Assessment of the Level of Tax Burden on Population of the Kyrgyz Republic

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Abstract: In the absence of a unified methodology for determining the tax burden on population and practical indicators of its level in the Kyrgyz Republic, the study of the tax burden on population and the available theoretical approaches to calculating its magnitude seem relevant. The novelty of the results obtained consists of the development of a method for comparing tax payments from populations with free income and its practical use on the basis of available statistical information on the Kyrgyz Republic. The results of the study were obtained using statistical, computational-analytical, economic-mathematical and other scientific methods of study. The work was carried out using a large array of statistical information on individual stages of the development of the tax system of the Kyrgyz Republic over a long period of observation. The assessment of the impact of the tax burden on the GDP of the Kyrgyz Republic with the definition of the trend. The necessity of optimizing the tax burden without reducing public spending in conditions of increasing the role of the state and the redistribution of the tax burden to high-income groups of the population is substantiated.

1 INTRODUCTION

Determining the tax burden on individual industries, economic entities or the population has always caused a lot of controversy due to difficulties or lack of a unified methodology, unlike the tax capacity in the whole state, when the amount of mobilized tax revenues in the country is compared with GDP. Almost all studies devoted to the problems of the burden of taxation are aimed at determining the tax burden on the economy as a whole, by branches of the economy or economic entities. However, there are no studies of the tax burden on the population in Kyrgyzstan today. There are separate works in Russian and English-language economic literature. Therefore, research in the field of methods of calculating the tax burden of the population is currently relevant (Tyurina, 2013). Difficulties are mainly due to the inability to obtain data on the quantitative (absolute) amount of the tax burden for individual groups of the population, but also due to different approaches to determining the composition of taxes, deductions and fees paid by the population (indirect taxes or social deductions that have the same tax character). There is no unanimity on the part of the denominator, to which indicator they should be correlated.

At the same time, in recent years there has been an increased interest in studying the issues of the tax burden in general and, in particular, the problems of the tax burden of individuals (tax burden at the macro level). The subject of research is the study of the nature of the impact of the tax burden on numerous

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aspects of the socio-economic development of the country. The results of the research allow us to determine the ways of reforming the tax system, ensuring economic growth, improving public welfare, substantiating the optimal tax rate or the level of tax burden. The conclusions are very diverse and even contradictory. Traditionally, the reduction of the tax burden is considered a factor of economic growth. This opinion is shared by many modern researchers. According to them, "reducing tax burden effectively influences state financial stability and stimulates the economy" (Skarzauskas, 2021). Demidenko M. considers the tax burden in conjunction with government spending, with the growth of which there is either a budget deficit or an increase in taxes (Demidenko, 2006). And determines that the positive effect on economic development is in several directions. The researchers' conclusions note the ambiguous impact of the tax burden on the development of the economy, the inconsistency of the results obtained according to existing calculation models, as well as the lack of a "comprehensive methodology for assessing all types of factors and testing this methodology in the European Union context is lacking" (Skarzauskas, 2021).

Such contradictory views of scientists were revealed in the process of determining the conditional tax burden on the population of the Kyrgyz Republic using a statistical approach.

2 RESEARCH METHODOLOGY

This study was conducted using possible research methods in economics, such as: scientific search (familiarization with the thematic domestic and foreign scientific heritage); statistical and economic with appropriate processing, systematization and analysis of statistical materials according to the National Statistical Committee of the Kyrgyz Republic, computational and constructive with the use of the author's methodology for calculating the tax burden per population; interpretation and generalization of the results of the study on the level of the tax burden of the population of the Kyrgyz Republic, determining the scope of their application in order to reform the taxation of income of the population.

The entire methodology of the tax burden study is based on the comparison of taxes to income. In world practice, for comparative purposes, a generally recognized indicator of tax capacity in the economy as a whole is used as a share of taxes in GDP. Depending on the scope of application of such an indicator, several modifications are proposed with certain conditions. It should be noted that when choosing the methodology, the author in his calculations proceeded from the criteria of pragmatism of the proposed methods, the possibilities of applying in practice the described calculation technique and the use of statistical information (Tyurina, 2013).

Determination of the impact of the tax burden of the population on economic growth is made using the economic and mathematical method. Correlation and regression analysis of the relationship of these indicators was carried out by the method of paired regression using computer applications.

3 RESEARCH RESULTS

3.1 Analysis of the Structure and Dynamics of Tax Withdrawals from the Population

The change in the tax burden is a consequence of various measures to improve taxation in the Kyrgyz Republic. These measures relate to the level of the tax rate of certain taxes and changes in the tax system. Moreover, this may concern both the amount of taxes and the payment mechanism and, accordingly, administration (in detail (Fynchina, 2011)). Based on the methodology of calculating the tax burden and in the process of scientific analysis, two directions of the impact of the tax burden on socio-economic development have been identified: «through tax structure and trough taxation level" (Skarzauskas, 2021).

Based on this provision, the study of the tax burden on the population requires an analysis of the composition of taxes and payments from the population of the Kyrgyz Republic.

The tax burden on the population is determined by the following payments: direct taxes from the population (income tax from individuals, including individual entrepreneurs, taxes on property (movable and immovable property and land), the amount of which depends on the level of income or economic activity of taxpayers and their property status. The level of rates of these taxes in the Kyrgyz Republic is relatively low.

The analysis of tax receipts from individuals over a number of years shows their stable growth (Table 1).

Table 1: Composition and structure of direct tax payments from individuals in the Kyrgyz Republic, at current prices, million soms.

	2008	% to total	*2010*	% to total	*2015*	% to total	*2018*	% to total	*2021*	% to total
Income tax paid by a tax agent	2657.9	67.2	3782.5	66.1	7635.0	70.0	9937.7	72.0	12533.1	74.7
Income tax on a single tax return	62.0	1.6	6.4	0.1	167.4	1.5	67.6	0.5	184.9	1.1
Single tax for small businesses	72.0	1.8	131.0	2.3	177.6	1.6	229.3	1.7	358.6	2.1
Tax based on a voluntary patent	653.6	16.5	974.0	17.0	1849.0	17.0	2243.7	16.3	2336.3	13.9
Real estate tax is not for business activities	0	0.0	47.0	0.8	56.4	0.5	81.7	0.6	104.6	0.6
Tax on vehicles of individuals	228.6	5.8	400.6	7.0	577.0	5.3	727.4	5.3	697.0	4.2
Land tax for the use of household and suburban land plots	37.1	0.9	130.9	2.3	165.4	1.5	194.2	1.4	210.5	1.3
Land tax for the use of farmland	243.4	6.2	251.5	4.4	279.7	2.6	318.8	2.3	343.2	2.0
Direct tax receipts from individuals	395.7	100.0	5723.9	100.0	10907.5	100.0	13800.2	100.0	16768.1	100.0

Source: compiled according to (http://www.stat.kg/ru/statistics/finansy/).

Thus, the income tax on employees levied by the tax agent increased from 2660 million soms in 2008 to more than 12500 million soms in 2021. This is the main share of taxes on the income of the population. During the period under review, it increased from 67% to 75% of all taxes paid by individuals. A significant share is also taken by contributions from individual entrepreneurs who pay income tax on the basis of a patent – on average more than 16%. There are some changes in the contribution structure. The increase in the share of taxes levied by employers occurs against the background of a decrease in the share of all taxes, the introduction of a tax on immovable property by the tax legislation of 2009 and an increase in tariff rates for land tax for the use of household and suburban land plots.

The purpose of this analysis is to determine general trends, so here taxes from individuals on certain types of taxes are conditionally or not fully determined for objective reasons. For example, payers of a single tax for small businesses can be, along with individuals and legal entities (expert: 5%). It should also be noted that there is a difference between the data on tax payments from individuals in the statistical collections "State Budget Revenues" and "National Accounts" (in terms of direct/current taxes). It can arise based on the conventions of the methodology of the system of national accounts, from which the difference can be significant, for example, the difference in 2008 amounted to about 400 million soms, in 2020 – more than 2500 million soms.

Indirect taxes in the form of surcharges to the price of goods and services are also levied on the population in the process of their acquisition for consumption purposes. Owners of enterprises that produce goods or provide services sell them at a price with the inclusion of indirect taxes and their subsequent contribution to the state budget from their revenue, being collectors of these taxes, and payers (carriers) of indirect taxes are essentially buyers. In the Kyrgyz Republic, as a low-income country, indirect taxes account for a large share of tax revenues, while ensuring a constant inflow of financial resources to the state budget and its relative stability.

The dynamics of indirect tax payments in the Kyrgyz Republic by stages of development of the taxation system in the Kyrgyz Republic is presented in Table 2.

Table 2: The composition and structure of indirect taxes in the Kyrgyz Republic, at current prices, million soms.

	2008		2010		2015	
	mil. soms	% to total	mil. soms	% to total	mil. soms	% to total
VAT	16540.0	68.2	14602.0	60.0	33220.8	57.1
Sales tax	1515.5	6.2	3698.9	15.2	7508.4	12.9
Excise duty	1575.0	6.5	1689.3	6.9	7756.9	13.3
Taxes on international trade and transactions	4633.6	19.1	4347.7	17.9	9684.3	16.6
Total indirect tax receipts on the KR	24264.1	100.0	24338.0	100.0	58170.5	100.0
	2018		2019		2021	
	mil. soms	% to total	mil. soms	% to total	mil. soms	% to total
VAT	52786.2	61.6	50912,1	58,5	63634.4	61.9
Sales tax	4283.5	5.0	4216,0	4,8	4929.6	4.8
Excise duty	10296.3	12.0	9945,0	11,4	11370.7	11.1
Taxes on international trade and transactions	18319.3	21.4	21967,7	25,2	22917.6	22.3
Total indirect tax receipts on the KR	85685.3	100.0	87040,8	100,0	102852.3	100.0

Source: compiled according to (http://www.stat.kg/ru/statistics/finansy/).

VAT is the main indirect tax and accounts for more than 60% of the receipts for these tax revenues of the state budget. The sharp reduction in the share of VAT was after the reduction of the VAT rate from 20% to 12% in 2009 in the process of reforming the tax system of the Kyrgyz Republic. The role of customs duties and fees in income from indirect taxes in the Kyrgyz Republic as a whole is also noticeable.

It is defined above that indirect taxes are paid from the proceeds of intermediaries (organizations and enterprises), but are levied from the incomes of end consumers, the population by shifting. However, the problem is to determine the degree of their transfer to the population due to the specifics of the mechanism of indirect taxes and the lack of established methodology. Russian researchers link the share of indirect taxes paid by the population with the income of the population directed to consumption. If for modern Russia it is defined in the range of 0.6–0.7, then for the Republic of Kazakhstan it is justified as follows: "according to the Statistics Committee of the Ministry of National Economy of the Republic, the income of the population for consumption in the second and third quarters of 2017 exceeded 95%, so that the coefficient of the share of indirect taxes paid by the population can be taken as one" (Baymukhametova, Ishchuk, 2018). On this basis, in the Kyrgyz Republic, taking into account certain factors, the share of indirect taxes from the population is assumed at the level of 0.8 (expert).

In this context (the conditionality of the desired indicator), the calculation of the tax burden on the population was made taking into account the transfer coefficient, as well as the difference between data from different statistical sources "State budget revenues" and "National Accounts" (indicated above).

3.2 Assessment of the Tax Burden on Population

In this study, the tax burden on population of the Kyrgyz Republic is calculated based on the well-founded available methods and methodological approaches for determining the tax burden on the economy as a whole and, in particular, on individuals considered by the author (Fynchina, 2011). However, it should be noted that the main aspects of calculating the tax burden for individual groups of the population are practically not developed due to the imperfections of the statistical material and the uncertainties of both the process and the degree of transfer of individual, mainly indirect taxes. At the same time, the statistical orientation in solving this problem in this study provides methodological support for quantifying the tax burden on the population. In this regard, Pushkareva quotes the words of P.V. Mikeladze about the conditionality of calculations, the approximate and illustrative nature of the figures of the severity of taxation (Pushkareva, 2004).

The tax burden on population (TBp) in this study is determined taking into account all tax payments from the population in relation to:

- ✓ Gross domestic product (GDP);
- ✓ Gross value added of households (GVAh/h);

- ✓ the amount of monetary income of population (MIp);
- ✓ Gross disposable household income (GDIh/h);
- ✓ the amount of free income (FI1) is the difference between GDIh/h and consumer spending (CS);
- ✓ the amount of free income (FI2) is the difference between the GDIh/h and the subsistence minimum (SM).

At the same time, tax payments from population (TPp) include current (direct) taxes from the population, social contributions (according to the National Accounts of the Kyrgyz Republic) and the share of indirect taxes levied on the population.

Note that E.V. Ordynskaya and M.V. Cherkovets believe that in the case of considering a broader set of mandatory payments, it would be more correct to talk about the fiscal burden. Since such a load is calculated taking into account both taxes and other mandatory payments (Ordynskaya, Cherkovets, 2021). However, the author, based on an understanding of the tax nature of social contributions, defines the calculation result as a tax burden (Table 3).

Table 3: The level of tax burden on the population of the Kyrgyz Republic, percentage.

	TBp to GDP	TBp to GVAh/h	TBp to MIp	TBp to GDIh/h	TBp to FD1	TBp FD2 to FD2
1	*2*	*3*	*4*	*5*	*6*	*7*
2008	17.6	43.3	25.5	19.0	72.4	-59.9
2010	17.7	50.7	23.7	19.4	62.1	-137.3
2015	19.0	53.1	27.8	22.2	52.8	-1077.3
2016	19.7	58.7	30.2	22.7	46.9	156.3
2017	19.2	58.4	28.7	22.1	42.9	109.4
2018	20.3	62.8	32.5	23.8	49.0	97.2
2019	18.9	58.5	26.2	23.8	49.9	100.4
2020	17.1	55.0	22.7	20.1	42.1	122.5
2021	18.6	60.0	25.4	22.6	48.2	133.3

Source: calculated by the author according to (http://www.stat.kg/ru/publications/sbornik)

Calculations of the tax burden in this study were made by the author according to a certain methodology, mainly as the ratio of the amount of actual tax withdrawals and insurance payments to the source of their payment (The full calculation of the tax burden indicators for certain periods is given in Appendix). The resulting indicators of economic activity are accepted as sources of payment. At different levels, it can be gross domestic product (GDP), gross value added (GVA), revenue, profit, income of population (http://www.stat.kg/ru/publications/uroven-zhizni-naseleniya-kyrgyzskoj-respubliki /).

The tax burden on the population to the volume of GDP (column 2), in relation to which the macroeconomic tax burden is determined in world practice, is the most traditional. The results of calculating the tax burden on the population of the Kyrgyz Republic for 2008-2020 show a relatively moderate tax burden in the range of 17-20% of GDP with a tendency to decrease the tax burden on the population in the last two years due to a decrease in the rate of income growth of the population.

To a certain extent, the calculation of the tax burden in relation to the GVA of households can be considered justified due to comparability with GDP (column 3), but with a more accurate characteristic, since the contribution of only households is taken into account. The indicator of the tax burden at the level of 40.3% in 2008 can be estimated as the level of the pre-reform period of the tax system. The growth of this indicator in 2010 up to 50.7% is not an objective consequence of the development of taxation as a result of the reform, but is associated with a low growth rate of household GVA in conditions of socio-economic difficulties as a result of the political upheavals of 2009-2010. The effect of the reform of the tax system further affected in the form of an increase in the tax burden on the population to 60%, taking into account losses on tax payments during the introduction of quarantine measures for Covid-19.

The tax burden on population of the Kyrgyz Republic in relation to the monetary income of the population (column 4) is calculated according to a reasonable methodology (Barulin, 2006). The results of calculating the indicator of the tax burden on the population in the Kyrgyz Republic are within 23-30% higher than the indicators of the tax burden on business, which amounted to 16.5% in 2010 and 18% in 2018 (Panskov, Knyazev, 2003). Calculated by this method, the level of tax burden on the population of the Orenburg region of the Russian Federation with a relatively low standard of living is slightly higher – 40.5% in 2004 (Fynchina, 2022).

Determining the tax burden on the population of the Kyrgyz Republic based on comparison with gross disposable income (the difference between gross income and the amount of tax and other mandatory payments), as a source of tax payment (Baltina, Tyurina, 2006) by population, is similar to calculating the tax burden of a legal entity in relation to the balance sheet profit. The calculation data (Table 4, column 5) show an increase in the tax burden on population relative to the GDI in the period under review from 19% in 2008 to 23% in 2021, while the growth rate of disposable income of population of the Kyrgyz Republic fell from 119.8% to 91.7%. Consequently, the trend of increasing the tax burden is ensured by an increase in tax payments from the population.

The calculation of the tax burden on the population in relation to total income minus consumer spending of the population is similar to the method of determining the tax burden on legal entities relative to net profit. This approach is proposed to be applied by researchers who, as noted above, call this ratio a fiscal burden. They propose to calculate the fiscal burden as the ratio of the amount of taxes, fees, and other mandatory payments paid by households to the gross household income minus household consumer spending (Ordynskaya, Cherkovets, 2021). In our context, such an indicator is determined by the author by the tax burden in relation to free income (FI1). According to this indicator, it is possible to fix a high level of the tax burden of the population with a tendency to decrease as a result of the reform of the taxation system in 2009, the income of individuals from 72% to 48% by 2021 (column 6). It can be compared with the data of calculations using a similar methodology for the Russian Federation and give an assessment of Russian researchers: the level of fiscal burden of individuals in Russia in 2018 was approximately 26%, and the maximum value (31%) was reached in 2007. In general, from 1997 to the present, the total fiscal burden on individual taxpayers has increased by about 47% (Ordynskaya, Cherkovets, 2021). It should be noted that a high level of the macroeconomic indicator of the tax burden (relative to GDP) from the Eurasian Economic Union countries is observed in Russia (about 35%), in Kyrgyzstan – more than 20%, the lowest – in Kazakhstan (less than 15%). Nevertheless, against this background, there is a very high level of tax burden on the population of the Kyrgyz Republic.

However, it seems that the calculation of the tax burden in relation to SD2 may cause disputes. Adherents of comparing tax contributions with this indicator are Russian Soviet financiers Solovey G.G. and Mikeladze P.V., who in their writings used free income calculated as the difference between national income and the subsistence minimum to calculate the relative levels of severity of taxation. At the same time, the calculation of the subsistence minimum is based not on the average actual consumer budgets, but on the construction of hypothetical normal budgets, which was only included in the tools of financial statistics (Fynchina, 2011). On this basis, it can be assumed that the indicator of the tax burden calculated by this method is theoretical. However, it should be noted that the theory of taxation of income of the population provides for the accounting of the subsistence minimum as non-taxable income. In the practice of taxation of the Kyrgyz Republic, it is accepted in the amount of 6.5 calculated indicators per month, that is 650 soms. (for comparison: the subsistence minimum for 2022 is determined in the amount of more than 7 thousand soms per capita).

The calculation data (column 7) show negative values of such an indicator of the tax burden on the population in the Kyrgyz Republic for several periods due to the lack of free income, that is, incomes were less than the subsistence minimum. In addition, in the Kyrgyz Republic, as in a developing economy, the subsistence minimum is set based on minimum standards based on survival and "lower than in developed countries, therefore it is fair to proceed from calculations of household income security of 1.5-2 subsistence minimums per family member, or to determine the subsistence minimum based on real prices and standards" (Litvin, 1998). Thus, if we proceed from consumer spending based on the real value of the subsistence minimum per capita of the Kyrgyz Republic, the tax burden on the population in relation to free income according to Mikeladze will be much higher, at the level of the tax burden of high-income groups of the population from the group of economically most developed countries.

As noted above, there is no unambiguously accepted methodology for calculating the tax burden on the population. The proposed methods of calculating only the indicator of tax exemptions from the population have different insufficiently substantiated approaches. For example, according to S.V. Barulin's methodology, both personal and indirect taxes should be used in the calculation. At the same time, it is proposed to apply a reduction coefficient to the latter without sufficient justification (for the Russian Federation it is 0.6–0.7), as a share of indirect taxes paid by the population (Tomina, 2018). At the same time, according to the methodology of V.G. Panskova considers it necessary to take into account indirect taxes paid by the population in full, without taking into account the completeness of the transfer of indirect taxes only based on the mechanism of the transfer of indirect taxes (Barulin, 2006). I.V. Gorsky's methodological approach includes a relatively complex scheme for calculating indirect taxes paid by the population, based on an analysis of their value as part of expenses for the purchase of goods and services in the context of such groups: food; alcoholic beverages; services; non-food excisable goods; non-food products with VAT benefits; non-food products, with the exception of excisable goods, and having VAT benefits (Panskov, V. G., 2006).

3.3 Dependence of the Tax Burden On The Population and the Indicator of Economic Development

The tax burden is an important characteristic of the effectiveness of tax reforms. There are different points of view on the assessment of the tax burden. Depending on the completeness and conditions of such an assessment, they may be contradictory. For example, a low tax burden may indicate the attractiveness of the tax climate. Or: a high share of taxes in GDP shows a greater volume of redistribution through the taxation system, which characterizes the effectiveness of the tax system (Gorsky, 2003). There are research results "that economic stability indicators would be positively affected by an increase in the tax burden in all country groups" (Skarzauskas, 2021).

The inconsistency in the assessment of the tax burden indicates the multiplicity of factors influencing the indicator of the tax burden on the population. Only one aspect of tax revenues from individuals, which undoubtedly determine the level of the tax burden, depends on changes in the incomes of the employed, the level of poverty and employment, the degree of stratification of the population, the tax potential of the regions (in terms of individual entrepreneurship) and many others: "Based on the analysis' findings, variables such as income per capita, foreign trading volume, the capacity of employment, unemployment and share of the industry sector effect tax burden in a statistically significant and positive direction" (Fynchina, 2013).

Determining the relationship of the tax burden on the population of the Kyrgyz Republic allows us to identify the degree of its influence on the indicator of economic growth based on the calculations in this study and statistical data for the period from 2005 to 2021.

As a result of correlation and regression analysis, we obtain a regression field (Fig. 1).

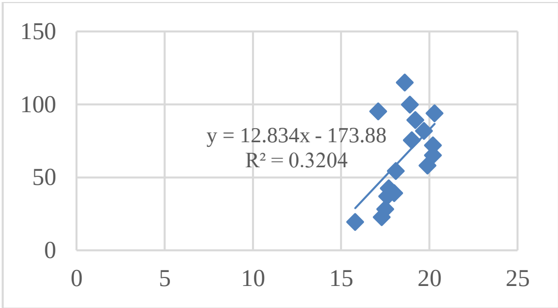

Fig.ure 1: The impact of the tax burden of the population on GDP per capita in the Kyrgyz Republic, thousand soms.

The parameters of the resulting linear regression equation *y = 12.834x - 173.88* show that the increase in the tax burden of the population by 1% increases GDP per capita by 12.8 thousand som.

The correlation coefficient at the level of 0.57 shows the presence of a noticeable relationship between the variables under study. The elasticity coefficient of 3.7% shows that the change in GDP by 1% of its average value will change the tax burden by an average of 3.7%. The actual Fisher criterion is 5.07 and this is above the norm at 4.54. This indicates the significance of the obtained regression equation.

A positive relationship between the two variables was revealed during the analysis of Ferdi Celikay. He determined that an increase in GDP by 1 percent would cause an increase in the tax burden by 0.1831% (Fynchina, 2013).

The inverse relationship is expressed by the regression equation y = 0.025x + 16.938 and the conclusion that the growth of GDP per capita by 1 thousand som. will entail an increase in the tax burden of the population by 0.025%.

4 THE DISCUSSION OF THE RESULTS

Disputes on the methodology for determining the severity of tax oppression are historical, starting with the formation of the taxation system back in the XVIII century, and concerned the problems not only of choosing indicators for comparing or calculating the level of its magnitude, but also of justifying the limit of tax exemptions. On this issue, the researchers' conclusion is more or less unambiguous: one of the goals of the state's tax policy should be to determine the optimal level of the tax burden as a guideline for amending tax legislation to implement the basic principles of taxation. In general, it should be emphasized that determining the size of the tax burden on the population is a very difficult and voluminous work based on a large array of statistical data, analysis materials and special studies, taking into account many factors affecting both the volume of tax withdrawals from the population (the numerator of the calculation) and different types of income of the population (the denominator of the calculation).

Meanwhile, the indicator of the tax burden at the macro level implies a tax burden both on the economy as a whole and on the population. This indicator, "reflecting the level of tax burden on the population, serves as the main indicator of the effectiveness of the state's tax policy. Assessing the tax climate and the magnitude of its pressure through taxes on citizens, the state seeks to optimize the level of burden and maintain a balance of interests of the state and taxpayers" (http://www.stat.kg/ru/publications/uroven-zhizni-naseleniya-kyrgyzskoj-respubliki /.).

Based on the above and based on the analysis of a wide range of scientific works of domestic and foreign scientists, it can be stated that the results of the tax burden on the population of the Kyrgyz Republic require the development of a policy in the field of taxes from citizens to implement the principle of fair taxation. Currently, the Kyrgyz Republic, in contrast to the proclaimed socially-oriented state, has determined the main strategy of tax policy to transfer the tax burden to the population, but through indirect taxes, taking into account which, in these calculations of the tax burden, its relatively high level in relation to free income (SD1) is revealed, that is, taking into account the disposable income of the population and consumer spending. It seems that this indicator of the tax burden most accurately reflects the real level of the tax burden on the population of the Kyrgyz Republic. The main argument is to compare all mandatory withdrawals from the income of the population and compare them with the disposable income of the population, taking into account consumer spending, indicated in this study by free income. Since this indicator is a determining factor in the stratification of society by the level of expenses and more fully takes into account the standard of living of the population.

The experience of highly developed countries shows that a high level of tax burden does not lead to a decline in the economy with effective administration in the tax system, contrary to the theory of the "Laffer curve". Based on this, it is necessary to reduce the tax burden without reducing tax revenues, since in the context of globalization, the strengthening of the role of the state against the background of solving complex geopolitical problems, the socio-economic development of society is impossible without a constant increase in public spending in accordance with Wagner's law. In this regard, the researchers note: "The general nature of the relationship between the tax burden and economic growth ... depends on the assessment of the productivity of public spending (Demidenko, 2006). It is specifically defined that "an increase in tax rates per unit can have a positive impact on economic development if tax sources are used in production areas, such as an increase in human and real capital reserves.

Thus, the increase in the tax burden is linked to the increase in the efficiency of government spending, including on education and health care. They "increase the efficiency of the economy by improving the quality of "human capital". Also, public investments, along with private ones, contribute to the development of the economy (Demidenko, 2006).

Therefore, it is necessary to solve the problems of reducing the tax burden on the population without losing tax revenues to the state budget and reducing the incomes of the main category of citizens.

Since the main share of taxes from citizens in the Kyrgyz Republic is income tax (in 2017, 28% of current taxes and 38% in 2021), the reality requires a revision of the income tax methodology.

Seligman in his work "Progressive taxation in theory and practice" wrote: "Each individual is assumed to have an income which he values at a certain percentage; i. e., the marginal utility of each successive grade of income diminishes as the income increases. In order to bring about a real equality, so that the ratio of sacrifice to enjoyment may be three per cent in each case, it would be necessary to tax…» more than three percent. In other words, in order to produce equal sacrifice we must have a progressive rate of taxation" (Celikay, 2020).

Seligman has developed a compelling case for a progressive income tax. However, he recommended first applying proportional tax rates, and only after that introducing elements of progressive taxation.

In the tax system of the Kyrgyz Republic, in terms of taxation of personal income, everything was the opposite.

Initially, when the Tax Code of the Kyrgyz Republic was introduced in 1996, income tax was established as a progressive tax in accordance with world practice. It was levied by the method of relative progression in six stages: the first stage was the tax base of up to 375 soms. (5 times the minimum monthly salary of that period) with a rate of 5%, the last step is the tax base over 45 times the minimum monthly salary (3375 soms.), the amount of tax from it was 585.25 soms. plus 40% of the amount exceeding 3375 soms. Due to the low incomes of the population, the latest rates of 30 and 40% were practically not applied. Therefore, a narrowing of the categories of taxation followed, first to four, then to two income levels with a corresponding reduction in tax rates. From 2006 to the present, proportional taxation has been in effect in the Kyrgyz Republic on any income of individuals with a tax rate of 10%. And this is the main reason for the widening gap between the expenditures of the most affluent segments of the population and the expenditures of the least affluent segments of the population. Proportional taxation contradicts world practice, does not provide the principle of vertical fairness of taxation and does not characterize the evolution in taxation (Panskov, Knyazev, 2003).

As M.M. Sokolov notes, the progressive personal income tax has now become an organic product of the economic and social life of industrialized countries. If we assume that in the USA, France, Denmark, Sweden, Finland and a number of other countries there was one tax rate on individuals of 13%, then their budget revenues would have decreased by an average of 2-2.5 times (Seligman, 1908).

To illustrate the application of progressive tax rate levels, we will give examples of income tax in the Scandinavian countries with the highest rates of personal income tax on middle-class workers. For example, in Denmark, the highest statutory personal income tax rate of 55.9% applies to all incomes exceeding the average income by 1.3 times. The maximum personal tax rate in Norway of 38.2 percent applies to all incomes exceeding 1.6 times the average Norwegian income. The highest personal tax rate in Sweden of 57.2 percent applies to all incomes exceeding 1.5 times the average national income (Sokolov, 2018). With such high rates affecting the main groups of the population by income level, the US tax rates are compared. Here, the maximum personal income tax rate is 43.7 percent (federal and state taxes combined), which is 9.2 times higher than the average income in the United States (about $ 500). Thus, a relatively smaller proportion of taxpayers face the maximum rate.

Currently, with the current level of income inequality of the population in the Kyrgyz Republic, it is necessary to apply progressive taxation instead of the proportional method. At the same time, the previously proposed progressive tax scheme with the gradation of personal income into three levels remains unchanged. The first is the taxation of the low–paid category of citizens at a rate of 10%. The second income level should include representatives of the middle class with a tax rate of 20%. This group includes highly paid professionals, high-class managers or small and medium-sized entrepreneurs who have made their own business based on accumulated knowledge, experience and initial capital. The future number of jobs and tax revenues of the budget largely depend on the successful activity of this class. Finally, the application of the rate at the level of 30% to the third category of income differentiation of the population. It should include citizens who have excess income from the capital acquired from the privatization of facilities in the first years of the transition to a market economy (Fynchina, H.A., 2011; Asen, E., 2021).

In order to equalize the income of the population, it is necessary to increase the amount of the non-taxable minimum, for example, to 1.5 thousand som. Currently, it is accepted in the amount of 650 SOM. per month. According to its purpose, the size of the non–taxable minimum is tied to the subsistence minimum, which in reality is higher – 7 thousand som. in 2022. In relation to the population engaged in small business (mainly in the service sector, small-scale production, etc.), a sufficiently flexible system of patents should be developed in order to motivate the development of this business area without strengthening the control of the individual entrepreneurship sector by the tax authorities, which also contributes to the weighting of the tax press on the population as an element of the tax mechanism.

Models of progressive taxation are proposed by Russian researchers of the problem with a similar justification of the arguments and conditions of application. D.E. Lapov et al. They say: "A progressive model of the distribution of the real tax burden, taking into account the real tax burden, should set more than four times the excess of tax rates for the highest income groups. Also, this model should have methods of adjusting the tax burden used in developed countries: minimum non-taxable income, determination of the tax base as a whole for the household, effective tax deductions and a system of social transfers" (Fynchina, 2018). Taking into account such factors in progressive taxation is especially important when there are shortcomings in the income tax mechanism in the Kyrgyz Republic.

5 CONCLUSIONS

In modern conditions of economic science development, a generally accepted methodology for determining the tax burden on the population by analogy with the tax burden on the economy used in international comparisons has not yet been developed. There is also no single methodology for assessing the factors of the impact of the tax burden of the population on certain aspects of the socio-economic development of society. Therefore, the results presented in this study cannot be final. But they can provide directions and a basis for further research in order to develop concepts for the development of the tax system.

The main conclusions of this work are:

1. Generalization of available methods for determining the tax burden on the population and their justification.

2. The calculated levels of the tax burden on the population using scientifically based statistical indicators for the Kyrgyz Republic are ambiguous. Its main indicator is estimated as a high tax burden on the population of the Kyrgyz Republic, taking into account the level of income of the population and the degree of stratification of society.

3. The level of the tax burden on the population is a multidimensional indicator, interrelated with the main macroeconomic indicators. The degree and nature of dependence of the economic growth of the Kyrgyz Republic on the tax burden are determined.

4. In the Kyrgyz Republic, there is a stratification of the population by the level of expenditure. This is facilitated to a large extent by the proportional taxation on personal income that has been in effect for many years.

5. Ensuring an optimal level of tax burden on low-income groups of the population without reducing tax revenues of the budget is possible with the transition to progressive taxation of income of the population with rational income levels and rates.

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APPENDIX

Calculation of the tax burden of the population

	2008	2010	2016	2019	2021
GDP, mil. soms	187991.9	220369.3	476331.2	619102.7	739818.5
Tax payments from population and social contributions of population, mil. soms	31866.8	39079.8	81615.7	93615.6	102049.4
The tax burden (TBp) on population to GDP, percent	17.0	17.7	19.0	19.7	19.2
Gross value added of households (GVAh/h), mil. soms	76309.4	77105.5	153632.6	159353.8	174768.2
TBp to GVAh/h, percent	41.8	50.7	57.8	58.5	60
Gross disposable income of households (GDIh/h), mil. soms	173956.4	201766.8	413168.4	493007.5	610857.6
TBp to GDIh/h, percent	18.3	19.4	22.7	23.8	22.6
Monetary income of the population (MIp), mil. soms	129545.7	164789.2	309946.4	447879.2	541755.0
TBp to MIp, percent	24.6	23.7	30.2	26.2	25.4
Consumer spending of population (CSp), mil. soms	128275.8	138817.7	213443.2	257884.4	324842
Free income of population (FI1) (GDIh/h - CSp), mil. soms	45680.6	62949.1	199725.2	235123.1	286015.6
TBp to FI1, percent	72.4	62.1	46.9	49.9	48.2
The subsistence minimum (SM), mil. soms	229185.4	230236.7	353255.5	376246.8	507529.2
Free income of population (FI2) (GDIh/h - SM), mil. soms	-55229	-28469.9	59912.9	116760.7	103328.4
TBp to FI2, percent	-57.7	-137.3	156.3	100.4	133.3

Source: calculated by the author according to (Baymukhametova, Ishchuk, 2018).