

THE ROLE OF FISCAL POLICY IN ENSURING INCLUSIVE ECONOMIC GROWTH IN THE REPUBLIC OF ARMENIA IN THE CONTEXT OF THE SUSTAINABLE DEVELOPMENT GOALS

O PAPEL DA POLÍTICA FISCAL PARA GARANTIR O CRESCIMENTO ECONÔMICO INCLUSIVO NA REPÚBLICA DA ARMÊNIA NO CONTEXTO DOS OBJETIVOS DE DESENVOLVIMENTO SUSTENTÁVEL

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Abstract

The article discusses the issues of selecting fiscal policy instruments and estimating the optimal tax burden in the context of ensuring inclusive economic growth. This article is based on the implementation of the theoretical requirement of combining the principles of fairness and efficiency in optimal tax policy. The main conceptual starting point of this analysis is that the tax burden of a state should stem from two main pillars: the first is macro-fundamental factors, which often consider fiscal policy exclusively from the perspective of meeting the state's spending needs and adequately responding to economic cycles, and the second pillar is the set of indicators related to social and institutional processes that characterize the sustainable development of the economy. In order to study the problem of assessing the optimal tax burden in the context of sustainable development, a panel regression model was calculated for 193 low-, middle-, and high-income countries with a time sample of 2002-2022. This made it possible to link the tax burden - taxes/GDP - with the macroeconomic fundamentals of the economy, as well as a number of indicators characterizing

Resumo

O artigo discute as questões da seleção de instrumentos de política fiscal e da estimativa da carga tributária ótima no contexto da garantia do crescimento econômico inclusivo. Este artigo baseia-se na implementação do requisito teórico de combinar os princípios de justiça e eficiência na política tributária ótima. O principal ponto de partida conceitual desta análise é que a carga tributária de um Estado deve derivar de dois pilares principais: o primeiro são os fatores macrofundamentais, que frequentemente consideram a política fiscal exclusivamente sob a perspectiva de atender às necessidades de gastos do Estado e responder adequadamente aos ciclos econômicos, e o segundo pilar é o conjunto de indicadores relacionados aos processos sociais e institucionais que caracterizam o desenvolvimento sustentável da economia. Para estudar o problema de avaliação da carga tributária ótima no contexto do desenvolvimento sustentável, um modelo de regressão em painel foi calculado para 193 países de baixa, média e alta renda com uma amostra temporal de 2002 a 2022. Isso permitiu vincular a carga tributária - impostos/PIB - aos



sustainable development. The study found that the actual and optimal levels of tax burden for countries by income group are directly proportional to their levels of development. As for the difference between the optimal and actual tax burden in dynamics, according to the results of the study, in low-income countries the optimal level is constantly lower than the actual level during the observed period, which is most likely due to the predominance of expenditure needs in these countries, which, ultimately, has a restraining effect on economic processes.

Keywords: Inclusive Economic Growth. Fiscal Policy. Macro Fundamental Factor. Optimal Tax Burden. Sustainable Development Goals.

fundamentos macroeconômicos da economia, bem como a uma série de indicadores que caracterizam o desenvolvimento sustentável. O estudo constatou que os níveis real e ótimo de carga tributária para os países, por faixa de renda, são diretamente proporcionais aos seus níveis de desenvolvimento. Quanto à diferença entre a carga tributária ótima e a real na dinâmica, de acordo com os resultados do estudo, em países de baixa renda o nível ótimo é constantemente inferior ao nível real durante o período observado, o que provavelmente se deve à predominância de necessidades de gastos nesses países, o que, em última análise, tem um efeito restritivo sobre os processos econômicos.

Palavras-chave: Crescimento Econômico Inclusivo. Política Fiscal. Fator Fundamental Macro. Carga Tributária Ótima. Objetivos de Desenvolvimento Sustentável.

1 INTRODUCTION

Ensuring sustainable economic development within the framework of promoting economic growth, social integration and jointly addressing environmental issues has become the main formula of the development agenda of recent decades. Governments of countries are striving to find comprehensive solutions to this problem. By and large, the problem of sustainable economic growth and the availability of its results for all segments of society is somehow embedded in ensuring the principle of inclusiveness. From this point of view, any government seeks to supplement its economic policy instruments with levers, the implementation of which guarantees the implementation of sustainable development goals. The main instrument of the government's economic policy in this sense comes down to the implementation of fiscal policy aimed at ensuring inclusive economic growth.

The aim of this study is to develop fiscal policy approaches, the application of which will, on the one hand, ensure the inclusiveness of economic growth, and on the other hand, ensure the implementation of sustainable development goals.

2 LITERATURE REVIEW

The analysis and assessment of ensuring sustainable economic growth using economic policy instruments, in particular fiscal policy levers, has become one of the most important topics of academic discussions in the economic literature of recent decades. There are numerous claims among researchers (Nijkamp and Poot, 2004) that taxes, being a source of primary income, generally have a negative impact on economic growth. However, some theorists are of the opinion that it is environmental taxes, aimed at neutralizing negative externalities, that have a positive impact on the development of society (Zagler and Dürnecker, 2003).

When considering the impact of individual types of taxes on economic growth, many researchers note that it is direct taxes, in particular the profit tax, that have a negative impact on economic growth. However, in this context, some authors (Johansson et al., 2008) are of the opinion that the corporate profit tax is an incentive to promote high-quality and promising investments, create jobs and, as a result, increase income. In this context, some authors (Greiner and Fincke, 2016) note that progressive tax systems, in particular progressive income taxes, have a negative impact on the quality of investment and, consequently, on economic growth, since they reduce the income of rich households and, consequently, their propensity to invest.

On the contrary, Joseph Stiglitz (2016) is of the opinion that a progressive tax system helps to reduce inequality in society, according to some other theorists (Ostry et al., 2016, Borissov and Hashimzade, 2022), in turn promotes long-term and sustainable economic growth. From the point of view of inclusiveness of economic growth, researchers also criticize the system of flat value-added tax. In particular, W. Gale (2020) develops the point of view that the value added tax, being a tax on consumption, harms the poor strata of the population more, therefore he proposes to move to a differentiated, progressive system of this type of tax.

Many authors have considered and analyzed the methodological issues related to the optimal design of tax systems in developing countries from the perspective of poverty alleviation and welfare distribution (Kanbur et al., 2018). However, most theorists (Lamb et al. 2004) view the problem of an optimal tax system as a fundamental macroeconomic problem of the relation of efficiency and fairness. Taking into account the fairness factor,

according to a number of authors (Fleurbaey and Maniquet, 2018) provides significant flexibility in the formation of the optimal design of the tax system.

In the fiscal sphere, optimality implies the formation and implementation of rules that are perceived with confidence by taxpayers as being in line with the principles of fairness, compliance, and neutrality. A reliable tax system is, from this perspective, an optimal tax system that is based on stability, certainty, and the sufficiency of financial resource generation (Barbu et al., 2022). The concept of an optimal tax system is often tied to the dominant political ideology in a given society (Angelopoulos, 2013).

A group of researchers notes that in many cases, the optimal tax system is identical to ensuring the stability of the financial system (European Commission, 2017). Some authors have compared the characteristics of developed and developing countries in the framework of the analysis of factors contributing to inclusive economic growth. In particular, Nino Mikeladze and Ivane Bedianashvili have compared the European Union and developing countries in this context, which revealed that in the case of developed countries, the factors determining the inclusiveness of economic growth are indirect taxes and capital expenditures from the state budget, while in the case of developing countries, the main drivers of inclusive growth are associated with an increase in direct taxes, as well as an increase in capital expenditures in the medium and long term (Mikeladze, N., & Bedianashvili, 2024).

In a number of research works, the development of optimal tax rates is based on consumption preferences, and it is argued that the density of this connection is inversely proportional to income growth (Kanbur and Tuomala, 2013). Many modern studies conclude that increasing direct tax rates, especially corporate and income taxes, leads to more effective implementation of sustainable development goals (Halim, A., Rahman, 2022). Another argument is that the tax system not only cannot contribute to the achievement of all 17 Millennium Development Goals, but in many cases can hinder them due to unfair and unsustainable taxes (Salaudeen, 2024).

3 METHODOLOGY AND MODELING

In the context of studying the links between ensuring sustainable economic development and fiscal policy, it is important to consider the extent to which the above follows from existing social, institutional and macroeconomic fundamental changes in

the economy. Accordingly, one of the key provisions of this analysis is that the tax burden of the state should follow from two main pillars: the first is macrofundamental factors, which often consider fiscal policy solely from the point of view of meeting the state's spending needs and adequately responding to economic cycles, and the second pillar is a set of indicators related to social and institutional processes characterizing the sustainable development of the economy.

In order to bring the above problem into the measurement plane and conduct quantitative assessments, this study calculated a panel regression model for 193 low-, middle- and high-income countries with a time sample of 2002-2022. This made it possible to link the tax burden, taxes/GDP, with the macroeconomic fundamentals of the economy, as well as with a number of indicators characterizing sustainable development. The assessment was carried out on the basis of statistical information contained in the databases of the International Monetary Fund and the World Bank.

The regression model was estimated with the following specification, typical for panel models:

$$T/GDP_{c,t} = \varphi_0 + \sum_{n=1}^j \varphi_n Dep_{c,n,t} + \vartheta_1 * dum_{country-low-inc} + \vartheta_2 * dum_{country-emergeing} + \vartheta_3 * dum_{country-fuel-ex} + \varepsilon_{c,t}, \quad (1)$$

where:

$T/GDP_{c,t}$ – The magnitude of the tax burden at time t in the case of country c,

φ_0 - model constant,

$\sum_{n=1}^j \varphi_n$ – elasticity of the n-th variable,

$Dep_{c,n,t}$ – Macroeconomic fundamentals of the economy, as well as a set of dependent variables characterizing sustainable development (poverty gap (depth), undernourished part of the population, Gini coefficient for consumption, investment in relation to GDP, final consumption in relation to GDP, etc.).

$\vartheta_1 * dum_{country-low-inc}$, $\vartheta_2 * dum_{country-emergeing}$, $\vartheta_3 * dum_{country-fuel-ex}$ – Dummy variables that take the value 1 when the country is classified as a low-income or middle-income (developing) country according to the International Monetary Fund's classification, and take the value 1 when the country is an energy exporter.

$\varepsilon_{c,t}$ – model error, i.i.d.

4 RESULTS AND DISSCUSION

The estimation of the above panel regression model allowed to obtain the optimal level of the tax burden (fitted values), resulting from the goals of sustainable development, as well as adjusted fundamental macroeconomic values, characteristic of the countries of the world, including the Republic of Armenia. The model evaluation results are presented in the following table (see Table 1).

Table 1. Results of panel regression analysis for estimating the optimal tax burden, corresponding to the goals of sustainable development¹

	Variable	Unit of measurement	Elasticity	Source
Macroeconomic fundamentals	Tax burden	% of GDP	-	IMF
	Final consumption	% of GDP	0.02***	WB
	Investment	% of GDP	0.01**	IMF
	Import	%, growth rate	0.010***	WB
	Saving	% of GDP	-0.02***	WB
	Agriculture	% of GDP	-0.11***	WB
	Inflation	%	-0.003***	IMF
	Net debt	% of GDP	0.02***	IMF
Social and institutional indicators characterizing sustainable development	Poverty gap (depth)	\$3.65 per day (2017 PPP) (%)	-0.04***	WB
	Undernourished population	% of total population	-0.07***	WB
	Gini coefficient of consumption	Index, percentage point	0.03***	WB
	CO2 emissions	Megaton	0.001***	WB
	Renewable electricity consumption	% of total energy consumption	0.016***	WB
	Social assistance coverage	% of total population	0.087***	WB
	Voice and accountability index	Index, percentile	0.08***	WB
	Control of corruption	Index, percentile	0.02***	WB
	Usage of internet	Index, percentile	0.02***	WB
	Vulnerable employment	% of total employment	-0.05***	WB

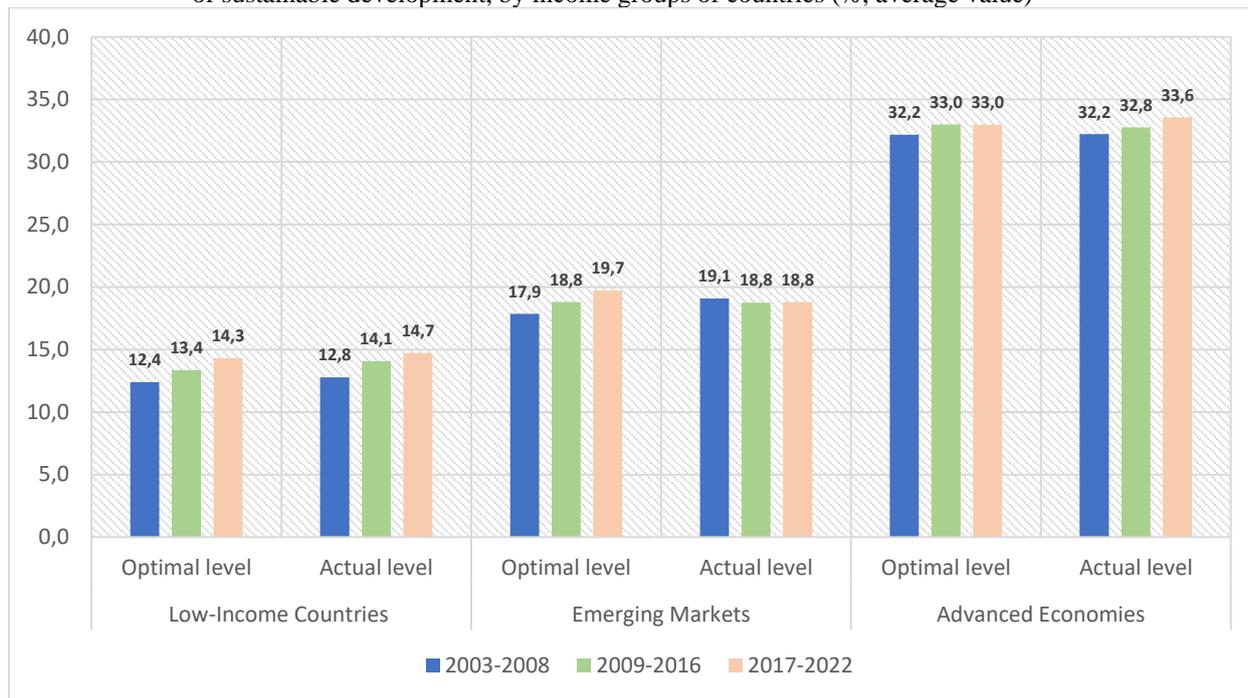
¹The evaluation was compiled by the author using the Eviews 13 software package. Data was collected also by the author from the following sources:
<https://www.imf.org/en/Topics/fiscal-policies/world-revenue-longitudinal-database>
<https://data.worldbank.org/>

	School enrollment	% of school-age children	0.02***	WB
	Dummy variable characterizing the tax burden of low-income countries	Takes the value 1 if the country is a member of the group, 0 otherwise.	-8.4***	
	Dummy variable characterizing the tax burden of middle-income developing countries		-7.1***	
	Dummy variable characterizing the oil-exporting country		-4.9***	
	Constant (developed countries)		20.2***	
	R²	0.908		
	R² adj.	0.907		
* p<0.1, ** p<0.05, *** p<0.01				

Source: Analysis results by the authors

From the results of the model, it is clear that both the actual and the optimal level of the tax burden are directly proportional to the level of development of the country, namely the level of income, and the calculated level of the optimal tax burden, corresponding to the goals of sustainable development, is on average 13% for low-income countries, 19% for developing and middle-income countries, and 33% for developed countries. As for the difference between the optimal and actual tax burden in dynamics, studying the results of the graph, it is possible to ascertain that in countries with a low level of income, the optimal level is constantly lower than the actual one during the observed period, which is most likely due to the prevalence of spending needs in these countries, which ultimately has a restraining effect from the point of view of economic processes.

Figure 1. Results of the panel regression assessment of the optimal tax burden, corresponding to the goals of sustainable development, by income groups of countries (% , average value)



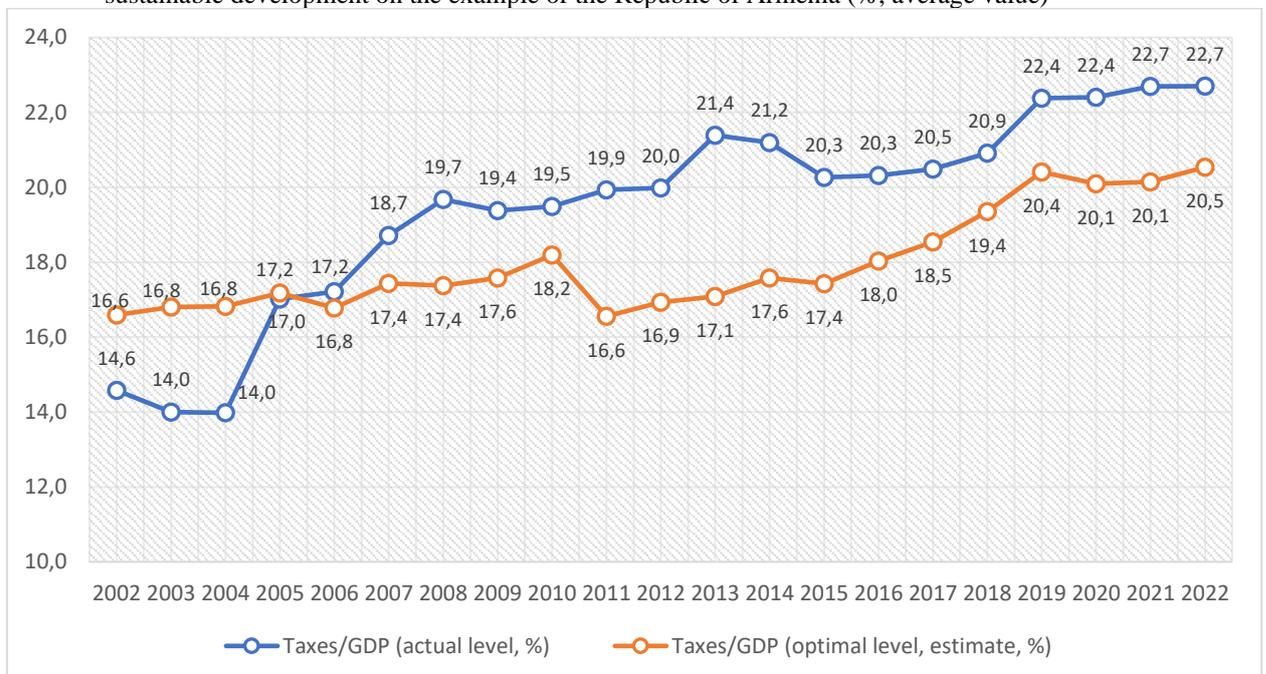
Source: Analysis results by the authors

In the case of middle-income countries, it can be noted that in the pre-crisis period (2003-2008), the actual level of the tax burden exceeded the optimal level, in the post-crisis period (2009-2016), these indicators were practically equal, and in the subsequent period (2017-2022) the optimal level, in accordance with the development of the economy, also increased, despite the actual level, which remained at the previous level of 18.8%. This phenomenon can serve as a signal for politicians in the countries of this income group, since the processes of economic development also imply a consistent increase in tax revenues, and the absence of comparable growth can indicate a tax evasion in the economy, an increase in tax benefits, or the preferential growth of structurally tax-exempt sectors.

As for advanced economies, in this case it can be noted that the phenomenon of the formation of a general economic equilibrium parallel to economic development, when the economic foundations are stabilized around a long-term steady state, is also characteristic of the fiscal sector of the economy and, compared to the previous two income groups, the level of the optimal tax burden in developed countries is characterized by relative stability during the observed period, while the actual tax burden stabilized around the optimal 33%.

It can be noted that in the case of Armenia, the indicator of the actual tax burden constantly exceeded the estimated optimal level, while the estimate of the optimal level fluctuated around 20-21% in recent years (see Figure 2). This phenomenon is a signal of the need to include sustainable development issues in budget planning, in particular, tax intervention in the economy and the tax burden when determining it, as well as the macroeconomic foundations of the economy, since the above estimates show that the further possibilities of expanding the tax burden are already very limited and do not follow from the goals of sustainable development.

Figure 2. The results of the assessment of the optimal tax burden in accordance with the goals of sustainable development on the example of the Republic of Armenia (% , average value)



Source: Analysis results by the authors

In the context of solving the problems considered in the framework of this analysis, in our opinion, politicians need to focus within the framework of economic policy not only on the financing of expenditure needs and the purely quantitative and volume expansion of economic programs due to the net expansion of the tax burden, but also on the improvement of the framework of social and institutional pillars, considered in the context of the panel regression assessment, due to structural reforms and increasing the efficiency of expenditures, which will allow not only to "extensively" improve the level of the actual tax burden, but also to emphasize on the dynamic improvement of the optimal level of the tax burden in accordance with the pillars of sustainable development.

5 CONCLUSIONS

Within the framework of this study, dynamic relationships and interactions between macroeconomic fundamental factors and the pillars of the sustainable development agenda, in particular economic growth, social stability and environmental factors, were studied, and approaches were developed, the application of which will ensure the inclusiveness of economic growth, on the one hand, and the realization of the goals of sustainable development, on the other.

According to the results of the research, the actual and also the assumed optimal level of the tax burden is directly proportional to the level of development of the country depending on the income group. According to the results of the study, the estimated level of the optimal tax burden, corresponding to the goals of sustainable development, is on average 13% for low-income countries, 19% for developing countries and middle-income countries, and 33% for developed countries. At the same time, in countries with an average level of income, which includes the Republic of Armenia, the ratio of the actual and optimal levels of the tax burden depended on the stage of the economic cycle in which the country was. In Armenia, in the pre-crisis period, the actual level of the tax burden exceeded the optimal level, in the post-crisis period, these indicators were practically equalized, however, in the subsequent period (2017-2022), the optimal level was lower than the actual one. This phenomenon can serve as a signal for politicians in the countries of this income group, since the processes of economic development also imply a consistent growth of tax revenues, and the absence of comparable growth can indicate the avoidance of paying taxes in the economy, an increase in tax benefits, or the preferential growth of structurally tax-exempt sectors.

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