Tkachuk, I. & Vinnychuk, O. (2020). Impact of specific macroeconomic indicators on the formation of revenues of non-governmental organizations from personal contributions of the Ukrainian population. *Administratie si Management Public*, 34, 64-77. DOI: 10.24818/amp/2020.34-04

Impact of specific macroeconomic indicators on the formation of revenues of non-governmental organizations from personal contributions of the Ukrainian population

Iryna TKACHUK[1], Olena VINNYCHUK[2]

Abstract: *The article is devoted to the study of the impact of specific macroeconomic indicators on the formation of revenues of non-governmental organizations from personal contributions of the Ukrainian population.*
The Revolution of Dignity and the outbreak of military actions in eastern Ukraine have led to an increase in the role of civil society in addressing social and economic problems and to a more active participation of Ukrainian population in the activities of non-governmental organizations (direct and indirect). The study of the volume and structure of the revenues of public organizations from private individuals indicated that there is a general tendency of increase concerning these revenues (both at from membership fees and the charity of individuals), but their structure has changed significantly (the share of membership fees in the structure of revenues of public organizations decreased from being 12.5% to 10.35%). At the same time, the share of charitable donations increased from 2.94% to 5.04%. Such changes are indicative of a gradual reorientation of support from the population from organizations aimed at satisfying the interests of their members only to those that are aimed at meeting needs of the general public. Having carried out the analysis, we have found that the amount of financial resources that the population directs to support public organizations of Ukraine per capita increased significantly from 4.77 UAH to 28,03 UAH. Such data substantiates the increase of public activity among Ukrainian population. The correlation and regression analysis has made it possible to research the peculiarities of impact of such factors as population size, inflation, average and minimum wages, and the number of employed on the formation of revenues of public organizations from private individuals. Accordingly, close relationships between the factors of impact and the resulting variable were discovered. It is important that such factors as inflation, and minimum and average wages are characterized by the direct relationship, while the population and the employed population are characterized by an inverse one. Note that there is multicollinearity between the factors of influence. Interdependence between specific macroeconomic indicators is a feature of the national economy. Respectively, the system of these factors in their totality influences the revenues of public organizations from private individuals. Given the constancy of relationships between factors, one should expect a further increase in the role of private individuals in the formation of the revenues of Ukrainian public organizations.

Keywords: *non-governmental organizations, civil society, revenues of civil society organizations, membership fees, charity of private individuals.*
JEL**:** L31, G59, C10
DOI**:** 10.24818/amp/2020.34-04

[1] Associate Professor, PhD, Yuriy Fedkovych Chernivtsi National University, Chernivtsi, Ukraine, email: i.tkachuk@chnu.edu.ua
[2] Associate Professor, Candidate of Economic Sciences, Yuriy Fedkovych Chernivtsi National University, Chernivtsi, Ukraine, email: o.vinnychuk@chnu.edu.ua

Introduction

Not only did the Revolution of Dignity in Ukraine show population's support for the European vector of state development and striving for European values, it also provided a significant impetus for the development of civil society. Prior to the Revolution of Dignity, the role of non-governmental organizations in solving problems of national and regional importance was somewhat vague (the Orange Revolution was the previous impetus for the growth of the role of non-governmental organizations, but in 9 years their role in solving problems of social and political nature and civil activity had declined significantly). After the Revolution of Dignity and the start of military actions in eastern Ukraine, the impetus for development was given to patriotic organizations, volunteer organizations, as well as organizations dealing with the assistance of IDPs from the territories of active military actions, support and retraining of veterans of the anti-terrorist operation, etc. The public's confidence and trust in the activities of non-governmental organizations also increased: the balance of trust in volunteer organizations in 2018 was equal to +37%, and the balance of trust in public organizations was +4%. Such social trends influenced the role of private individuals in the formation of the resource base of NGOs in a positive way. However, the question remains whether other macroeconomic and social factors influenced the formation of revenues of Ukrainian non-governmental organizations from personal contributions from the population.

Scientific knowledge gained from the study of the impact of specific macroeconomic and social factors on the formation of revenues of non-governmental organizations through personal contributions of Ukrainian population will not only expand the methodology of civil society finance research, but can also create significant practical benefits: promoting diversification of the sources of revenues of civil society organizations in Ukraine and, as a consequence, reduce their dependence on other sources of funding.

The aim of the article is to research the role of specific macroeconomic indicators in the formation of revenues of non-governmental organizations through personal contributions of Ukrainian population.

Research methods. In the course of the research, a set of general scientific and special methods was used. The methods of mathematical analysis were used to study changes in the trends of the formation of the revenues of non-governmental organizations from private individuals and their shares in the general structure of revenues. The method of correlation and regression analysis was used in order to study the impact of social and economic indicators on the formation of revenues of Ukrainian non-governmental organizations from private individuals. The graphical method was used to visualize the obtained results.

The research was conducted based on open access data for the period of 2006-2019.

1. Literature review

In recent decades, more and more scientists have conducted research on the contribution of civil society to the development of democracy, economy, promoting education, security and so on. For example, a group of scientists from Malaysia mentioned that Non-profit organizations (NPOs) significantly influence society as they support socio-economic growth (Roshayani, Mohd Hisham, Nur Ezan, Ruhaini, Ramesh, 2018). Reini Schrama (Schrama, 2019) explores the possibility to control and monitor implementation of EU policies by civil society organizations, taking into account social, human and financial capital. Christopher L. Pallas (Pallas, 2019), attempted to model the decision of an NGO (not) to join an existing advocacy campaign using a cost-benefit analysis of the expenditures and benefits, caused by the presence or absence of competition for the benefits, which NGOs seek. Ami Pedahzur (Pedahzur, 2018) emphasizes the triple role of civil society in defending democracy in Israel. Armenia Androniceanu (Androniceanu, et al, 2019; Tamulevičienė, Androniceanu, 2020) makes an analysis of good and democratic governance within the central and local administration of Romania and Slovakia (Ciobanu et al., 2019; Pauhofova et al., 2018). The analysis of the results contributed to the identification of key pillars of good governance (Bayar et al., 2020; Borocki et al., 2019).

Obviously, to be effective an NGO need considerable financial resources (Kinnunen et al., 2019). This also applies to non-governmental organizations of Ukraine. Government funding and donor financing make NGOs dependent on government policies or on the will of individual donors (Nicolescu, L. et al., 2020). Therefore, it seems obvious that, given the increasing public confidence in the activities of non-governmental organizations in Ukraine, it is worthwhile to intensify the formation of budgets of non-governmental organizations from contributions of the population.

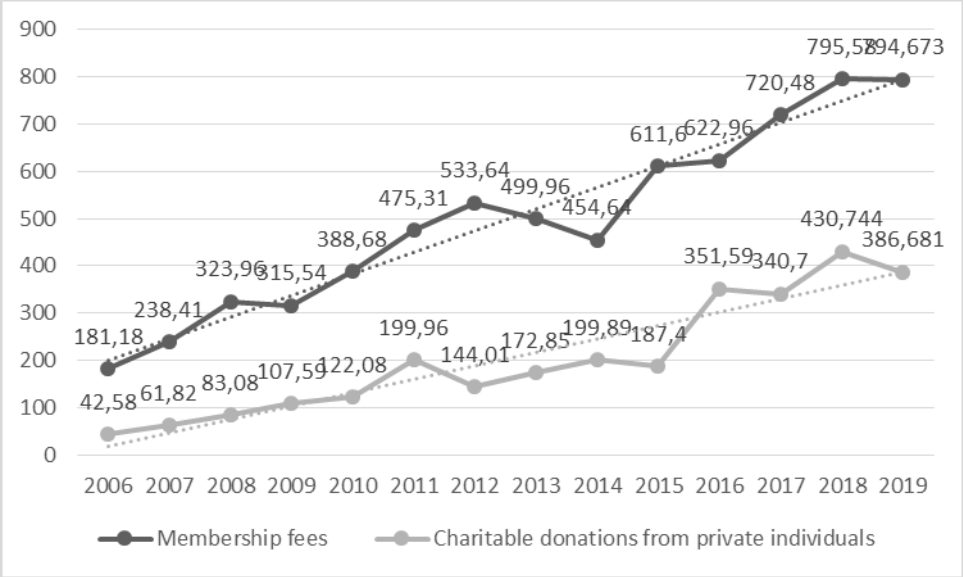
We have already conducted a research of the role of the population in the formation of the NGO resource base (Tkachuk, 2015; Haseeb et al., 2019) in the context of advocacy for the introduction of a mechanism of interest philanthropy in Ukraine. However, nowadays, while finding ways to increase the revenues of non-governmental organizations of Ukraine and, at the same time, enhance their financial independence, it is important to examine the factors that influence the formation of the revenues of non-governmental organizations from personal contributions of the population (Ohanyan, Androniceanu, 2017; Rahman et al., 2019).

2. The revenues of Ukrainian public organizations from contributions of private individuals

It is possible for Ukrainian public organizations to receive personal contributions from private individuals in two legal ways: membership fees and charitable donations. Figure. 1 graphically demonstrates the dynamics of the

revenues of Ukrainian public organizations from membership fees and charity of private individuals.

Figure 1. The revenues of Ukrainian public organizations from membership contributions and charity of private individuals within the period of 2006-2019, million UAH, %



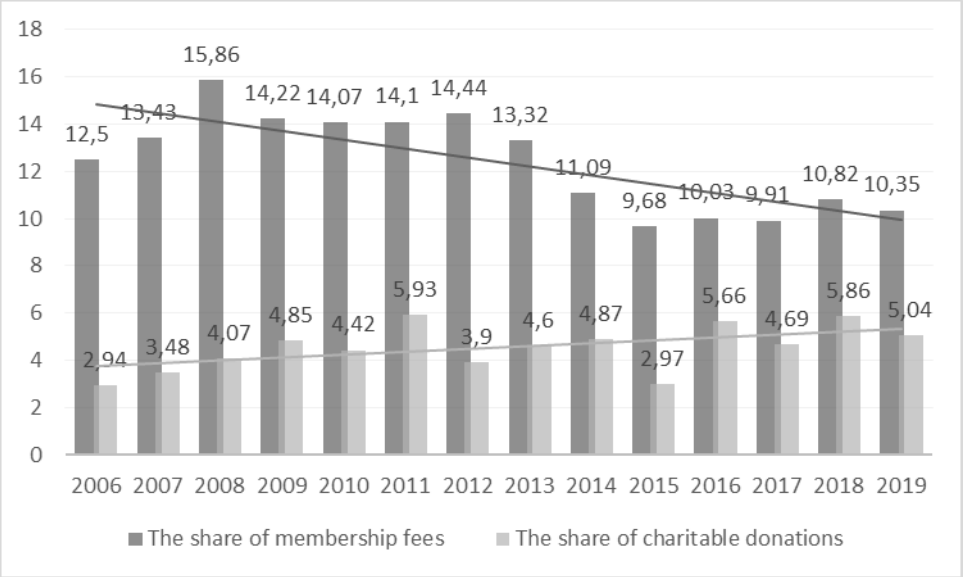
(*Source:* compiled by the author according to the data from State Statistics Service, 2020)

The data presented in Figure. 1 demonstrate a general trend towards an increase in the revenues from private individuals under both "Membership fees" and "Charitable donations of private individuals". However, the increase was not steady: decreases the revenues from membership fees were observed in 2009 and 2014, and also in those from the charitable donations of individuals in 2012, 2015, 2017.

The role of revenues from private individuals in the structure of revenues of Ukrainian public organizations was not very stable, which is shown by Figure 2.

Figure 2 demonstrates the tendency to reduce the percentage of membership fees in the revenue structure of Ukrainian public organizations. Instead, the share of the revenues from charitable activities of private individuals were gradually increasing within the research period.

Figure 2. The share of revenues of Ukrainian public organizations from sources related to private individuals within the period of 2006-2019, %



(*Source:* The author's own contribution*)*

It is worth noting that over the period under review, the population decreased significantly, namely by 4.78 million (from 46, 93 million people to 42.15 million people.) (MinFin), which is more than 10%. In view of such changes, we must consider the volume of financing of Ukrainian public organizations from personal contributions of private individuals per capita (table 1).

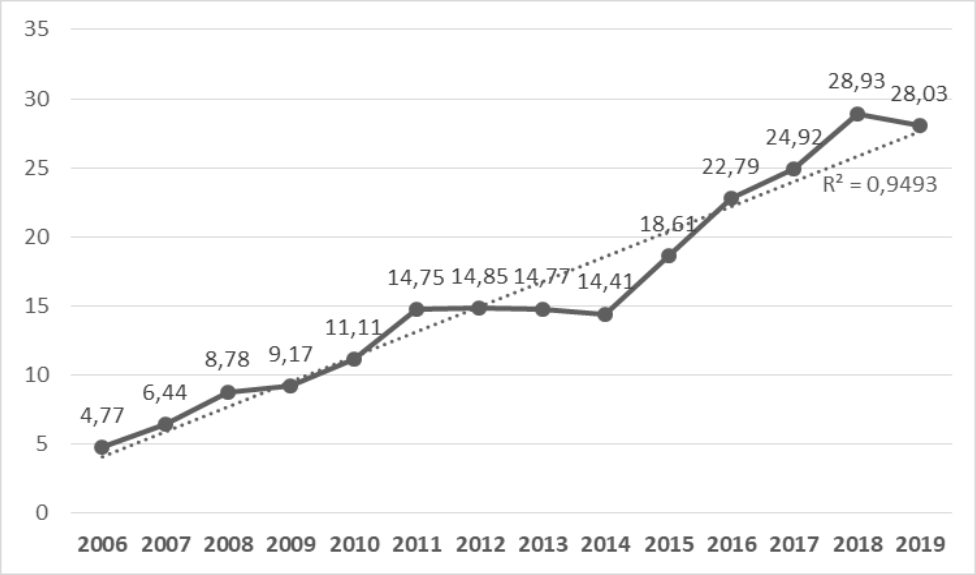
Table 1. The revenues of Ukrainian public organizations per capita within the period 2006-2018.

Indicator/ Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Deviation, million UAH	Deviation, %
Population, million people	46,93	46,65	46,37	46,14	45,96	45,78	45,63	45,55	45,43	42,93	42,76	42,59	42,39	42,15	-4,78	-10,19
Funds of private individuals, UAH	4,77	6,44	8,78	9,17	11,11	14,75	14,85	14,77	14,41	18,61	22,79	24,92	28,93	28,03	23,26	487,63

(*Source:* compiled by the author according to the data from State Statistics and the MinFin portal, 2020)

The results of the calculations presented in table 1, indicate the increase of the activity of the population in support of public organizations within the studied period. This means that the population is aware of the positive effect of their activities and is ready to "pay for it". Figure. 3 graphically displays the revenues of Ukrainian public organizations from contributions of private individuals per capita.

Figure 3. The revenues of Ukrainian public organizations related to the contributions of private individuals per capita, UAH



(*Source:* The author's own contribution*)*

3. The impact of specific social and economic factors on the formation of revenues of Ukrainian public organizations

Considering the significant impact of such a factor as the population on the revenues of public organizations from sources related to private individuals, it should be assumed that other indicators might influence the formation of these indicators and, accordingly, the support of the public sector by the Ukrainian population may be influenced by such factors as minimum and average wage rates, unemployment rates, etc.

For a comprehensive analysis and creation of an effective system of revenue generation from private individuals, using correlation and regression analysis, let us examine the peculiarities of the impact of some macroeconomic factors, such as population, inflation, average and minimum wages, and the number of employed population, on the formation of revenues from private individuals.

In the first stage, let us find out the degree of closeness of the linear correlation between the revenues from private individuals and the specific

macroeconomic indicators. In doing so, we use the correlation matrix, which is an important sample characteristic in the case of multiple correlation analysis.

Let us denote the revenues of public organizations from private individuals by $\boldsymbol{Y}$ (million UAH), microeconomic indicators by $\boldsymbol{X}_1$, $\boldsymbol{X}_2$, $\boldsymbol{X}_3$, $\boldsymbol{X}_4$, $\boldsymbol{X}_5$, ($\boldsymbol{X}_1$ – inflation index (%), $\boldsymbol{X}_2$ – population (million people), $\boldsymbol{X}_3$ – minimum wage (UAH), $\boldsymbol{X}_4$ – average wage (UAH), $\boldsymbol{X}_5$ – the number of employed population (million people) accordingly).

The values of correlation coefficients that estimate the closeness of the linear relationship between the revenues from private individuals and macroeconomic indicators are provided in table 2.

Table 2. The values of correlation coefficients that estimate the closeness of the linear relationship between the revenues from private individuals and macroeconomic indicators

	Revenues from private individuals Y	**Inflation index X1**	**Population X2**	**Minimum wage X3**	**Average wage X4**	**Number of employed population X5**
Revenues from private individuals Y	1					
Inflation index X1	0,947	1				
Population X2	-0,939	-0,982	1			
Minimum wage X3	0,853	0,902	-0,821	1		
Average wage X4	0,886	0,941	-0,875	0,994	1	
Number of employed population X5	-0,872	-0,951	0,962	-0,760	-0,814	1

(*Source:* compiled by the author based on the calculations carried out using the tools of MS Excel*)*

The data from table 2 demonstrates the direct relationship between the revenues of public organizations from private individuals and all the studied factors, except for the relationship between the revenues of public organizations from private individuals and the population and the relationship between the revenues of public organizations from private individuals and the number of employed population that are inverse. In addition, it is worth pointing out that all relationships, regardless of their orientation, are very close.

Using the correlation matrix implies that the researcher is aware that the relationship of each pair of variables is influenced by the relationships with the other variables. For example, the relationship of the revenues of public organizations from private individuals with the inflation index characterizes the value of the correlation coefficient of 0.947, but such a relationship is caused not

only by the mutual influence of these indicators, but also by such indicators as the population, average and minimum wages, and the number of employed population. Therefore, when examining the correlation relationships between the independent variable (the revenues of public organizations from private individuals) and the independent variables (impact factors) in the multidimensional model, one must also determine the partial correlation coefficients. Partial correlation coefficients allow quantitative estimates of the closeness of the correlation between two variables, provided that the other independent variables are stable. That is, partial correlation coefficients can be used to determine the "net" correlation between the studied pairs of variables, eliminating the influence of other factors.

Let us calculate the partial correlation coefficients between the revenues of public organizations from private individuals and the previously mentioned macroeconomic indicators by the following formula (1):

$$\rho_{ij}^{*} = -\frac{d_{ij}}{\sqrt{d_{ii}d_{jj}}}, \quad (1)$$

where d_{ij}, d_{ii}, d_{jj} are the elements of $\boldsymbol{K}^{-1}$ matrix, inverted to the correlation matrix ***K***.

The values of the partial correlation coefficients that estimate the “net” relationship between the revenues of public organizations from private individuals and such macroeconomic indicators as population, inflation, average and minimum wages, and the number of employed population are given in Table 3.

Table 3. The values of the partial correlation coefficients that estimate the “net” relationship between the revenues of public organizations from private individuals and specific macroeconomic indicators

$\rho_{YX_1}^{*}$	0,517
$\rho_{YX_2}^{*}$	-0,337
$\rho_{YX_3}^{*}$	0,532
$\rho_{YX_4}^{*}$	-0,564
$\rho_{YX_5}^{*}$	0,595

(*Source:* compiled by the author based on the calculations carried out using the tools of MS Excel*)*

The data in table 2 and table 3 differ. As we can see, table 3 shows a slightly weaker relationship between the revenues of public organizations from private individuals and the specific macroeconomic factors (population, inflation,

average and minimum wages, the number of employed population). However, let us note that the directions of relationship remain unchanged.

When analyzing the correlation coefficients between the factors (Table 2), we see that there is a fairly close relationship between them, which violates one of the preconditions of the least square method, which assumes that there are no relationships between explanatory variables of the model, that is, independence of X_j, $j = \overline{1,m}$ (the matrix of regressors). This means that the factors that influence the formation of the revenues of public organizations from private individuals are characterized by the phenomenon of multicollinearity. In this case, we can get the wrong conclusions, and the econometric model may give inadequate forecasts.

Let us check for correlation between the explanatory variables by constructing a correlation matrix (Table 4). If the determinant of the correlation matrix approaches "0", it can be argued with great reliability that there is multicollinearity between the explanatory variables. In our case, the determinant of the correlation matrix is "0".

Table 4. Correlation matrix between impact factors

	Inflation index X1	**Population X2**	**Minimum wage X3**	**Average wage X4**	**Number of employed population X5**
Inflation index X1	1,000	-0,982	0,902	0,941	-0,951
Population X2	-0,982	1,000	-0,821	-0,875	0,962
Minimum wage X3	0,902	-0,821	1,000	0,994	-0,760
Average wage X4	0,941	-0,875	0,994	1,000	-0,814
Number of employed population X5	-0,951	0,962	-0,760	-0,814	1,000

(*Source:* compiled by the author based on the calculations carried out using the tools of MS Excel*)*

There is no single method for eliminating multicollinearity, because the causes and effects of multicollinearity are ambiguous and significantly dependent on the results of the sample. Exclusion from the model of one or more correlated variables is one method of eliminating multicollinearity.

After analyzing the correlation coefficients $\rho_{X_i X_i}$ $(i, j = \overline{1,m})$ we exclude X_3 (minimum wage) and X_5 (number of employed population) from consideration.

To analyze the relationship between the revenues from private individuals and inflation index (%) (X_1), population (million) (X_2), average wage (UAH) (X_3), we construct a linear multiple regression model.

The theoretical model of linear multiple regression describing the correlation relation of Y variable with X_1, X_2, X_3 is formalized as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \qquad (2.)$$

where $\alpha, \beta_1, \beta_2, \beta_3$ are unknown theoretical regression parameters, a ε – random theoretical deviation.

Using the least squares method, the theoretical parameters of the regression were estimated and a sample equation of linear multiple regression of the dependence of the revenues of public organizations from private individuals on the inflation index (%) (X_1), population (million) (X_2), average wage (UAH) (X_3) was written:

$$Y = 4351,26 + 59,98X_1 - 87,07X_2 + 0,02X_3.$$

A linear multiple regression model is also constructed in a standardized form, since the standardized regression parameters b_j^* ($j = \overline{1,m}$ m – a number of independent factors) are dimensionless and, unlike ordinary multiple regression b_j, $j = \overline{1,m}$ parameters, can be compared with each other. The larger the value of the parameter b_j^*, the greater the effect the explanatory variable X_j has on the dependent variable Y. This content of the standardized regression parameters makes it possible to use them during the screening of irrelevant factors, namely, the factors with the least b_j^* value will be excluded from the model. The standardized linear multiple regression selective equation looks the following way:

$$Y^* = 0,28X_1^* - 0,51X_2^* + 0,18X_3^*,$$

where Y^*, X_j^*, $j = \overline{1,3}$ – standardized variables.

In general, the results of the correlation and regression analysis of the studied relationship between the revenues of public organizations from private individuals and such indicators as population, inflation index and average wages are shown in Figure 4.

Figure 4. The results of the correlation and regression analysis in Statistica 19 system

Regression Summary for Dependent Variable: Revenues from private individuals Y (Spreadsheet2)
R= ,94881221 R?= ,90024461 Adjusted R?= ,86699281
F(3,9)=27,074 p<,00008 Std.Error of estimate: 104,56

N=13	b*	Std.Err. of b*	b	Std.Err. of b	t(9)	p-value
Intercept			4351,261	6948,084	0,626253	0,546702
Inflation index X1	0,277510	1,197136	59,983	258,757	0,231811	0,821869
Population X2	-0,511301	0,838934	-87,066	142,857	-0,609465	0,557287
Average wage X3	0,177651	0,470360	0,018	0,048	0,377692	0,714413

(*Source:* compiled by the author based on the calculations carried out using the tools of Statistica 19*)*

The multiple coefficient of determination R^2 is a total measure of the quality of the regression model (a measure of compliance of the regression equation with empirical data) and equals 0.9002. It also means that the variation in the volume of the revenues from private individuals is largely explained by changes in the specific macroeconomic indicators.

The constructed regression equation is significant at the level of $\theta = 0,05$ because $F^* > F_{\theta;l_1;l_2}$, where F^* is the observed value of criterion *F*, and $F_{\theta;l_1;l_2}$ is the critical value found from the *F*-distribution table ($l_1 = m$ and $l_2 = n - m - 1$ are degrees of freedom). According to the results of the research F^* = 27.07 and $F_{\theta;l_1;l_2} = F_{0.05;3;9} = 3,8626$, which is an indication that the constructed regression equation is significant. If p<0.0008, then the regression equation is significant overall with the significance level $\theta = 0,05$.

The insignificance of the regression parameters is explained by the relationship between the explanatory factors involved, that is, the existence of the phenomenon of multicollinearity. In this case, the estimates of the regression parameters found using the least squares method become biased (the property of the Gauss-Markov theorem is negated (Plackett, 1950), the variance of the parameter estimates (respectively, standard errors of the parameters) increase (which leads to the extension of confidence intervals and their accuracy). as well as decreasing *t*-statistics of the regression parameters (which in turn generates incorrect conclusions about the influence of the corresponding explanatory variable on the dependent variable).

It should be noted that in some situations it might not be necessary to eliminate multicollinearity. With a large value of the multiple coefficient of determination $R^2 (\geq 0,9)$, the presence of the phenomenon of multicollinearity almost does not affect the quality of the forecast. The validity of this statement is justified if, in the future, the relationships between the correlative explanatory variables remain unchanged. This is exactly what we consider our situation to be when we research the revenues of Ukrainian public organizations from private individuals. In our opinion, the macroeconomic indicators chosen for the research as factors influencing the formation of the indicator of the revenues of Ukrainian public organizations from private individuals have formed a specific system of indicators, being closely interrelated, influence many processes that take place in the country. In particular, this concerns the formation of the resource base of public organizations. Thus, a system of interrelated factors influences the dynamics of change in the resulting indicator.

4. Conclusions

Changes in Ukrainian society following the Revolution of Dignity and the outbreak of the war in the east of Ukraine have had a significant impact on civil engagement and increased support for NGOs (including the financial one).

Thus, within the period of 2006-2019, public organizations of Ukraine raised almost 7 billion UAH from membership fees and over 3 billion UAH from the charity of resident individuals. At the same time, the revenues from both sources increased significantly during the period under review (613,493 million UAH (338,61%) and 344,101 million UAH (808,13%) respectively). However, even though the revenues from membership fees substantially excel the revenues from charitable donations from private individuals, the share of revenues from membership fees is gradually decreasing, while the share of revenues from charitable donations from private individuals is increasing.

The research has shown a significant intensification of support of public organizations by the population substantiated by the data on the amount of financing of public organizations per capita, which increased significantly within the study period, despite the population decrease by more than 10%.

For a comprehensive understanding of the reasons for the growth of the importance of the role of private individuals in the formation of NGOs budgets, a correlation and regression analysis was carried out and the peculiarities of such factors influencing the revenues of public organizations from private individuals as population size, inflation, average and minimum wages and number of employed were investigated. According to the carried out analysis, close relationships were found between the influence factors and the resultant variable (revenues from private individuals), with factors such as inflation, and minimum and average wages having a direct impact, and the population size and the number of employed having a reverse relationship. Moreover, while there is a phenomenon of

multicollinearity between the influence factors, a deep level of interdependence between the specific macroeconomic indicators is a feature of the national economy. Therefore, the system of these factors in their totality influences the revenues of public organizations from private individuals. Thus, given the constancy of relationships between factors, it is to be expected that the role of private individuals in the formation of Ukrainian public organizations will continue to increase.

Authors Contributions

The authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

References

Androniceanu, A., Gherghina, R. & Ciobanasu, M. (2019). The interdependence between fiscal public policies and tax evasion. *Administratie si Management Public*, 32, 32-41, Doi: 10.24818/amp/2019.32-03.

Bayar, Y., Remeikiene, R., Androniceanu, A., Gaspareniene, L., & Jucevicius, R. (2020). The shadow economy, human development and foreign direct investment inflows. *Journal of Competitiveness*, *12*(1), 5-21. https://doi.org/10.7441/joc.2020.01.01

Borocki, J., Radisic, M., Sroka, W., Greblikaite, J. & Androniceanu, A. (2019). Methodology for strategic posture determination of SMEs – the case from a developing country, *Inžinerinė Ekonomika-Engineering Economics*, *30*(3), 265-277.

Ciobanu, A, Androniceanu, A & Lazaroiu, G. (2019). An integrated psycho-sociological perspective on public employees' motivation and performance. *Frontiers in Psychology*, 10:36. Doi: 10.3389/fpsyg.2019.00036

Haseeb, M., Hussai, H. I., Kot, S., Androniceanu, A. & Jermsittiparsert, K. (2019). Role of Social and Technological Challenges in Achieving a Sustainable Competitive Advantage and Sustainable Business Performance. *Sustainability*, 11(14), Article Number: 3811

Kinnunen, J., Androniceanu, A., & Georgescu, I. (2019). The role of economic and political features in classification of countries in-transition by Human Development Index. *Informatica Economică*, *23*(4), 26-40.

MinFin. Internet portal. Population of Ukraine. Retrieved March 31, 2020 from: https://index.minfin.com.ua/ua/reference/people/ [in Ukrainian].

Nicolescu, L., Tudorache, F.G. & Androniceanu, A. (2020). Performance risk analysis on mutual funds versus stock exchanges in young financial markets Journal of International Studies, 13(1), 279-294. doi:10.14254/2071-8330.2020/13- 1/18

Ohanyan G., Androniceanu, A. (2017), Evaluation of IMF program effects on employment in the EU, Acta Oeconomica, 67(3), 311-332

Pallas, Ch. L. (2019). Pursuing the common goods: An economic theory of collective action among NGOs in transnational advocacy. Journal of Civil Society. Vol. 15. Issue 2. DOI: https://doi.org/10.1080/17448689.2019.1602332

Pauhofova, I., Stehlikova, B, Kljucnikov, A. & Androniceanu, A. (2018). Spatial and sectoral conditionality of the average monthly nominal wage in the Slovak Republic, Transformations in Business & Economics, 17(3), 155-168.

Pedahzur, A. (2018). The role of 'civil society' in the 'defending democracy'. In The Israeli response to Jewish extremism and violence. Manchester University Press.

Plackett, R. L. (1950). SOME THEOREMS IN LEAST SQUARES, *Biometrika*, Volume 37, Issue 1-2, June 1950, Pages 149-157. https://doi.org/10.1093/biomet/37.1-2.149.

Rahman, A., Tvaronaviciene, M., Smrcka, L. & Androniceanu, A. (2019). The effect of bank competition on the cost of credit: empirical evidence from the Visegrad countries. Acta Polytechnica Hungarica, 16(4), 175-195. DOI: 10.12700/APH.16.4.2019.4.9

Roshayani, A., Hisham, M. M., Ezan, R. N., Ruhaini, M., & Ramesh, N. (2018). Desired board capabilities for good governance in non-profit organizations. Administratie si Management Public, (30), 127-140.

Schrama, R. (2019), The Monitoring Capacity of Civil Society Networks: A Social Network Analysis in the Case of Gender Equality Policy. Journal of Civil Society. Vol. 15. Issue 2. https://doi.org/10.1080/17448689.2019.1598628

State Statistics Service of Ukraine (2020). Hromadski orhanizatsii v Ukraini. Stat. Biuleten [Civic organizations in Ukraine. Statistical Bulletin]. Retrieved March 31, 2020 from: https://ukrstat.org/uk/druk/publicat/Arhiv_u/15/Arch_go_bl.htm [in Ukrainian].

Tamulevičienė, D., Androniceanu, A. (2020). Selection of the indicators to measure an enterprise's value and its changes in the controlling system for medium-sized enterprises. Entrepreneurship and Sustainability Issues, 7(3), 1440-1458. https://doi.org/10.9770/jesi.2020.7.3(1)

Tkachuk I. Y. (2015). Citizens participation in financing activities and development of NGOs in Ukraine. Actual problems of economy. Vol. 4. March 31, 2020 from: http://nbuv.gov.ua/UJRN/ape_2015_4_41.