes one of the key elements of supervision over PBOs, which pursuant to the Act on public benefit activity (Act, 2003, Article 28(1)), is performed by the Chairman of the Public Benefit Committee. "Information on the spending of funds from 1% personal income tax by public benefit organizations" (National Freedom Institute, 2018) contains analyses of spending correctness and relevant conclusions on the use of these funds, which are all made available to the public.

According to data published by the Department of Income Tax of Poland's Ministry of Finance, the number of taxpayers that declares the donation of 1% of income tax to selected organizations has been increasing year by year, provided that in 2013–2018 the dynamics of growth was relatively low and reached only 4%. Data on the number of taxpayers declaring the donation of 1% of tax between 2004 – the first year of this scheme – and 2018 is presented in Figure 1. In 2018, 1% of due tax was donated by 14.1 million taxpayers.

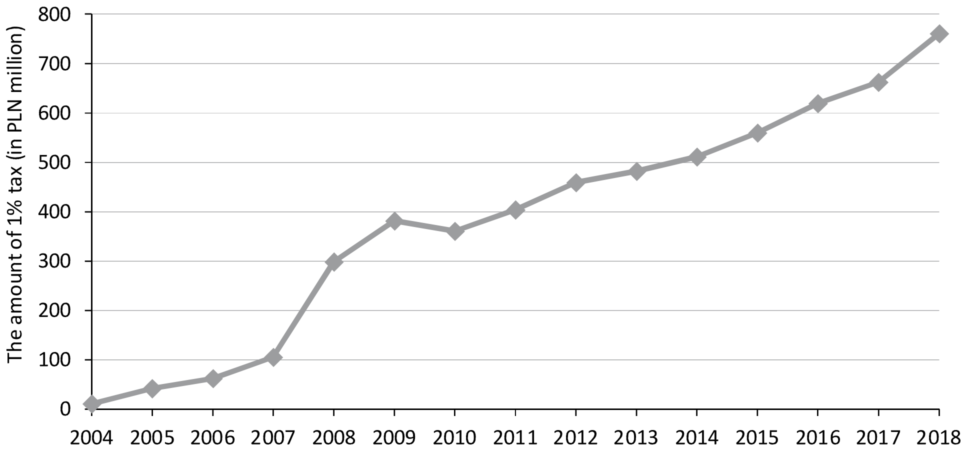
**Figure 1.** The number of taxpayers (in thousands) declaring the donation of 1% of tax in 2004–2018




Source: own elaboration based on Ministry of Finance (2018, p. 5).

The increase in the number of taxpayers who use the possibility to indicate the PBO in tax return is accompanied by a growing amount of funds allocated to the budgets of these organizations. The relevant data for 2004–2018 are presented in Figure 2.

**Figure 2.** Amounts from the 1% scheme donated to organizations in 2004–2018 (in PLN million)




Source: own elaboration based on Ministry of Finance (2018, p. 5).

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In 2018, the PBOs received PLN 761.3 million in total from the 1% of personal income tax scheme. Information on the allocation of this amount between the organizations involved in individual areas of public benefit activity is not published and neither was there ever any empirical research in the matter.

## Empirical Research of Public Benefit Activity Financing from Taxpayers Donated Funds

Sources of funding of socially useful activity carried out by PBOs in Poland and other European countries are relatively rarely addressed by empirical research. Information on funds received by organizations from schemes financing their activity from a part of income tax revenue are published with a delay and there is no empirical research seeking to determine the factors that affect the amount of funds earned from this source.

The periodical analysis of non-governmental organizations and social activities in Poland is performed by the Klon/Jawor Association. According to the latest report on the condition of the NGO sector in 2018 (Kondycja sektora organizacji pozarządowych 2018) published in February 2019, this source of funding was used by 25% of organizations (Charycka and Gumkowska, 2018). More comprehensive research on the funding of PBOs in Poland from the 1% scheme is performed by the National Freedom Institute (2018), whose key findings show:

- the amount of funds from 1% of personal income tax received by PBOs increases regularly on a year by year basis,
- the amount of funds from 1% of tax donated to PBOs increased by 0.66% compared to the previous year,
- funds from 1% of personal income tax accounted for 7.83% of the total revenues of PBOs,
- the number of taxpayers donating 1% of personal income tax increases by approx. 500,000 people year by year.

The increase in the amount of donated funds stems from the higher awareness of PBOs’ needs among taxpayers, including their statutory activity. The share of these funds in total revenues confirms that these funds form a significant source of revenues for PBOs. The increase in the number of taxpayers who use the possibility to indicate an organization in their tax return reflects growing social trust in PBOs, also in the scope of the safety of donated amounts related to the execution of organizations’ tasks.

In the countries that implemented legal solutions similar to the Polish 1% of income tax scheme, the amount of revenues earned by organizations from this source is stable or increases on a continuous basis. However, the level of involvement of taxpayers who use their right to support organizations differ (Civil Society Organization Sustainability Index, 2019):

- In Hungary, the amount reached from the 1% of tax scheme has been increasing and amounted to the equivalent of EUR 29.5 million in 2018. The number of taxpayers who use the possibility to donate funds decreases in the effect of the introduction of an automatic tax return system, which eliminates the need for their manual preparation.
- In Romania, income tax rate was decreased from 16% to 10%, which resulted in decreased amounts received by organizations. In response, the government increased the percentage of funds transferred to organizations from 2% to 3.5% of tax.
- Lithuania observes the continuous growth in revenues of organizations from the 2% of income tax scheme. In 2018, 40% of entitled taxpayers decided to donate EUR 17.4 million to PBOs.
- In Slovenia, the amount donated by taxpayers to organizations remains stable and amounts to nearly EUR 4.6 million per annum. The number of taxpayers who use the scheme has been slightly increasing by approx. 0.5% annually.
- Slovakia adopted legal solutions under which 0.5–2% of tax may be transferred to organizations by payers of both personal and corporate income taxes.
- The scheme has no wide support in Moldavia. Only 2.4% of entitled taxpayers use their right to finance the organizations.

Apart from general information on the amounts donated by taxpayers, none of the abovementioned countries performs research on the factors that affect the amount of revenues earned by organizations from the 1% scheme.

Looking for a determinant of the amount of amounts transferred to organizations from the 1% mechanism, Misiewicz (2013) focuses on demonstrating the relationship between the complexity of procedures and the number of taxpayers choosing organizations. According to the study, the biggest change in synthetic meter value took place in 2007, right after the modification of regulations. Those changes mainly simplified the process of donating the 1% of personal income tax to PBOs, because since 2007, the Revenue Office became responsible – instead of taxpayers – for money transfers to PBOs' accounts specified in tax returns. At present, the method of transferring funds to organizations has not changed since 2007.

The international literature emphasizes that organizations should develop a culture focused on organizational competencies beneficial to organizational confidence and the construction of strong community relationships (Coleman, 2018). A well-known and popular organization may receive higher donations. It seems that such organizations may also be selected more often by taxpayers of personal income tax.

Conclusions from international research concerning different sources of revenues in organizations show only that their catalog is correlated with the area of activity, in which PBOs perform socially useful tasks. Organizations that provide public services use donations and endowments more frequently (Fischer, 2011), while organizations that use revenues from their statutory activities demonstrate a lower diversification of their revenue sources (Chang and Tuckman, 1996). The diversification of organizations' revenues is measured by the Herfindahl index. A vast majority of international research demonstrates a low or medium level of the diversification of revenue sources among PBOs (Carroll and Stater, 2008) and diversification rate from various areas of activity.

Research on factors that affect the amount of revenues earned by organizations focuses on proving the impact of organization coverage, the number of people involved in its activity, and the potential beneficiaries on the results of an organization's operation (Aschari-Lincoln and Jager, 2016). According to very few studies, some donors are more willing to donate if they receive financial information from a PBO in advance (Parsons, 2007). Surveys conducted on Polish taxpayers suggest that when deciding on donating to an organization, taxpayers are also influenced by the fact that the organization is supported by a famous person, the Catholic Church, or the media (Waniak-Michalak and Zarzycka, 2013). Standard management strategies for achieving mission objectives became increasingly relevant for procuring government grants and contracts (Michalski, 2012). We should also mention studies on the motivation of donors to make donations to PBOs. According to Garcia-Rodriguez and Romero-Merino (2020), donors' motivations to make monetary contributions to PBOs are numerous, diverse, and clearly affected by their socioeconomic characteristics.

Legal regulations enable the PBOs to finance also their activities indirectly, thanks to the tax exemption system. The available tax preferences allow organizations to have larger budgets for the implementation of socially useful tasks. A separate issue remains whether tax exemptions are beneficial to organizations as such or whether their application enables the implementation of a greater number of socially useful tasks (Herring et al., 2018, p. 1).

Tax preferences for foundations and associations are present in legal solutions applicable in a vast majority of European states, while in some cases the use of tax exemptions depends on the implemented public benefit objectives (Moore, Hadzi-Miceva, and Bullain, 2008, p. 7). In the USA, upon gaining legal personality, non-profit organizations apply for the status of organizations exempted from federal income taxes by state authorities and the Internal Revenue System (Halperin, 2006, p. 133).

Some argue that legal regulations enabling tax exemptions for non-profit entities in many countries are described as inconsistent and non-uniform (Bater et al., 2003, p. 7). Likewise, exemptions for PBOs in the Polish tax system are scattered among many acts and ordinances.

The possibility to use tax exemptions by Polish organizations may be compared to solutions adopted in developed countries. A part of exemptions depends on organizations' compliance with conditions related to holding the PBO status, while other exemptions are allowed when an entity performs socially useful tasks in specific areas. Let us note that empirical research in this scope demonstrates that the actual scale of tax exemptions use by organizations is very high (Zieniuk, 2019, p. 229–245). The inability to use tax exemptions would pose a significant obstacle for an organization both in terms of future development and the continuation of activity on the current scale.

## Research Design

### Data

Our empirical research covered PBOs involved the in promotion of physical culture and sports who publish their financial statements and technical reports in the Public Benefit Organization Base kept by the National Freedom Institute. The research sample included 100 organizations acting as foundations and associations, selected randomly, and subject to constant selection intervals. Thus, the selection of organizations to the sample meets the conditions of random selection.

The research was performed based on data from financial statements and technical reports published for 2016–2018. It used the content analysis method, while aggregated data for the selected research sample are summarized further in this article.

Each organization included in the research sample published detailed information from the section of its technical report entitled "Revenues and costs of public benefit

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institution in the reporting period." Let us note that the level of information detail on revenues and costs revealed in this part is much greater than of information about the profit and loss account in the financial statement.

This study used five independent variables and one dependent variable. Dependent variable (Y) is the amount of revenue from the 1% tax scheme. In order to verify the statistical hypotheses, the following explanatory variables were adopted for regression analysis purposes:

**X1**: Organization coverage. For coverage limited to the nearby vicinity, we adopted the value of 1. Subsequent values were adopted for organizations whose coverage includes a commune (2), powiat (3), voivodeship (4), and the whole country (5).

**X2**: The number of beneficiaries. Calculated using the following formula: the number of natural persons + (the number of legal persons x 10), pursuant to commonly adopted principles of determining the number of beneficiaries used in calculating performance indicators for non-governmental organizations.

**X3**: The duration of public benefit activity. The adopted variable is the number of years from receiving PBO status.

**X4**: The number of persons involved in the activities. The value of the variable is the number of employees and volunteers involved in socially useful activities. The number of employees was converted into full-time equivalents, while the number of volunteers according to the following formula: the number of volunteers up to 30 days / 52 + the number of volunteers above 30 days / 4. The adopted principles of determining the number of volunteers involved in the activity were the principles used for calculating scale indicators and indicators of saved personnel costs (Dyczkowski, 2015).

**X5**: Remunerated and economic activity. For organizations that conduct only non-remunerated activity, the adopted value of the variable was 1. When the organization was also involved in remunerated or economic activities, the adopted value of the variable was 2 or 3.

To understand the characteristics of the variables in terms of minimum value, maximum, average, and standard deviation, we present descriptive statistical data (Table 1).

**Table 1.** Descriptive statistics

| VARIABLE | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|
| Y – the amount of revenue from the 1% tax scheme | 76.80 | 7889187 | 110331 | 817310 |
| X1 – organization coverage | 1 | 5 | 3.78 | 1.45 |
| X2 – the number of beneficiaries | 0 | 30010 | 2662.39 | 5238.41 |
| X3 – duration of public benefit activity | 2 | 15 | 11.44 | 3.13 |
| X4 – the number of persons involved in activities | 0 | 143 | 6.84 | 18.74 |
| X5 – remunerated and economic activity | 1 | 3 | 1.74 | 0.68 |

Source: own elaboration.

## Model

The method used in this research was the multiple linear regression analysis. The model for our study is represented by the following equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \varepsilon$$

The results of the conducted Shapiro-Wilk test indicate that the probability distribution of observation of the explained variable Y differs from normal distribution. Due to the lack of compliance with the assumption about the normality of the Y variable distribution, the regression method with robust estimators was used. Robust estimators are characterized by significantly reduced sensitivity to outliers, and at the same time, even for normal distributions, their properties are slightly different from those of least squares estimators (Muciek, 2012, p. 245).

## Results

### The Scale of Funds from the 1% of Personal Income Tax Possessed by the PBO

Information of key importance for this research was the information on revenues of organizations earned from 1% of personal income tax, the amount of funds from this scheme at the beginning of the reporting period, and the amount of costs incurred

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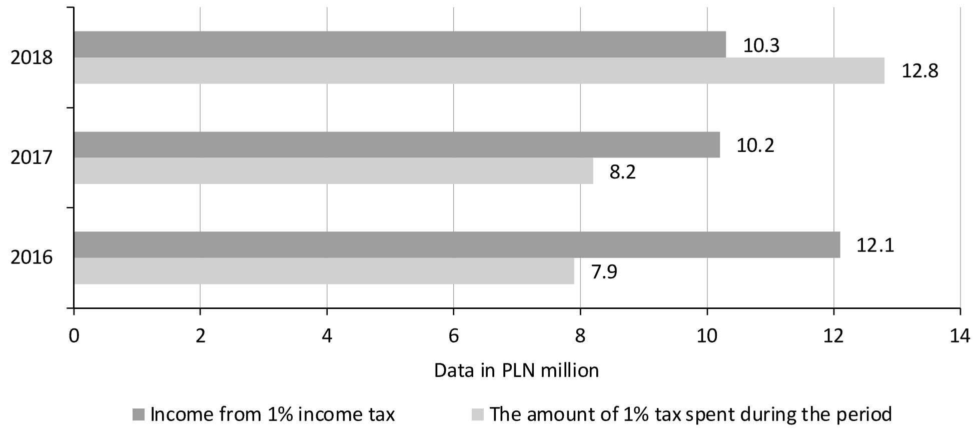
from the 1% of personal income tax in the reporting period in total. Moreover, in this part of the report, the organizations publish information on the activities financed with 1% of personal income tax in the reporting period. The estimated costs of these activities are published, as well as specific goals indicated by taxpayers, for which the organization incurred the highest costs of 1% income tax in the reporting period.

Figure 3 informs on total revenues gained from the 1% scheme by the organizations in the research sample broken down by individual years covered by the research timeline and expenditures from this source (data in PLN million, in current prices).

**Figure 3.** The total amount of annual revenues and expenditures from the 1% scheme in the research sample organizations (in PLN million)

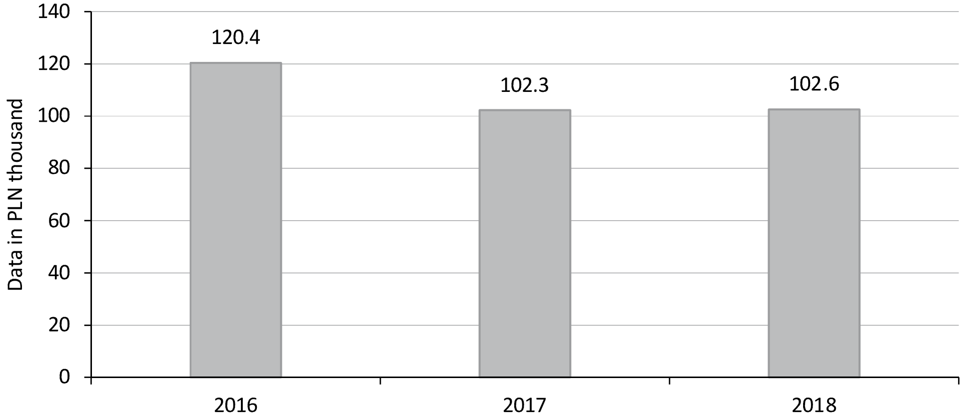



Source: own elaboration.

In 2018, the amount of expenditures exceeded revenues due to the high level of cash from the 1% scheme held by the organizations at the beginning of the reporting period. Figure 4 shows the average amount of revenues from the 1% of income tax scheme earned by the organizations in the sample (data in PLN thousand).

The total amount of 1% of due income tax transferred by the Heads of Tax Offices to PBOs' bank accounts indicated by taxpayers in their tax returns was PLN 761.3 million in 2018. In 2018, there were 9022 organizations with PBO status in the PBO base (National Freedom Institute, 2019a), while 8924 organizations were entitled to receive 1% of personal income tax (National Freedom Institute, 2019b). This means that in the entire population of organizations using this source of funding, the average revenue amounts to nearly PLN 85 thousand.

**Figure 4.** The average amount of revenues from the 1% scheme for the research sample organizations (in PLN thousand)




Source: own elaboration

Economic stratification is characteristic of and unchanged for the Polish non-governmental sector (Zieniuk, 2012). A similar situation applies to the use of individual sources of funding by organizations. The highest amounts from the 1% scheme are donated primarily to organizations involved in large scale charity and social aid. According to the Ministry of Finance (2018), in Poland 10 foundations received nearly 40% of all funds donated by payers of personal income tax from the discussed source. A similar structure appears in data published for previous years in which the 1% of tax scheme was applied. High disparities in revenues from this scheme are also confirmed by the results obtained in our research sample. Figure 5 presents the median of revenues from 1% of income tax earned by the research sample organizations for periods covered by the research timeline.

For 2018, the average revenue from 1% in the research sample amounted to PLN 102 thousand, while the median only PLN 3716. The obtained results confirm that the PBOs consist of many entities for which the 1% scheme constitutes only an additional source of revenue that cannot support their activities, which makes them acquire funds for their activity primarily from other sources.

Figure 6 presents data on the total cost of execution of statutory public benefit activities funded from 1% of tax in the analyzed group of organizations.

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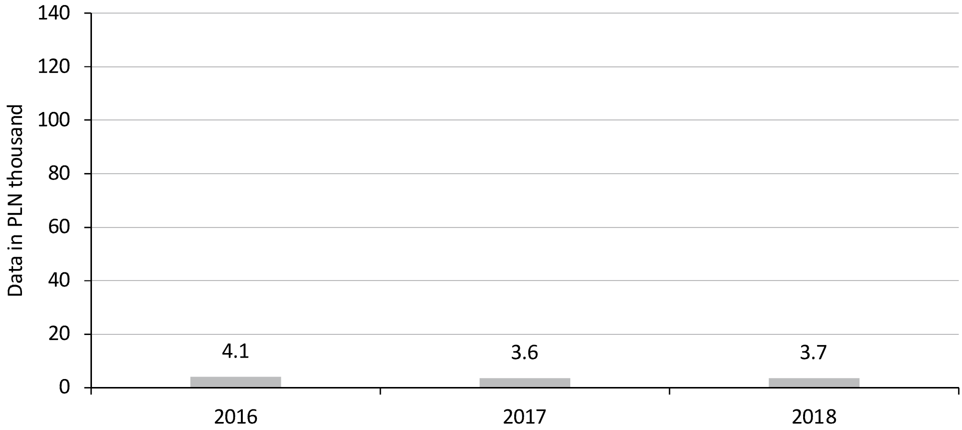
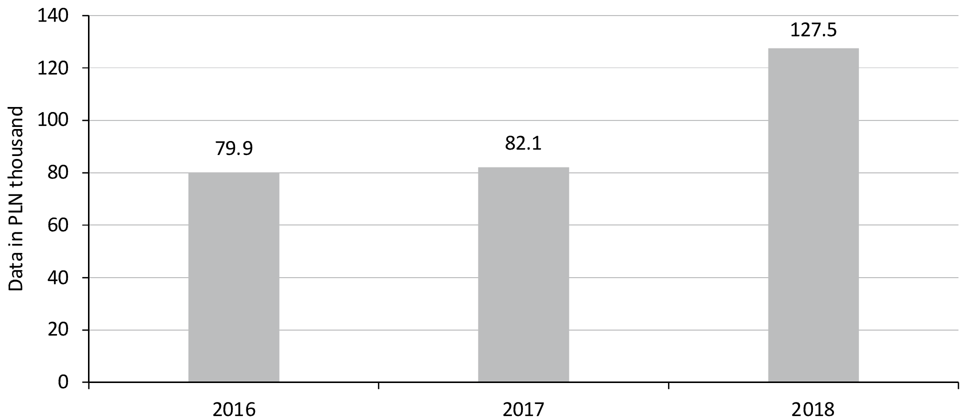
**Figure 5.** The median amount of revenues from the 1% scheme for the research sample organizations (in PLN thousand)




Source: own elaboration.

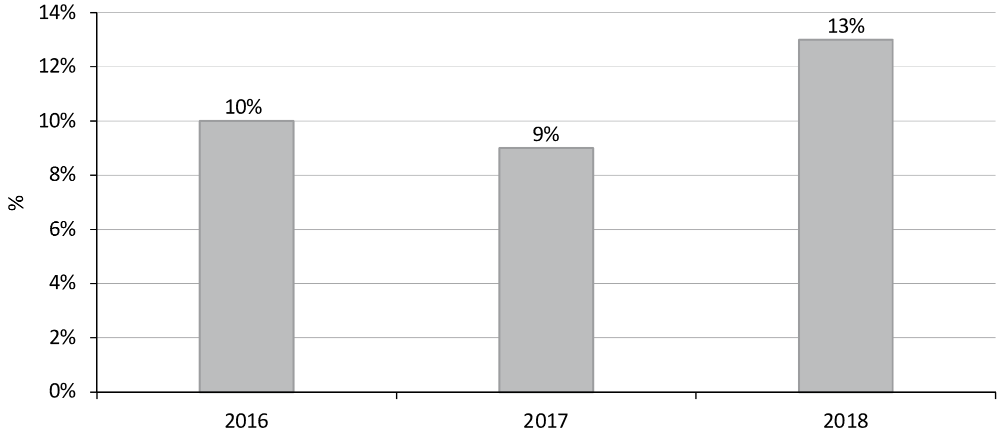
**Figure 6.** Costs of execution of statutory tasks funded from 1% of tax for the research sample organizations (in PLN million)




Source: own elaboration.

To illustrate the scale of impact of funds from the discussed scheme on the execution of socially useful tasks, we calculated the ratio of costs of execution of public benefit statutory activities financed from 1% of tax to total organization costs. Average results for the individual years are presented in Figure 7.

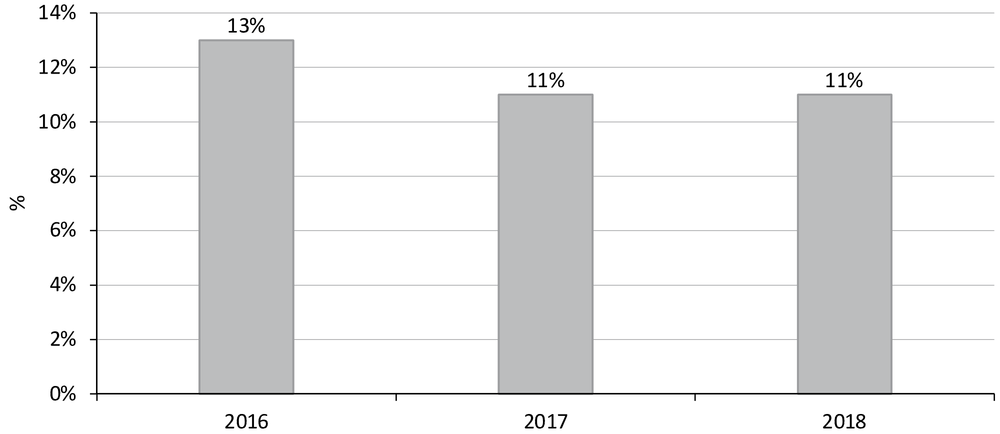
**Figure 7.** The percentage of costs of execution of statutory activities funded from 1% in total costs




Source: own elaboration.

The obtained results can be interpreted as a percentage share of public benefit activities executed by the research sample organizations that could not be delivered without the support scheme for PBOs consisting in the donation of funds from the personal income tax available in the Polish legal system. For 2018, this rate was 13% which, considering that the total costs of operation of PBOs in the researched group are at the level of PLN 94 million, means that the tasks of the execution cost of PLN 12 million could not be delivered by the researched organizations.

**Figure 8.** The percentage of revenues from the 1% scheme in revenues in total




Source: own elaboration.

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The rates reflecting the ratio of revenues earned from the 1% scheme to total annual revenues of organizations were also calculated for the research sample organizations. Average results for the individual years are presented in Figure 8.

The obtained results demonstrate that – in recent years – the scheme of financing public benefit activities from taxpayers' funds has become a significant source of revenue for the organizations. The absence of such a support instrument would result in reducing the amount of funds acquired by organizations for the implementation of socially useful tasks by 11%.

## Identification of Factors Affecting the Revenues Amount from 1% of Income Tax in Selected PBOs

The next research step consisted of the determination of correlations between the amount of revenues from 1% of personal income tax acquired by the organizations and explanatory variables adopted for research purposes based on theoretical considerations, along with the analysis of already existing empirical research focused on the organizations' performance published in national and international literature. So far, no one has ever performed similar empirical research on the financing operation of organizations from taxpayer funds. The factors affecting the amount of revenues earned by the organizations from different sources have been usually the measures associated with:

- organization coverage,
- the number of beneficiaries,
- the number of persons involved in activities,
- activity duration,
- remunerated and economic activity.

In order to verify the intercorrelations between the response variable and the explanatory variables, we calculated correlation coefficients. The obtained results allowed us to conclude that there is no significant correlation between the response variable (Y) and the explanatory variables (X1–X5). No significant correlation was noticed between individual explanatory variables. Thus, the assumptions were met for enabling the adoption of the proposed set of variables for further research and the performance of linear regression analysis for the response variable and explanatory variables.

The regression analysis with robust estimators was performed with the use of STATA 13.0 software. The results of the analysis are presented in Table 2.

**Table 2.** Results of linear regression analysis

| No. | Independent variables | Coefficien | T | P > \| t \| (p-value) |
|---|---|---|---|---|
| 1. | CONSTANT | 1638.752 | 0.31 | 0.753 |
| 2. | X1: organization coverage | 1736.862 | 2.51 | 0.013 |
| 3. | X2: the number of beneficiaries | .0114675 | 0.08 | 0.936 |
| 4. | X3: The duration of public benefit activity | -617.751 | -1.58 | 0.115 |
| 5. | X4: the number of persons involved in activities | 727.0485 | 6.77 | 0.000 |
| 6. | X5: remunerated and economic activity | 4441.686 | 1.73 | 0.085 |
| | R-square | 0.2984 | | |

Source: own elaboration in STATA 13.0.

Based on the results of the regression analysis in the above table, the regression obtained equation model is as follows:

$$Y = 1638{,}75 + 1736{,}86\ X1 + 0{,}011\ X2 – 0{,}62\ X3 + 727{,}05\ X4 + 4441{,}\ 69\ X5 + e$$

For the purpose of statistical hypotheses verification, we adopted the significance level of $\alpha=0.05$. The obtained results allowed us to conclude that:

- there are significant correlations between the amount of revenues from 1% of personal income tax (Y) and organization coverage (X1), but also the number of persons involved in its activity (X4).
- there are no significant correlations between the amount of revenues from 1% of personal income tax (Y) and the number of beneficiaries (X2), the duration of public benefit activity (X3), and remunerated and economic activity (X5).

The correlation between the amount of revenues from the 1% tax mechanism and organization coverage was not surprising. Organizations operating in a larger area are better known, more recognizable, and raise more funds for their activities from other sources. The number of people involved in activities (volunteers, employees) can also increase the organization's recognition, thus increasing the number of people – income taxpayers – who will transfer part of their taxes to a specific organization.

However, we should emphasize that the power of the adopted model is unsatisfactory. The R2 (R-squared) coefficient, named the coefficient of determination, specifies the

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level at which the variability of the response variable was explained by the variability of explanatory variables. In the performed research, the value of this coefficient was approximately 30%, which demonstrates the weak power of the adopted model. The variability of the response variable – i.e. the amount of revenues from 1% of income tax – was not explained by the variability of explanatory variables. This demonstrates that there are other factors affecting the amount of revenues earned from the 1% of personal income tax scheme.

## Conclusions

The results of our research on a random sample of PBOs demonstrate that approximately 13% of costs of statutory tasks implementation could not be delivered in the absence of the statutory option to support organizations with funds from 1% of personal income tax. The obtained results may serve as a baseline to perform further empirical research on different sources of PBOs' funding, including endowments, public fundraising, punitive damages, and funds from donations and grants, but also research comparing the sources of funding of organizations that operate in various areas of public benefit. The analysis of sources of funds acquisition with funds allocation purposes is also an option. One of the most interesting directions of research definitely is the measurement of the effectiveness of activities carried out by the organizations.

The absence of correlations between the amount of revenues from the 1% of tax scheme and conventional factors that determine the amount of revenues of foundations and associations encourages us to reflect on other factors – difficult to measure in practice or non-measurable – that could affect the amount of revenues from the discussed source. At the stage of developing the presented model, we were aware that the above set of variables may be insufficient to determine the variability of revenues from the 1% scheme due to the specific nature of this source of funding. Thus, we believe that the variables primarily include non-measurable factors, such as the recognizability of organizations in the society, the loyalty of taxpayers, and information campaigns conducted by the organizations.

The recognizability of organizations in society can depend on individual preferences of taxpayers, who may associate a given organization with certain activities or a celebrity heading the organization, which should be considered one of the factors difficult to define and measure in practice. Information campaigns concerning the option to allocate 1% of taxes form a separate issue. However, we should indicate that 95% of researched organizations recognized in their financial statements the amounts of funds allocated to advertising and information campaigns of PLN 0. In recent years, we observed an interesting practice that appeared among organizations that provide taxpayers with free software to prepare their tax returns. Software users cannot change the organization designated as the recipient of the 1% of tax. Such practices could form the object of separate empirical research.

Let us emphasize that the possibility to use a specific source of funding by entities with PBO status – i.e. the 1% of personal income tax scheme – is inextricably linked to the need for correct settlement with others and meeting additional reporting obligations. The preparation of technical reports on public benefit activities, in which organizations inform about funds acquired from the discussed source and their allocation, requires the adequate adjustment of accounting records and should become an inherent component of internal audit procedures performed in each entity. Using the discussed funding scheme requires adequate knowledge and a professional approach both by those managing organization finances and deciding on their allocation, along with those responsible for bookkeeping and reporting obligations.

## References

Act (2003) of 24 April 2003 on public benefit activity and voluntary work. Journal of Laws of 2019, item 688.

Anheier, H.K., Toepler, S., and Sokolowski, W. (1997). The implications of government funding for non-profit organizations: three propositions. *International Journal of Public Sector Management*, *10*. https://doi.org/10.1108/09513559710166057.

Aschari-Lincoln, J. and Jager, U.P. (2016). Analysis of Determinants of Revenue Sources for International NGOs: Influence of Beneficiaries and Organizational Characteristics. *Non-profit and Voluntary Sector Quarterly*, *45*(3). https://doi.org/10.1177/0899764015595721.

Bater, P., Hondius, F. and Kessler Lieber, P. (2003). *The Tax Treatment of Ngos: Legal, Fiscal and Ethical Standards for Promoting NGOs and their Activities*. Hague: Kluwer Law International.

Carroll, D.A. and Stater, K.J. (2008). Revenue diversifications in nonprofit organizations: Does it lead to financial stability? *Journal of public Administration Research and Theory*, *19*. https://doi.org/10.1093/jopart/mun025.

Chang, C.F. and Tuckman, H.P. (1996). *Revenue diversification among nonprofits*. *The International Journal of Voluntary and Nonprofit Organizations*, *5*.

Charycka, B. and Gumkowska, M. (2019). *Kondycja organizacji pozarządowych 2018*. Warsaw: Klon/Jawor Association.

*Civil Society Organization Sustainability Index* (2019). US Agency of International Development, Bureau of Democracy, Conflict and Humanitarian Assistance, Center of Excellence on Democracy, Human Rights and Governance, 22nd Edition.

Coleman, A. (2018). *Attraction and Retention of Individual Donor Funding in Nonprofit Organizations*. ProQuest Dissertations Publishing.

 DOI: 10.7206/cemj.2658-0845.36

Dyczkowski, T. (2015). Mierniki dokonań organizacji pożytku publicznego. Możliwości i ograniczenia stosowania. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, 398*. https://doi.org/10.15611/pn.2015.398.13.

Fischer, R.L., Wilsker, A., and Young, D.R. (2011). Exploring the revenue mix of non-profit organizations. Does it relates to publicness? *Non-profit and Voluntary Sector Quarterly, 40*(4). https://doi.org/10.1177/0899764010363921.

Garcia-Rodriguez, I., and Romero-Merino, M.E. (2020), *Financing nonprofit organizations*. New York, NY: Routledge. https://doi.org/10.4324/9780429265419.

Halperin, D. (2006). Income Taxation of Mutual Nonprofits. *59 Tax Law Review, 133*.

Herring, B., Gaskin, D., Zare, H., and Anderson, G. (2018). Comparing the Value of Nonprofit Hospitals' Tax Exemption to Their Community Benefits. *The Journal of Health Care Organization, Provision and Financing, 55*. https://doi.org/10.1177/0046958017751970.

Michalski, G. (2012). Operating cycle and nonprofit organizations efficiency. *Economics, Management, and Financial Markets, 7*(4).

Ministry of Finance (2018). *Informacja dotycząca kwot 1% należnego podatku dochodowego od osób fizycznych przekazanych organizacjom pożytku publicznego w 2018 roku (z rozliczenia za 2017 rok)*. Warsaw: Department of Income Tax.

Misiewicz, E.I. (2013). The influence of changes in personal income tax regulations on donating nonprofit organization. *Optimum. Studia Ekonomiczne, 5*(65). https://doi.org/10.15290/ose.2013.05.65.05.

Moore, D., Hadzi-Miceva, K., and Bullain, N. (2008). A comparative overview of public benefit status in Europe. *The International Journal of Not-for-Profit Law, 11*(1).

Muciek, A. (2012). *Wyznaczanie modeli matematycznych z danych eksperymentalnych*. Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej.

National Freedom Institute (2018). *Informacja dotycząca wydatkowania przez organizacje pożytku publicznego środków finansowych pochodzących z 1% podatku dochodowego od osób fizycznych*. Warsaw: Centre for Civil Society Development.

National Freedom Institute (2019a). *Base of financial statements and technical reports of public benefit organizations*. https://sprawozdaniaopp.niw.gov.pl/ (1.10.2019).

National Freedom Institute (2019b). *List of public benefit organizations entitled to receive 1% of personal income tax*. https://niw.gov.pl/opp/wykaz-opp/ (1.10.2019).

Parsons, L.M. (2007). The impact of financial information and voluntary disclosures on contributions to not-for-profit organizations. *Behavioural Research in Accounting, 19*. https://doi.org/10.2308/bria.2007.19.1.179.

Waniak-Michalak, H., and Zarzycka, E. (2013). Czynniki wpływające na wybór organizacji pożytku publicznego przez darczyńców indywidualnych w Polsce –czy dane finansowe mają znaczenie? *Zeszyty Teoretyczne Rachunkowości, 74*(130).

Young, D.R. (2007). *Financing nonprofits putting theory into practice*. Lanham, Md.: AltaMira Press.

Zieniuk, P. (2012). Źródła finansowania działalności pożytku publicznego w Polsce. Analiza zmian w latach 2005–2010. *Zeszyty Naukowe Polskiego Towarzystwa Ekonomicznego, 12*.

Zieniuk, P. (2019). Wykorzystanie systemu zwolnień podatkowych dla organizacji pożytku publicznego w praktyce polskich fundacji i stowarzyszeń. In: W. Skoczylas and K. Kochański (eds.) *Rachunkowość jako źródło informacji na potrzeby zarządzania wartością przez interesariuszy*. Szczecin: Scientific Publishing House of the University of Szczecin.