



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

# Volunteers in public benefit organizations in Poland and the UK - do the organizations' financial results depend on the number of volunteers?

**Halina Waniak-Michalak**

Management Department, Accounting Faculty, University of Lodz, Poland

e-mail: [hwaniak@uni.lodz.pl](mailto:hwaniak@uni.lodz.pl)

address: off.157, 22/26 Matejki Street, 90-237 Lodz, Poland

Many private institutions serving public purposes use volunteer work that they must disclose in their reports. In this paper, 315 public benefit organizations in Poland (PBOs) and 315 charities in the UK are analyzed using statistical methods. Differences in the level of disclosure and the degree to which PBOs' financial results depend on the number of volunteers are also described. The conclusion the research has offered is that UK PBOs operate on a wider scale and use volunteer work more frequently and that the Polish. Moreover, UK PBOs are not significantly different than Polish regarding the relationship between their financial results and the number of volunteers supporting their activities.

**JEL Classifications:** L31

**Keywords:** Volunteers, PBOs, financial results

## Introduction

Charitable non-profit organizations (also known as public benefit organizations (PBO) or simply: charitable organizations) have been the subject of research and of growing public concern since 1950s. The organisations fulfil socially useful purposes using public and private funds, contribute to the development of the society and of the economy, as well as helping alleviate social problems. Their activity is appreciated in both developing and developed countries. Poland is one of the developing countries where philanthropic organizations were not allowed to operate for 30 years after World War II. In contrast, the United Kingdom is considered to be the first developed country to set philanthropy in the institutional framework. A review of the literature of the subject leads to a question about whether the level of PBOs' experience in running charitable activities has a bearing on their performance and the tools they choose in different countries.

Many PBOs have free access to the resources of other organizations, services and gifts in kind. Because the products they deliver are unique, they are required to specify where their funding comes from and what their non-financial results are. The input of volunteer work is also disclosed in PBOs' reports (Pace and Basso, 2009, p.1). The provision of unpaid work is known as volunteerism. In Poland, unlike developed countries such as the United Kingdom, volunteer work is less popular than paid work. Most Poles would be unwilling to take up any sort of volunteer jobs benefitting the common good or people in need (Kinowska, 2012, p.4). Some studies (Salamon et al., 2003) show that Poland is at the bottom of the European ranking for the number of volunteers. However, in Western countries, too, people prefer paid work to volunteer work that they consider to be inferior to gainful employment (Hustinx, 2007, p.4).

This paper aims to determine whether PBOs' costs and revenues depend on how many volunteers they have. If it were so, the relationship could be used to compare PBOs for performance and volunteerism would be worth disclosing in financial statements as an item of measureable economic value. In the literature, the economic value of volunteer work is defined as the added value of activities that the organization generates by using volunteers. Added value may be either tangible or intangible and take forms such as improved employee morale, enhanced reputation of the organisation, or its higher efficiency in accomplishing socially useful objectives measured against charitable costs<sup>1</sup> or voluntary income<sup>2</sup> (Salamon et al., 2011).

The above goal will be achieved by analysing the outcomes of other studies and statistics and by interpreting discussions presented in the literature. It is likely that the findings of this research will be different for PBOs in Poland and the UK, because of different reporting requirements they must fulfil and the likelihood that some country-specific factors will be revealed during the analysis.

## Volunteerism in Poland and other countries

According to L. M. Salamon et al. (2003), charitable organizations in 35 countries have a total of about 36 million regular workers and volunteers (the latter are estimated at 12.6 million) in terms of full-time equivalent (FTE) employees. Considering that volunteers work irregular hours (e.g. a few hours a week) their real number may be much higher than that (about 190 millions). A Polish study has found that a volunteer contributes an average of about 12 hours of work a month (Nałęcz and Goś-Wójcicka, 2012, p.27). L. M. Salamon et al. (2003) estimated volunteers in Poland to account for about 0.2% of the economically active population (FTE). According to more recent studies, only about 10.3% of Poles older than 15 years of age work as volunteers, of which 9.6% are involved in PBOs (Nałęcz and Goś-Wójcicka, 2012, p.26). The results of a study commissioned by the Department of Public Benefit at the Ministry of Labour and Social Policy were similar, showing that 14.3% of Poles were volunteers in 2011 (Arczewska et al., 2011, p.11).

Some studies point out, however, that Polish PBOs are increasingly interested in volunteer work. Compared with 2006 when only 40% of them wanted to use external volunteers (for example other than staff members), in 2010 the rate was 50% (Arczewska et al., 2011, p.12-13) and in 2012 55% (Przewłocka et al., 2013, p.17). In PBOs, volunteers are usually (by frequency of indication) involved in administrative work, rescue operations during natural disasters, fire-fighting, fundraising, and collecting donations in kind (Nałęcz and Goś-Wójcicka, 2012, p.37). It is estimated that in 2010 volunteers in Polish PBOs contributed a total of about 2.5 billion hours, an FTE of 1.5 million employees (Nałęcz and Goś-Wójcicka, 2012, p.57).

TABLE 1. THE VALUE OF VOLUNTEER WORK IN POLAND AND OTHER COUNTRIES IN 2010

COUNTRY	POLAND	CANADA	USA	UK	GERMANY	ITALY
Volunteer work (% of GDP)	2.80%	6.80%	12.50%	2.28%	3.30%	1.09%
Volunteer work as equivalent of FTE employees*	1.5m	549,000	4,99m	1.2m	980,000	380,000
Volunteer GDP per volunteer (USD)	8,769.23	220,199	375,526	42,869.7	110,600.5	58,616.18

Source: prepared by the author based on Nałęcz and Goś-Wójcicka (Red.) (2012), *Wolontariat w organizacjach i inne formy pracy niezarobkowej poza gospodarstwem domowym - 2011*, GUS, Warszawa; Salamon, Sokolowski, and Haddock

<sup>1</sup> Costs spent on charitable purposes

<sup>2</sup> Main revenues of the charitable organization: gifts, donations and legacies from the public and grants from Government and other charitable foundations which provide core funding or are of a general nature. Distinctive characteristic: the donor receives nothing in return.

(2011), Measuring the economic value of volunteer work globally: concepts, estimates, and a roadmap to the future, "Annals of Public & Cooperative Economics", Vol.82 Issue3, pp.217-252.

\*FTE- Full Time Equivalent.

Table 1 points out that the value of volunteer work (as % of GDP) and the number of volunteers are higher in Poland than in the UK, so volunteerism is more important in the Polish economy. At the same time, low salaries paid in Poland (compared with the largest world economies) cause that the nominal value of volunteer work is also lower than in other countries. GUS (the Central Statistical Office) estimates the value of 1 hour of volunteer work in the Polish non-profit sector (including PBOs) at 24 PLN, which is more than in sectors such as construction, transport and tourism, culture and entertainment (Nałęcz and Goś-Wójcicka, 2012, p.70). This fact shows how significant volunteer work is and explains why NGOs should estimate its value. The importance of measuring volunteer work is also stressed by the International Labour Organisation (*International Labour Organization*, 2011). The ILO encourages countries to promote and monitor volunteerism and to present the number of volunteers and of the hours they work in national statistics. The work volunteers do on behalf PBOs is a sort of donation that needs to be valued.

Because studies highlight problems with managing volunteers and additional costs they involve in the organizations (e.g. the costs of supervision, coordination of activities, insurance, business travel, materials), it is also necessary for the nature of volunteer work to be explained (Przewłocka at al., 2013, p.8). The managers of some NGOs believe that volunteers help save money, but a more accurate statement would be that "volunteers allow us to carry out the tasks that we would not carry out otherwise" (Dalsimer, 1986, p.38).

### **PBOs' reports - the scope of information on volunteer work disclosed in Poland and the UK**

In Poland, foundations and associations began to grow in number in the early 1990s. Every year hundreds of new philanthropic organizations emerged, some of which decided to seek the status of a public benefit organization. The status, while granting certain privileges (e.g. eligibility for 1% of personal income tax donated by taxpayers), imposes also reporting obligations.

Financial statements and activity reports prepared by Polish PBOs must conform to the requirements of the *Accounting Act* (1994), *the Act on Public Benefit Activities and Volunteering* (2003), and the *Regulation of the Minister of Finance* (2011 and 2013). The financial statement of an organisation must contain its balance sheet, a profit and loss statement and additional information. How activity reports should be prepared is prescribed in the annex to the *Act of the Minister of Labour and Social Policy* (2013). Activity reports must provide financial and non-financial information about the number of employees and volunteers in the organisation, the assessments of financial statements, the outcomes of audits, as well as detailed information about salaries. The volunteer information must indicate how many volunteers the organization has used by period (shorter and longer than 30 days). PBOs are also required to disclose whether volunteers were the members of their personnel, members of the board, individuals who signed casual work contracts with the organisation, or people from outside the organisation. The amount of presented information must make the PBO transparent to the public and must prove that neither its members nor employees pursue personal interests that might be detrimental to the socially useful goals of the organisation. Special attention is paid to the way public funds (1% of taxpayers' personal income tax) are distributed. The purpose of activity reports is to show the donors that their funds are spent on the main objectives of the organization.

The UK authority in charge of supervising PBOs' activities and their financial reports is the Charity Commission. The Commission requires of the PBOs to submit the following types of documents (Charity Commission, 2004a, p.11):

- the annual update form. Although some non-profit organizations are exempted from the mandatory submission of annual financial statements, all PBOs must complete identity forms with the most important data (also financial) for the database to be updated and for the Charity Commission to be able to keep control over their activities. PBO's non-compliance with the requirement can be a reason for the Commission to strike a PBO off from the register<sup>1</sup>;
- the annual report and accounts prepared on a receipts and payments basis or a statement of financial transactions detailing all sources of PBO's incomes and costs, a balance sheet, notes explaining what the income and costs are made of, as well as information about assets and liabilities.
- the audit report, in the case of organisations the financial statements of which must be audited under the Act on Public Benefit of 2006.

PBOs forming a capital group must prepare a consolidated report that their parent company submits to the Commission. All information provided must comply with the principle of a true and fair view. PBOs disclosing information on the number of volunteers should do this following the recommendations of the Charity Commission, but the voluntary character of the information causes that not all non-profit organizations in the UK reveal it.

PBOs do not appraise the value of volunteers as a human resource. Even though issues in intellectual capital measurement have long been discussed in the literature, accounting has not solved (despite a few attempts) the problem of fair valuation and recognition of this capital in the reports (Dobija, 2004). Financial statements do not have the space where organisations might indicate the number of volunteers and the value of their work. The profit and loss statement, one of the mandatory financial documents, does not allow its users to evaluate how public benefit organizations perform. Researchers suggest that the statement has been designed to cater for the information needs of investors, mainly the owners of the entity, for example to enable them assessments of the performance of their investments. PBOs do not need to present their financial results, as the primary reason for which they exist are non-financial (Henke, 1972, p.53). The structure of the profit and loss statement has been somewhat modified, but PBOs preparing financial statements are still required to abide by the general accounting rules. However, volunteer work does not necessarily be connected with the direct use of organisational resources, contribute to the creation of PBO's assets or increase their value, so its value cannot be accounted for in the profit and loss statement. The problems that PBOs face in valuing volunteer work and disclosing the pertinent information in financial statements have been noticed by the UK's Accounting Standards Board. The Board proposed that the value of volunteer work should be calculated for accounting purposes only if it can be reliably measured, and if the disclosure benefits are greater than the cost of preparing the information. It is, however, assumed that in most cases a reliable valuation of volunteers' work is not possible. Their services should be valued when replacing services that the organization would have to pay for in the market, e.g. accounting services or legal advice (Accounting Standard Board, 2013). Interviews with auditors have revealed (Cordery et al., 2013, p.52) that they were unwilling to encourage charitable organizations to measure and include voluntary work in the reports, as this could increase the auditors' workload. The auditors indicated, however, that it would be useful to have information on the number of hours contributed by

---

<sup>1</sup> This seems like a good way to solve the Polish problem of timelessness of PBOs' data. It is thought the Polish national court register and the PBO register contain many organisations units that have been inactive for a long time. That it might be so is supported by the fact that many PBOs do not publish their annual reports (required by law) on the website [www.bopp.gov.pl](http://www.bopp.gov.pl). Moreover, it is not possible to find information about them on the websites.

volunteers and on the number of volunteers as a proportion of employees in the organisation (Cordery et al., 2013, p.52).

Many researchers argue that as a result of problems with presenting the value of volunteer work in financial statements organisations' resources, incomes and costs are understated (Mook and Quarter, 2006, pp.2-3). Studies show that many NGOs only indicate how many volunteers they have. Very few of them estimate and disclose the value of their work (Mook et al., 2007, p.1), even though the work is important for the public (hospices) and charitable organizations themselves.

Further, underestimated incomes and costs make it more difficult to compare the performance of charitable non-profit organizations (CNPOs) that use different proportions of paid and volunteer (unpaid) work (Dalsimer, 1986, p.17). The CNPO managers are ambivalent about the proposals to assess the economic value of volunteer work. Firstly, they do not understand that this information is important to stakeholders (including the governments) and that it may have a bearing on their future results. The number of volunteers and the value of their work in the organisation can be an indication of its strength, enhance its reputation and show the managers what organisational resources are available to them.

TABLE 2. BARRIERS AND BENEFITS IN DISCLOSING THE VALUE OF VOLUNTEER WORK

SOURCE	BARRIERS	BENEFITS
Cordery and Naraway, 2010; 2006	Insufficient human resources and funds. Complicated and time-consuming measurement methods.	The availability of complete information about the organization. The government has information about the total amount of welfare.
Cordery et al., 2013	Volunteers opposing the measurement of their work. High costs of preparing the information. Technical problems with calculating the amount of volunteer work.	Enhanced reputation of the organization. Knowledge of volunteers' contribution.
Sajardo and Serra, 2011	Lack of the necessary data. Volunteers opposing the measurement of their work. Imperfect measurement methods.	The correct value of GDP, for example allowing for volunteer work, can be calculated.
Trigg and Nabangi, 1995	The organisation may lose some of its incomes once it is not perceived as poor any more.	Compliance with disclosure standards.
Bowman, 2009	Volunteer work cannot be replaced by paid work, so its economic value cannot be determined. The diversity of volunteer services and the lack of time-keeping. Imprecise measurement methods.	Greater transparency of the organization.
Dalsimer, 1986	There is no legal obligation to measure volunteer work. The organisation does not want to be compared with other organizations. Managers think that the information is not useful.	The possibility of evaluating an organisation with all its incomes and costs. Greater transparency of the organization.
Salamon et al., 2011	Volunteer work cannot be attached a market value. Difficulties in assessing the results and products of volunteer work and in assessing the market value of the products.	More efficient management of volunteers. The public thinks higher of volunteer work, publicity for the organization and its social work.

Source: Developed by the author.

The gathering of data necessary to value volunteer work may be costly, though, and exceed the financial skills of many CNPOs. Polish PBOs even have the problem breaking down their costs into charitable and administrative (Waniak-Michalak, 2012). To be able to value volunteer work an organisation must monitor how long they work, understand the nature of their services, and extract costs relative to their training, supervision, the consumption of materials and energy, etc. These tasks are beyond the technical and

financial capacity of these organizations (Cordery et al., 2013, p.48). Table 2 presents major problems and benefits of measuring the value of volunteer work.

According to Dalsimer (1986), managers in non-profit organizations are doubtful about whether the value of volunteer work is useful information. They are also afraid that having presented the value of volunteer work they make it easier for donors to compare how they perform against other PBOs. There is also the tendency to believe that information not required by the law is insignificant (Dalsimer, p.17). Bowman (2009) argues that the special nature of volunteer work seriously hampers its measurement. For one thing, volunteers frequently provide services that are difficult to measure, e.g. assist dying or terminally ill people or raise funds. Further, volunteers frequently use their spare time, outside their regular schedule of work. Still another problem is that the models used to value volunteer work disregard the diversity and special character of their services, so their output is less reliable (Bowman, 2009; Sajardo and Serra, 2011). Measuring volunteer work and reporting on its value may also be difficult because of people doing different tasks as volunteers and in their primary jobs. In such cases, the methods with which the value of volunteer work is measured (the replacement cost approach<sup>1</sup> or the opportunity cost approach<sup>2</sup>) may lead to its underestimation or overestimation (Pho, 2008, p.226).

Dalsimer has observed that valuing volunteer work allows determining the correct amounts of incomes and costs. In organizations using volunteer work, he argues, incomes and costs are understated compared with organizations with permanent employees. Higher comparability of their results can be achieved by adjusting their respective incomes and costs. Information about the value of volunteer work can also be used by PBOs to evaluate their performance and by the public sector institutions to assess the full scale of welfare services. According to Dalsimer (1986), the information can also serve as encouragement for volunteers, because, in his opinion, all employees and volunteers want to be appreciated. When work is not evaluated or when the evaluation process is perfunctory, the risk of injustice among the workforce is increasing (Dalsimer, 1986, p.18).

His arguments have been challenged by the results of other studies (Cordery et al., 2013; Sajardo and Serra, 2011), according to which the reason why philanthropic organizations in New Zealand do not value the work done by volunteers is their unwillingness to be measured. The New Zealand volunteers want to remain anonymous and reject the possibility of their work being measured or monitored, because they believe this would damage the very idea of volunteer work that, by definition, should be an act of individuals' free will and of their desire to help those in need. As a result, they have concluded that volunteers should not be categorized.

## Methodology and hypothesis

The sample of charitable organizations examined in this study consists of 315 public benefit organization based in Poland and the United Kingdom, which were selected through simple random sampling with replacement.

Polish PBOs were drawn from their register which is available on the website of the Department of Public Benefit, the Ministry of Labour and Social Policy. When the organization drawn was found not to have submitted a report or the report was incomplete, another organization was drawn. In this way, a total of 414 Polish PBOs were selected, of which 99 were removed from the sample: 10 were not registered and their financial statements were not published and the other 89 had either published incomplete reports or the great number of errors in their financial statements rendered the data useless.

Concerning the United Kingdom, 733 entities were drawn from the set of philanthropic organizations registered at the Charity Commission, of which 418 were rejected for the

<sup>1</sup> Assigns a shadow wage rate equal to the market wage for the activity performed.

<sup>2</sup> Values labor at the wage for the volunteer's primary occupation

non-disclosure of information on the number of volunteers they had. The analysis was performed using IBM SPSS Statistics 20.

Based on the literature review and the author's previous research, the following hypotheses were formulated:

Hypothesis H1: *The correlations between the number of volunteers in a PBO and its incomes and between the number of volunteers and PBO's costs are negative in both Poland and the UK.*

Hypothesis H2: *The relationships between the number of volunteers in a PBO and its costs and between the number of PBO's volunteers and its incomes are significantly weaker in Poland than in the UK.*

Hypothesis H1 derives from the empirical studies according to which organizations based on volunteer work have lower costs and incomes than other organizations do (Mook et al., 2007; Dalsimer, 1986). It is so because the former do not pay salaries, so their expectations of incomes are lower.

Hypothesis H2 has been formulated because of volunteerism being more popular in the UK and because of the greater experience of UK organizations in managing volunteers resulting from the long history of charitable activity in this country. Because of this experience, volunteer work may have stronger influence on the organisations' incomes.

Given that the number of volunteers is a discrete variable and the distribution of other variables was significantly different from normal, both hypotheses were verified using non-parametric tests: the Kruskal-Wallis test, the Spearman's Rank Correlation Coefficient and the modified Fisher z-transformation (Fieller and Pearson, 1961).

## Results of the research

A preliminary initial analysis of the statements disclosed by Polish PBOs revealed that they had failed to show all volunteer information required by the law. As many as 79 of the 414 PBOs did not state how many volunteers they had: they put zero in the 'number of volunteers' box and the 'number of employees' box. Some PBOs (10) presented unreliable data, because in the same report the number of employees was accompanied by a zero payroll, or total salaries were lower than the sum of their components. These findings seem to imply that either managers in the Polish PBOs have a vague understanding of the term "volunteer" or the information is inaccurately prepared.

Most UK philanthropic organizations (57%) in the sample did not state the number of volunteers, but only the number of employees.

TABLE 3. STATISTICS OF INDEPENDENT VARIABLES

STATISTICS		POLAND			UK	
		NO. OF VOLUNTEERS	NO. OF EMPLOYEES	NO. OF CONTRACTS	NO. OF VOLUNTEERS	NO. OF EMPLOYEES
N	Valid	315	315	315	315	315
	Missing	0	0	0	0	0
Mean		42.81	9.28	22.23	88.33	485.17
Median		9.00	1.00	4.00	21.00	50.00
Percentiles	25	0.00	0.00	0.00	12.00	11.75
	75	28.00	5.00	17.00	39.00	154.00

Source: Developed by the author.

The statistical analysis showed that while most Polish foundations used paid work, a large proportion of them also sought the assistance of volunteers (73%). Of 44% of Polish



PBOs that did not have regular personnel, only 19% did not use paid work at all<sup>1</sup>. Polish PBOs prefer to sign fixed-term employment contracts or casual work contracts. These two types of employees usually have the same duties as permanent employees, but they are not entitled to the same benefits as the latter are and the organisation that employs them pays lower personal income tax and social insurance on them.

Considering that the UK PBOs is longer than the Polish ones, they also have more volunteers and employees. Most Polish PBOs emerged in the early 1990s, after the fall of communism. The relatively short period of their activity and weaker involvement in voluntary services have a bearing on the degree to which they use volunteer work.

Because Polish PBOs are required to disclose also additional information on the structure of volunteers, the analysis of volunteerism in Poland could be continued. Statistics showed that in Polish PBOs volunteers working longer than 30 days a year were significantly outnumbered by those who offered help on a short-term basis.

The above fact reveals high volunteer turnover in Polish PBOs and so it confirms the outcomes of earlier studies indicating problems with the valuation of volunteer work caused by its irregular character (Bowman, 2009). As the structure of Polish volunteers showed, most PBOs did not seek external volunteers<sup>2</sup>. Most unpaid work in PBOs was done by their permanent employees or founders, which probably attributable to the aforementioned low popularity of volunteerism in Poland. The donation of private time may also be perceived as harder and more costly than a donation in cash.

TABLE 4. THE STRUCTURE OF VOLUNTEER WORK IN POLISH PBOs

STATISTICS	VOLUNTEERS FOR LESS THAN 30 DAYS				VOLUNTEERS FOR MORE THAN 30 DAYS			
	Labour<30	Serv<30	Manag<30	Others<30	Labour>30	Serv>30	Manag>30	Others>30
All volunteers	92	177	165	8107	113	824	530	3175
Mean	0.29	0.56	0.52	25.74	0.36	2.62	1.68	10.08
Max	33	43	18	3100	26	518	58	527
Number of PBOs	14	20	47	119	25	33	129	129
% Of PBOs	4.44	6.35	14.92	37.78	7.94	10.48	40.95	40.95
All volunteers as %	1.06	2.05	1.91	93.70	2.33	16.95	10.91	65.33

Source: prepared by the author using SPSS Statistics 20

Notes: Labour<30 number of regular employees working on a voluntary basis less than 30 days; Serv<30 number of employees with casual work contracts working on voluntary basis less than 30 days; Manag<30 number of PBO managers working on a voluntary basis less than 30 days; Others<30 number of volunteers other than PBO's personnel working on a voluntary basis less than 30 days; Labour>30 number of personnel working on a voluntary basis more than 30 days; Serv>30 number of employees with casual work contracts working on a voluntary basis more than 30 days; Manag>30 number of PBO managers working on a voluntary basis less than 30 days; Others>30 number of volunteers other than PBO personnel working on a voluntary basis more than 30 days.

An analysis of information provided by Polish BBOs in their activity reports revealed their reliance on paid work. Even PBO managers and founders want to be paid. Most volunteers provide services occasionally and stay with a philanthropic organization up to 30 days. This information is useful for stakeholders who want to learn about the attitudes of the PBO's personnel and managers. According to earlier studies (Waniak-Michalak and Zarzycka, 2013), donors appreciate information that the organization pays for work or has support from volunteers. The awareness that both employees and managers commit some of their time to the organization may encourage people to give their non-financial and financial support to it.

<sup>1</sup> Many organizations in Poland sign casual work contracts instead of employment contracts to have less problem dismissing the employee.

<sup>2</sup> Volunteers other than employees, managers or members of the organization.

The reliability of the disclosed information seems to pose some problem, though. The earlier studies have found that PBOs tend to "dress up" their data in various ways (Yetman and Yetman, 2013), so that they look better to potential donors. In this research it has been established that PBOs provide data that are potentially useful but not necessarily reliable. Although the form completion instructions require that each volunteer be counted only once, either as a person involved with the organization for a period shorter than 30 days or longer than 30 days, some of the analysed organizations failed to comply. The identified errors were the following:

- the number of managers doing voluntary work exceeded the number of those managing the organization;
- members of the supervisory board were counted just as members and for some PBOs they were neither volunteers nor employees;
- organizations that reported not to have regular employees indicated that the volunteers were their employees;
- foundations indicated that the volunteers were their members, although the law does not allow foundations to have members.

For the purpose of testing hypothesis H2, the sample was divided into three groups:

1. Organizations using only volunteer work,
2. Organizations using only paid work, and
3. Organizations using both types of work (unpaid and paid).

The non-parametric Kruskal Wallis test which was used (Pallant, 2005) in the first stage of the analysis showed that the groups were significantly different in the distribution of costs and incomes. It pointed to three groups of organizations as being significantly different in terms of performance, costs and incomes (Table 5).

TABLE 5. THE KRUSKAL-WALLIS TEST STATISTICS FOR PBOs IN POLAND

STATISTICS	VOLUNTARY INCOME	TOTAL COSTS	CHARITABLE COSTS	ADMINISTRATIVE COSTS
Chi-square	38.83	53.00	24.51	38.08
Df	2.00	2.00	2.00	2.00
Significance	0.00	0.00	0.00	0.00

Source: Prepared by the author using SPSS Statistics 20.

To identify which groups these were, the Mann-Whitney's test was applied to each pair of groups of Polish PBOs, for example:

1. PBOs using only regular employees and PBOs using only volunteers
2. PBOs using only employees and PBOs using both volunteers and employees
3. PBOs using only volunteers and PBOs using both volunteers and employees

TABLE 6. THE STATISTICS OF THE MANN-WHITNEY'S U-TEST FOR POLISH PBOs

GROUPS	STATISTICS	VOLUNTARY INCOME	TOTAL COSTS	CHARITABLE COSTS	ADMINISTRATIVE COSTS
Only volunteers and only employees	Z	-5.90	-4.69	-6.86	-5.79
	Asymp. Sig. (2-tailed)	.000	.000	.000	.000
Only employees and volunteers + employees	Z	-2.05	-2.97	-1.80	-.73
	Asymp. Sig. (2-tailed)	.040	.003	.072	.464

Only volunteers and volunteers + employees	Z	-8.01	-7.75	-8.62	-6.97
	Asymp. Sig. (2-tailed)	.000	.000	.000	.000

Source: Prepared by the author using SPSS Statistics 20.

The Mann-Whitney's test (Table 6) showed that in terms of overheads and administrative costs Polish PBOs using volunteer work and PBOs that only used paid work were not significantly different from each other. However, the first group of organisations had higher incomes. This fact may indicate that in Poland volunteers increase the effectiveness of regular employees or that their job is to collect funds for the organization rather than replacing regular employees in their work. PBOs that did not use paid work and the other PBOs were significantly different regarding their financial performance. This may mean that regular employees are more important for the incomes and costs of Polish PBOs than volunteers are.

Because among the UK PBOs only one organization had no employees at all, the Mann-Whitney's test was applied (Pallant, 2005) to two groups of organizations: one using both paid work and volunteer work and one formed of organisations without volunteers (Table 7).

TABLE 7. THE STATISTICS OF THE MANN-WHITNEY'S U-TEST FOR UK PBOs

	VOLUNTARY INCOME	TOTAL COSTS	CHARITABLE COSTS	ADMINISTRATIVE COSTS
Mann-Whitney U	3952.00	4297.00	4162.50	5182.00
Z	-2.66	-2.01	-2.26	-0.34
Significance	0.01	0.04	0.02	0.73

Source: Prepared by the author using SPSS Statistics 20.

The Mann-Whitney's test showed that in terms of overheads and administrative costs UK PBOs using volunteer work and PBOs that only used paid work were not significantly different from each other. However, as in Poland, the PBOs using unpaid work in UK had different charitable cost, total costs and voluntary income than other PBOs. It may mean that (as Dalsimer and other researchers suggested) PBOs using the volunteer's work underestimate their incomes and costs.

The test complete the basic descriptive statistics calculated for each group, for example for organizations that did not use unpaid work, for organizations that did not use paid work, and for organizations that used both types of work.

TABLE 8. THE MEDIAN AND MEAN OF THE INCOME AND COST OF POLISH PBOs (PLN) AND UK PBOs (£)

GROUP	MEASURE	VOLUNTARY INCOME	TOTAL COSTS	CHARITABLE COSTS	ADMINISTRATIVE COSTS
POLAND					
Only employees	mean	1 313 693.12	1 085 300.12	882 910.92	123 398.60
	median	288 075.00	287 637.00	126 439.00	28 020.00
Only volunteers	mean	157 601.65	108 147.81	102 517.19	5 630.61
	median	46 734.00	25 008.00	19 327.00	1 814.00
Employees and volunteers	mean	2 299 487.66	1 978 651.65	1 710 680.40	184 761.90
	median	502 776.00	453 422.00	37 978.00	39 387.00
UK					
Employees and volunteers	mean	5 379 808.19	5 308 926.29	4 464 387.78	45 919.27
	median	824 622.00	788 800.00	692 800.00	14 500.00
Only employees	mean	2 649 307.45	2 327 619.29	2 069 342.11	37 571.05
	median	1 094 826.00	935 613.00	916 350.00	14 250.00

Source: Prepared by the author using SPSS Statistics 20.

In table 8, the average and median values of incomes and costs are the highest for Polish PBOs using both paid and unpaid work. The results are against of Dalsimer's conclusion, that all PBOs using the volunteer's work underestimate their incomes and costs. This seems to indicate that in organisations using both paid and unpaid work, regular employees and volunteers complement each other. It may be that the regular employees are more productive when supported by volunteers. In this way, the range of PBOs' activities reflected by the amount of costs can be extended. The smallest incomes are reported by organizations that only use volunteers (that replaced regular personnel with volunteers). The interchangeability of voluntary and paid work causes underestimation of costs and incomes in organizations that only use unpaid work and so it may affect the comparability between the performance of organizations with paid employees and those using only volunteers. It is noteworthy, however, that the latter may have smaller incomes than the other PBOs, because of limited experience, the low popularity of their services, or few services they can offer.

The subsequent analysis of Polish PBOs by age showed this parameter determines neither their incomes nor the number of volunteers they use. It is therefore possible that the findings have a different explanation. In foundations that only use unpaid work lower incomes may be caused by lower productivity of volunteers than of regular employees.

Among the UK PBOs, organisations that only had regular personnel had a higher median of incomes and costs (excluding administrative costs) than organisations that additionally used the support of volunteers. The distinguished groups had significantly different overheads, incomes and charitable costs, but PBOs that only used regular employees and PBOs that used both paid and unpaid work were not significantly different from each other regarding overheads and administrative costs.

The results of the Kruskal-Wallis test showed that only PBOs using voluntary work and PBOs paying for work had different financial results. This may imply that the PBO's attitude to charitable work (for example the ratio between employees' financial and non-financial goals) has effect on the level of the organisation's costs and revenues.

Spearman's rank order correlation was run to determine whether the frequency with which PBOs use paid and unpaid work and their costs and incomes were significantly correlated (Table 9).

TABLE 9. SPEARMAN'S RANK ORDER CORRELATION

VARIABLE	MEASURE	VOLUNTARY INCOME	CHARITABLE COSTS	TOTAL COSTS	ADMINISTRATIV E COSTS
POLAND					
Volunteers	Correlation coefficient	0.15**	0.19**	0.12*	0.05
	Sign. (2-tailed)	0.01	0.00	0.03	0.38
Employees	Correlation coefficient	0.72**	0.61**	0.73**	0.49**
	Sign. (2-tailed)	0.00	0.00	0.00	0.00
Casual work contracts	Correlation coefficient	0.53**	0.53**	0.56**	0.29**
	Sign. (2-tailed)	0.00	0.00	0.00	0.00
UK					
Volunteers	Correlation coefficient	0.20**	0.18**	0.16**	0.07
	Sign. (2-tailed)	0.00	0.00	0.00	0.22
Employees	Correlation coefficient	0.64**	0.68**	0.67**	0.21**
	Sign. (2-tailed)	0.00	0.00	0.00	0.00

Source: Prepared by the author using SPSS Statistics 20.

Note: \* - correlation significant at p=0.05 (2-tailed); \*\* - correlation significant at p=0.01 (2-tailed).

The test showed a statistically significant and positive correlation between the number of PBO's volunteers and the amount of its costs and voluntary income (at a level of significance of  $\alpha = 0.01$ ) in both Poland and the UK (Table 9). The correlation between the number of volunteers and administrative costs was statistically significant too. At the same time, the correlation between the number of PBO's employees and the amount of its costs and incomes was significantly stronger than that between the number of volunteers and financial results.

Because PBOs that (i) only used paid work, (ii) only used volunteer work, and (iii) used both paid and volunteer work, were found to have significantly different incomes and costs, a comparative analysis of Spearman's correlation coefficients was applied to two groups of Polish PBOs. One contained organisations that used paid as well unpaid work and the other consisted of those that either used or did not use paid work. Because only one PBO in the UK conducted all its activities through volunteers, correlation was tested only for PBOs using voluntary as well as paid work (Table 10).

TABLE 10. SPEARMAN'S RANK ORDER CORRELATION COEFFICIENTS FOR TWO GROUPS OF PBOs

CORRELATION COEFFICIENTS FOR POLISH PBOs USING ONLY ONE TYPE OF WORK					
VARIABLE	MEASURE	VOLUNTARY INCOME	CHARITABLE COSTS	TOTAL COSTS	ADMINISTRATIVE COSTS
No. of volunteers	Correlation coefficient	-0.44**	-0.035**	-0.53**	-0.45**
	Sign. (2-tailed)	0.00	0.00	0.00	0.00
	N	142	142	142	142
<i>Correlation coefficients for Polish PBOs using both types of work</i>					
No. of volunteers	Correlation coefficient	0.23**	0.25**	0.23**	0.12
	Sign. (2-tailed)	0.00	0.00	0.00	0.11
	N	173	173	173	173
<i>Correlation coefficients for UK PBOs using both types of work</i>					
No. of volunteers	Correlation coefficient	0.65**	0.72**	0.24**	0.70**
	Sign. (2-tailed)	0.00	0.00	0.00	0.00
	N	276	276	275	276

Source: Prepared by the author using SPSS Statistics 20.

Note: \*\* - significance on the level  $\alpha = 0.01$

This test revealed that both in Poland and the UK the correlation between organisation's incomes and the number of volunteers and between organisation's costs and the number of volunteers was significant. However, the direction of the correlation varied depending on whether the PBO only used paid work or only unpaid work, or whether volunteers were used in aid of the regular employees. Because of that, hypothesis H2 that the number of volunteers a PBO has negatively affects its incomes and costs and thereby leads to the underestimation of their amounts had to be rejected.

The above results imply a positive correlation between PBO's financial performance and the number of volunteers when the latter are used in support of regular employees. Otherwise, the correlation between incomes or costs and the number of volunteers is negative. To establish whether or not it is really so more detailed data (e.g. on the types of volunteer work) and further empirical research are necessary.

To test hypothesis H3 that the costs and incomes of UK PBOs show stronger dependence on the number of volunteers compared with Polish PBOs, a modified Fisher z-transformation test was conducted (Table 11)<sup>1</sup>.

TABLE 11. FISHER Z-TEST FOR VOLUNTEERS

	VOLUNTARY INCOME	TOTAL COSTS	CHARITABLE COSTS	ADMINISTRATIVE COSTS
UK Rho Spearman	0.20	0.18	0.16	0.07
Poland Rho Spearman	0.15	0.19	0.12	0.05
r <sup>1</sup>	0.20	0.19	0.17	0.07
r <sup>2</sup>	0.15	0.20	0.12	0.05
Z	0.63	-0.11	0.50	0.24
p	0,26	0,54	0,30	0,40

Source: Prepared by the author using SPSS Statistics 20.

According to the results of the test, the hypothesis predicting that the two correlation coefficients differ statistically significantly from each other must be rejected. In other words, the number of volunteers a PBO has does not depend on its financial performance and financial performance is not determined by the number of volunteers. This appears to be another proof that PBOs take volunteers to support their regular personnel, particularly that the correlation between the number of PBO's employees and its incomes and costs is significant in both Poland and the UK (Table 11).

## Conclusion

The tools for achieving the purpose of this article were empirical research and a literature review. The correlation between the financial performance of Polish and British PBOs and the number of their volunteers was determined based on statistical analysis.

The number of volunteers indicated by Polish PBOs in their activity reports was found to be positively correlated with their charitable costs and revenues. The correlation was negative only in the case PBOs that did not use volunteers and regular employees at the same time. The strongest positive correlation between the number of volunteers used by PBOs and their incomes and costs was established in both Poland and the UK for organisations using volunteers as well as paid staff.

The statistical tests led to the rejection of the hypothesis predicting that the number of volunteers negatively affects the amounts of Polish PBO's incomes and costs. Hence, a hypothesis was formulated that the direction of the correlation between these two variables depends on whether volunteers are used instead of or in support of paid staff.

The two reasons why PBOs in Poland use volunteers less often than the UK organisations may be cultural dissimilarities between the two countries and different views on volunteer work in their populations.

<sup>1</sup> Fieller E.C.; Pearson E.S. (1961) presented in their paper a modified test for Rank Correlation

Coefficients using the following descriptive statistic: 
$$z = \frac{r_1' - r_2'}{\sqrt{\frac{1,06}{n_1 - 3} + \frac{1,06}{n_2 - 3}}}$$

The research sought to establish whether PBOs' costs and incomes depend on the number of volunteers they use. In both Poland and the UK, the correlation between PBOs' financial performance and the number of volunteers was found to be low. It was also much weaker than that between their financial performance and the number of paid staff. Moreover, the analysis showed that the knowledge of the number of volunteers does not necessarily make it easier to compare the results of PBOs and that some volunteers' tasks are not measurable.

A thesis has been proposed that the correlation between the financial performance of a public benefit organization and the number of volunteers is positive when they are used in support of the paid staff. Otherwise, the correlation between incomes and costs and the number of volunteers is negative. To find out whether or not the thesis is valid more detailed data must be available, e.g. on the type of work done by volunteers, so further empirical research is necessary.

The focus of the presented analysis was on PBOs in Poland and the UK. It investigated the differences in disclosure levels and the degree to which their financial performance depended on the number of volunteers they used. The UK PBOs were found to run a wider range of activities and to use volunteer work more frequently. At the same time, the Polish and UK PBOs were not significantly different regarding the correlation between their financial results and the number of volunteers. This shows that the information about the number of volunteers in a PBO is of little use, because neither the importance nor value of volunteer work can be derived from it. The information can even mislead the donors. A large number of volunteers may suggest that a PBO is popular and reliable, but it might as well be an indication of high turnover of volunteers who for different reasons do not want to stay with the organization for a long time.

The reasons why the financial results of PBOs depend on the type of work done by volunteers will be a matter of further research.

## References

- Accounting Standard Board, FRS 102. The Financial Reporting Standard applicable in the UK and Republic of Ireland, London
- Arczewska M., Calek G., Gliwicka E., Pazderski F., Rustecki W., and Bobek K., 2011. Długofalowa polityka rozwoju wolontariatu w Polsce [Longterm politics of volunteer work development in Poland] [www.pozYTEK.gov.pl](http://www.pozYTEK.gov.pl), accessed on 28.08.2013
- Bowman W., 2009. "The economic value of volunteers to nonprofit organizations", *Nonprofit Management and Leadership*, Vol.194, pp.491-515
- Cordery C. and Narraway G., 2006. "The invisible crowd - valuing volunteer service"s. *Chartered Accountants Journal*, Vol.85(11), pp.71-74
- Cordery C. and Narraway G., 2010. "Valuing Volunteers: Expanding the Relevance and Reliability Debate", *Australian Accounting Review*, Vol.20(4), pp.334-344
- Cordery C.J., Proctor-Thomson S.B., and Smith K.A., 2013. "Towards communicating the value of volunteers: lessons from the field", *Public Moneyand Management*, Vol.13(2), pp.47-54
- Dalsimer P., 1986. "Financial records and the Value of Volunteers", *Nonprofit world*, Vol.4(3), pp.17-38
- Dobija D., 2004. *Pomiar i sprawozdawczość kapitału intelektualnego przedsiębiorstwa*. Wydawnictwo Wyższej Szkoły Przedsiębiorczości i Zarządzania im. Leona Koźmińskiego, Warszawa
- Fieller E.C. and Pearson E.S., 1961. "Tests for Rank Correlation Coefficients: II", *Biometrika*, Vol.48(1/2), pp.29-40
- Henke E.O., 1972. "Performance evaluation for not-for-profit organizations", *The Journal of Accountancy*, Vol.133, pp.51-55
- Hustinx L., 2007. "Brave New Volunteers? The Value of Paid and Unpaid Work for Flemish Red Cross Volunteers", *International Journal of Voluntary and Nonprofit Organizations*, Vol.18(1), pp.73-89

- International Labour Organization, 2011. *Manual on the measurement of volunteer work*, Geneva
- Kinowska Z., 2012. "Kondycja społeczeństwa obywatelskiego w Polsce", *Biuro Analiz Sejmowych*, Vol.22(136), pp.1-10
- Mook L., Handy F., and Quarter J., 2007. "Reporting volunteer labour at the organizational level: A study of Canadian nonprofits", *Vol.18*, pp.55-71
- Mook L. and Quarter J., 2006. "Accounting for the social economy: the socioeconomic impact statement", *Annals of Public and Cooperative Economics*, Vol.77(2), pp.247-269
- Nalęcz S. and Goś- Wójcicka K. (Red.), 2012. *Wolontariat w organizacjach i inne formy pracy niezarobkowej poza gospodarstwem domowym - 2011*[Volunteers in organizations and other forms of unpaid work]. GUS, Warsaw
- Pace, E. S.U. and Basso, L. F. C., 2009. "Social return on investment, value added and volunteer work", *Journal of the Academy of Business and Economics*, Vol.9(3), pp.42-58
- Pallant J., 2005. *SPSS survival manual*, Open University Press, Berkshire
- Pho Y.H., 2008. "The value of volunteer labor and the factors influencing participation: Evidence for the United States from 2002 through 2005", *Review of Income and Wealth*, Vol.2, pp.220-238
- Przewłocka J., Adamiak P., and Herbst J., 2013. *Podstawowe Fakty o Organizacjach Pozarządowych* [Basic facts on the nongovernmental organizations]. Stowarzyszenie Klon/Jawor, [http://www.ngo.pl/PodstawoweFakty\\_2012\\_raport/](http://www.ngo.pl/PodstawoweFakty_2012_raport/), accessed on 28.08.2013
- Sajardo A. and Serra I., 2011. "The economic value of volunteer work: Methodological analysis and application to Spain", *Nonprofit and Voluntary Sector Quarterly*, Vol.40(5), pp.873-896
- Salamon L.M., Sokolowski S.W., and Haddock M.A., 2011. "Measuring the economic value of volunteer work globally: Concepts, estimates, and a roadmap to the future", *Annals of Public and Cooperative Economics*, Vol.82(3), pp.217-252
- Salamon L.M. and Sokolowski S.W., and List R., 2003. *Global civil society. An overview*. The Johns Hopkins University, Baltimore
- Trigg R. and Nabangi F.K., 1995. "Representation of the financial position of not-for-profit organizations: the Habitat for Humanity situation", *Financial Accountability and Management*, Vol.11(3), pp.259-269
- Waniak-Michalak H., 2012. "Wykorzystanie dotacji i darowizn przez organizacje pożytku publicznego" [Using grants and donations by the public benefit organizations]. *Rachunkowość*, Vol.3, pp.44-48
- Woods B., 2009. "The economic value of volunteers to nonprofit organizations", *Nonprofit Management and Leadership*, Vol.19(4), pp.491-506.
- Yetman M.H. and Yetman J.R., 2013. "Do donors discount low-quality accounting information?", *The Accounting Review*, Vol.88 (3), pp.1041-1067