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TAX BURDEN INEQUALITY OF POPULATION IN GEORGIA AND CONCEPTUAL - METHODOLOGICAL PROBLEMS OF EVALUATION

Abstract:

Fairly determined taxes and tax burden of population is one of the most important criteria for living standards evaluation. Should tax rates be the same for everyone? This is the challenge which every government meets and successful decision regarding this issue is very important for sustainable development of the economy. The aim of the conducted research is to propose methodology and evaluate existing tax burden of population in Georgia. Empirical study was performed in order to reveal heaviness and lightness of population tax burden. On the basis of empirical research, we conclude that tax burden of population in Georgia, considering their income, is unequal, while according to tax code of Georgia, income of individuals is taxed by flat rate of 20%. Result of investigation, described in the article will be useful for executive and legislative authorities of Georgia to make decisions regarding tax system in Georgia, also for scientists and students who have research interest in the same field.

Keywords:

Decile inequality; Proportional tax system; Progressive tax system; Tax burden; Tax rate; Population

JEL Classification: H21, H24, G28

Introduction

Nowadays, everyone agree that taxes play crucial role in business development of the country. Despite the fact scientists, businessmen and society as a whole have different opinions regarding tax burden of society. One argues that countries that have flat tax rate system have experienced economic growth and to prove that evidence they name Estonia, Latvia and Lithuania as an example, while others think that progressive tax system eliminates social inequality.

As Blum and Kalven (1953) acknowledged, "Progressive taxation is now regarded as one of the central ideas of modern democratic capitalism and is widely accepted as a secure policy commitment which does not require serious examination." Mitchell (2006) admitted that "a flat tax would yield major benefits, including: Faster economic growth. A flat tax would spur increased work, saving and investment." It goes without saying that tax system has direct linkage with fair income redistribution. Kakwani (1980) is writing that "since the introduction of progressive income tax, the fiscal policies of many governments have included the redistribution of income as a major goal."

Masso, Espenberg, Masso, Mierina, Philips (2012) considered that "The overall rise in income inequality after regaining the independence has been the highest in the Baltic States compared to other CEE countries. During Soviet time the income inequality was low due to the low returns to education, centrally planned system aimed at achieving the equality in wages and non-labor incomes, full employment, state ownership of the means of production, negative attitudes towards private entrepreneurship and resulting low wealth inequality, and social transfers."

According to Grabka (2015) "Since 2000, it is clear that the gap between the richer and the poorer income groups has widened further. During this period, real income gains of more than 15 percent were recorded among the top ten percent of earners, while real income in the broad middle class stagnated and the bottom 40 percent even suffered income losses in real terms."

Problem of the governments in any time was to decide whether the tax burden should be equal or unequal for the population with the different income. Thus, the goal of the research is to evaluate tax burden in Georgia, to propose new methodology for calculation of the tax burden of population and to make suggestions about transition from proportional tax system to progressive tax system.

The research tasks are: 1) theoretical background of the research and methodology for the tax evaluation; 2) Empirical investigation of heaviness and lightness of population tax burden according to population income; 3) Suggestions for transition from proportional tax system to progressive tax system.

The methodology of the research is focused on the next issues: 1) Setting boundaries for low-income, middle-income and high-income population; 2) Evaluation of tax burden of population with the different income according to decile groups; 3) Setting new components of population tax burden and modernization of the formula.

The object of the research is population of Georgia. The subject of the research is determination of the new methodology for tax burden of population, investigation of heaviness and lightness of personal income tax.

The research methods: 1) Monograph and descriptive analysis is used for targeted scientific assessment of ten years; 2) Meta-analysis is applied for evaluation of theoretical and empirical framework of tax burden of population and for development of new methodology; 3) Selective statistical observation method (Empirical data is investigated according to 49 111 individuals); 4) Average value is applied to reveal inequality of tax burden by decile groups; 5) Methodological definitions is used for analysis and conclusions in the field of taxation

Calculation and Analysis of Tax Burden of Population in Georgia

While calculating tax burden of population, personal income tax and property tax is taken as percentage of population's monetary income. Taking in consideration above mentioned, formula can be written in the following form:

$$TBP = \frac{TPP}{MIP} \times 100\% \quad (1)$$

Where, TBP denotes tax Burden of population, TPP is taxes paid by population (here we mean personal income tax and property tax), MIP – monetary income of population. In Georgia, rate of personal income tax is determined as flat rate of 20%. In case of property tax, individuals pay above mentioned tax if their family income exceeds 40 000 GEL and calculation is based on tax declaration, rate of property tax is up to 1%.

We consider tax burden of population by taking in consideration taxes existing on central as well as on municipal level. In this case, communal taxes (water, electricity, gas, municipal transport taxes) should be added to numerator of the formula. As for the calculation of denominator, here is necessary to be reflected income of population, (received by employed as well as by self-employed people) also population wealth indicator. In European Union, research related to population income is always issue of consideration, where population wealth indicator is added to monetary income. This circumstance is stipulated by the factor that population may not have stable current income, but this factor does not makes sense for them, because they have received inheritance from ancestor and their main task is to transform the wealth into stable source of income. Conceptually speaking, allocation of wealth elements with income is acceptable, but question is how reliable and accurate will be information presented by

population in official bodies? For sources of given information can be considered submitted declarations in state tax authorities. Best way to obtain above mentioned information is to complete declaration forms of each member living in households about their income and wealth during population census, of course, with assurance of confidentiality.

By introducing property tax in the numerator of formula given by us may cause negative attitude of those citizens who possess large quantity of real estate. By taking in consideration practice of other countries, high tax burden of population can have negative impact on economy, though low tax burden is also unacceptable. Low rates on land and other real estate may cause speculative investment transactions and first of all, obstruction of municipal revenues and consequently, municipal programs.

Evaluation of population tax burden is the issue of constant monitoring and its calculation is desirable to be made annually by official authorities. According to data of National Statistics Office of Georgia about income of households and according to data of Ministry of Finance about personal income tax, it is possible to construct characteristic indicators of population tax burden.

Table N1

Tax Burden of Population in Georgia, 2005 - 2011

Indicators	2005	2008	2009	2010	2011
1. Annual Income of Population (Million Gel)	4238,4	6536,4	6904,8	7790,4	8533,2
2. Personal Income Tax (Million Gel)	290,7	1296,3	1119,0	1202,1	1551,1
3. Tax Burden of Population (%)	6,8	19,8 ¹	16,2	15,4	18,1

(Author's calculations, based on data of the National Statistics Office and Ministry of Finance)

Indicator of population property, due to lack of statistical data, did not participate in calculation of population tax burden, which is approximately equivalent to 140 000 GEL (78 000 USD, calculation is made according to exchange rate at that period of time) (Journal Economy of Georgia, News, 2012), which would increase burden indicator.

In order to improve taxation of individuals, taking in consideration best practices of developed countries, introduction of progressive tax system would improve existing situation in the country, in other words, rate of personal income tax should increase along with the growth of salary and other revenues. Such practice in Georgia has not been established and population regardless of their wages pay flat rate of 20%. We do not

¹ Increase of tax burden in 2008 in comparison with 2005 was stipulated due to changes in tax code – social tax was abolished, personal income tax rate was increased from 12% to 25%.

consider above mentioned as fair regulation, people with different income should not be taxed with the same tax rate, because in this case tax burden and living conditions will be heavier for society with low income.

Currently, personal income tax plays crucial role in revenue part of the budget and holds second place in its structure. Given tax is determining indicant of population tax burden and therefore it has certain influence on living standard of society. Mentioned tax performs fiscal, as well as social function, it can also perform distribution function, though according to tax code of Georgia, personal income tax, with the flat tax rate of 20%, hinders performance of this function and does not perform universally recognized requirement: „Rich pay more than the poor”.

In given article, we analyzed interrelation between hired workers, their gross salary and personal income tax.

Table N2

Hired workers, Gross salary and Personal income tax in 2007 – 2011

Indicators	2007	2008	2009	2010	2011
Hired Workers (Thousand person)	625,4	572,4	596,0	618,6	632,0
Average Monthly Salary	368,1	534,9	556,8	597,6	636,0
Personal Income Tax	526,9	1296,3	1119,0	1202,1	1551,1

(Author's calculations, based on data of the National Statistics Office and Ministry of Finance)

As we can see from presented data, in 2007-2011, annual increase in hired workers was 1.60 thousand, while average monthly salary grew at 1.2 times and personal income tax at 1.3 times. In such rapid growth of salary and personal income tax, issue of personal income tax rate differentiation is very actual. Our idea is approved by high concentration indicant of population income, salary and tax burden, according to poor and rich parts of population.

According to data of National Statistics office of Georgia, population income distributed by decile groups show that since 2000, high income population owe 35% of total revenue of population, while poorest population owe 1% of total revenue. Approximately, the same situation is sustained according to nominal monthly salary, which has greatest share in revenue of population.

In order to analyze tax burden of population revenue, we conducted research and took data about personal income tax and total income from National Statistic Office of Georgia and Ministry of Finance. In particular, we wanted to determine how the burden is distributed according to decile groups among tax payers. For this purpose, we

investigated 49 111 individuals. We calculated tax burden of revenue for each person by using next formula: $h = (X_{max}-X_{min})/n$; so we made 10 groups of individuals. In total population, minimal coefficient of burden was - 1 and maximum – 20. By putting values into the formula, it will be written as following:

Table N3

Distribution of Individuals by income tax burden

Groups according to burden coefficient	Number of individuals
1 – 2,9	25127
2,9 – 4,8	8121
4,8 – 6,7	3414
6,7 – 8,6	1795
8,6 – 10,5	1270
10,5 – 12,4	1005
12,4 – 14,3	894
14,3 – 16,2	861
16,2 – 18,1	932
18,1 – 20,0	5692
Total	49111

In order to calculate decile groups, at first we have to calculate mode and median indicators. As we know, for calculation of mode, we use next formula:

$$M_0 = x_0 + i \frac{(f_{M_0} - f_{M_{0-1}})}{(f_{M_0} - f_{M_{0-1}}) + (f_{M_0} - f_{M_{0+1}})} \quad (2)$$

By putting data of table 3 in the formula, we will receive:

$$M_0 = 1 + 1,9 \frac{(25127-0)}{(25127-0) + (25127-8121)} = 2,13$$

Thus, the most frequent income tax burden among individuals is equal to 2, 13. Now, we have to calculate median indicator of the burden with the formula:

$$Me = x_0 + i \frac{\frac{1}{2} \sum f_i - S_{me-1}}{f_{Me}} \quad (3)$$

If we will put data of table 3 in the formula, the result will look like:

$$Me = 1 + 1,9 \frac{\frac{1}{2}(49111 - 0)}{25127} = 2,85$$

Thus, middle part of the individual's income tax burden goes through individuals with the burden coefficient of $-2,85$. More detailed information for characterization of heaviness and lightness of individual's income tax burden can be received by decile characterization of tax burden. The situation in first and last groups is especially interesting. For this, we have to calculate first decile of income with the formula:

$$D_1 = X_{D_1, \min} + \frac{i \cdot \frac{1}{10} \sum f_1 - S_{D_1-1}}{f_{D_1}} \quad (4)$$

We have to put data of table 3 in given formula, afterwards, we will have:

$$D_1 = 1 + 1,9 \frac{(4911 - 0)}{25127} = 1,37$$

With the same way, we are calculating ninth decile:

$$D_9 = X_{d9} + \frac{i \cdot \frac{9}{10} \sum f_1 - S_{D_9-1}}{f_{D_9}} = 18,1 + 1,9 \cdot \frac{\left(\frac{9}{10} \cdot 49111\right) - 43419}{5692} = 18,3 \quad (5)$$

Now, we calculate concentration coefficient of individual's income tax burden:

$$K_{\text{conc}} = (D_9 / d_1) = 18,36 / 1,37 = 13,6 \quad (6)$$

Thus, 10% of individuals who have highest tax burden exceed 10% of individuals with lowest burden by 13,6 times.

Conclusions

1. Research revealed that tax burden in population is unequal according to the level of their income, while according to tax code of Georgia, tax liabilities is the same for everyone. Inequality of tax burden is more noticeable by decile groups of population income.
2. Research shows that taxation of population income should be changed from proportional system to progressive system.
3. More attention should be paid to the new methodology for calculation of population tax burden, which takes into account current global processes.

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