

Article

# Level of social security expenditures and economic growth rate based on econometric regression modelling: New evidence from OECD countries

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**Abstract:** This research article examines the relationship between the level of social welfare expenditure and economic growth rates, based on unbalanced panel data from 38 OECD countries covering the period from 1985 to 2022. Four hypotheses are formulated regarding the impact of social expenditure on economic growth rates. Through multiple iterations of regression model building, employing various combinations of dependent and independent variables, and conducting tests for stationarity and causality, compelling empirical evidence was obtained on the negative influence of social welfare spending on economic growth rates. The study takes into account both government and non-governmental expenditures on social welfare, a novelty in this field. This approach allows for a detailed examination of the effects of different components on economic growth and provides a more comprehensive understanding of the relationships. The findings indicate that countries with high levels of social welfare spending experience a slowdown in economic growth rates. This is associated with increasing demands on social security systems, their growing inclusivity, and the escalating required levels of financing, which are increasingly covered by debt sources. The research highlights the need to strike a balance between social expenditures and economic growth rates and proposes a set of measures to ensure economic growth outpaces the indexing of social expenditures. The abstract underscores the relevance of the study in light of the widespread recognition of the necessity to combat inequality, poverty, and destitution, and calls on OECD countries' governments to pay increased attention to social policy in order to achieve sustainable and balanced economic growth.

**Keywords:** urban studies; social expenditures; economic growth; social security financial model; poverty; public finance; welfare state; welfare programs

## 1. Introduction

The funding of social support programs in economic thought has been an extremely contentious issue, debated for centuries. Redistributing a portion of the income of high-income individuals through the fiscal system in favor of socially vulnerable groups of citizens is considered by some scholars as economically justified investments, ensuring social stability in the short and medium term. Furthermore, such investments can be seen as high-yield investments, positively impacting long-term economic growth by enhancing the quality of the average human capital in the economy.

At the same time, the opposing views argue against excessive fiscal redistribution

and excessive social spending. This perspective maintains that increasing income redistribution in economies may have long-term adverse effects by stifling labor initiatives and entrepreneurial activity, reducing risk-taking tendency, and impeding the pace of innovation adoption in the non-governmental sector of the economy. In theory, all of these factors are likely to inevitably slow down the economic growth rate, as high marginal tax rates and a large volume of budgetary transfers to the population, particularly without means-testing and targeting of these transfers, can significantly negatively impact the productivity of both high-income and low-income groups of citizens.

This discussion largely takes place in the context of solving issues related to eradicating poverty and overcoming the financial hardships of the population. The modern context for debates in this area revolves around transitioning social security systems to financial models based on a universal basic income. In the 21st century, experiments are being conducted in which researchers attempt to empirically justify the impact of universal or unconditional payments on the recipients' motivation for work and personal development. Additionally, they seek to determine the extent to which these recipients' dependency on budgetary transfers may evolve in the long term.

Ensuring the flexibility of social security financial models will help avoid significant damage to income redistribution processes in the economy, which are crucial for economic growth and the sustainability of modern social welfare theory. Until now, countries that have ratified International Labour Organization (ILO) Convention No 102 and have taken into account the recommendations for constructing an efficient and sustainable social security model have demonstrated this capability.

During the literature review, we came across studies that classified budget expenditures within a functional framework, distinguishing between productive and unproductive, active and passive expenditures. However, we have not found any research that considers the existence of non-governmental financial models for social security and expenditures on social security in the non-governmental sector of the economy. Expenditures on social security for the population, implemented through non-governmental models of social security in certain countries, account for more than 40% of the total expenditures in this sphere (see **Table 1**).

**Table 1.** Level and structure of social security expenditures in OECD Countries in 2019.

No	Country	Grand Total	Total Public	Public Active	Public Passive	Total Private	Mandatory Private	Voluntary Private
		% of GDP	Share of Grand Total	%	%	%	%	%
1	Australia	25.6%	80.0%	11.3%	68.7%	20.0%	14.7%	5.3%
2	Austria	30.0%	92.3%	5.5%	86.7%	7.7%	2.8%	4.9%
3	Belgium	30.0%	94.0%	7.9%	86.1%	6.0%	0.0%	6.0%
4	Canada	25.9%	72.5%	3.5%	69.0%	27.5%	0.0%	27.5%
5	Chile	15.6%	74.8%	1.9%	72.9%	25.2%	21.2%	4.0%
6	Colombia	16.5%	85.6%	2.1%	83.6%	14.4%	10.2%	4.2%
7	Costa Rica	13.2%	93.5%	1.7%	91.8%	6.5%	2.9%	3.6%
8	Czech Republic	20.2%	96.5%	3.2%	93.3%	3.5%	2.0%	1.5%
9	Denmark	32.3%	88.1%	5.8%	82.3%	11.9%	7.3%	4.6%

**Table 1. (Continued).**

No	Country	Grand Total	Total Public	Public Active	Public Passive	Total Private	Mandatory Private	Voluntary Private
		% of GDP	Share of Grand Total	%	%	%	%	%
10	Estonia	18.0%	99.4%	4.8%	94.6%	0.6%	0.0%	0.6%
11	Finland	30.6%	96.1%	7.9%	88.2%	3.9%	0.1%	3.8%
12	France	34.3%	89.7%	6.5%	83.2%	10.3%	2.2%	8.1%
13	Germany	29.3%	87.4%	4.7%	82.7%	12.6%	8.8%	3.8%
14	Greece	26.2%	95.9%	3.6%	92.3%	4.1%	1.9%	2.2%
15	Hungary	18.0%	98.2%	4.9%	93.3%	1.8%	0.0%	1.8%
16	Iceland	25.7%	72.7%	3.2%	69.5%	27.3%	26.8%	0.5%
17	Ireland	14.8%	86.9%	6.0%	80.9%	13.1%	0.0%	13.1%
18	Israel	18.6%	86.7%	2.3%	84.4%	13.3%	1.2%	12.1%
19	Italy	29.6%	93.8%	4.0%	89.8%	6.2%	3.3%	3.0%
20	Japan	25.7%	88.4%	1.2%	87.2%	11.6%	1.3%	10.3%
21	Korea	15.6%	78.7%	5.2%	73.5%	21.3%	6.4%	14.9%
22	Latvia	16.8%	98.6%	4.2%	94.4%	1.4%	0.0%	1.4%
23	Lithuania	17.6%	96.6%	3.8%	92.9%	3.4%	1.6%	1.7%
24	Luxembourg	22.7%	95.1%	8.5%	86.6%	4.9%	3.9%	1.0%
25	Mexico	7.8%	94.0%	0.0%	94.0%	6.0%	0.0%	6.0%
26	Netherlands	29.5%	55.4%	4.7%	50.7%	44.6%	22.3%	22.3%
27	New Zealand	24.3%	97.1%	18.2%	79.0%	2.9%	0.0%	2.9%
28	Norway	27.9%	90.7%	2.4%	88.3%	9.3%	4.5%	4.8%
29	Poland	22.0%	96.2%	2.1%	94.1%	3.8%	0.1%	3.7%
30	Portugal	24.6%	90.9%	3.8%	87.1%	9.1%	0.9%	8.3%
31	Slovak Republic	18.4%	94.7%	3.2%	91.5%	5.3%	0.5%	4.8%
32	Slovenia	22.8%	94.2%	2.7%	91.5%	5.8%	0.0%	5.8%
33	Spain	25.9%	95.0%	8.6%	86.5%	5.0%	0.0%	5.0%
34	Sweden	28.6%	87.5%	4.7%	82.8%	12.5%	1.4%	11.1%
35	Switzerland	27.8%	58.2%	4.4%	53.7%	41.8%	38.3%	3.6%
36	Türkiye	12.7%	98.2%	2.9%	95.3%	1.8%	0.0%	1.8%
37	United Kingdom	25.8%	75.7%	0.9%	74.8%	24.3%	2.4%	21.9%
38	United States	30.6%	59.6%	0.8%	58.8%	40.4%	18.8%	21.6%
<b>Descriptive statistics</b>								
39	Max	34.3%	99.4%	18.2%	95.3%	44.6%	38.3%	27.5%
40	Mean	23.2%	87.6%	4.6%	83.0%	12.4%	5.5%	6.9%
41	Median	25.1%	91.6%	3.9%	86.5%	8.4%	1.7%	4.7%
42	Min	7.8%	55.4%	0.0%	50.7%	0.6%	0.0%	0.5%

Source: Compiled by the authors based on OECD data.

In all OECD countries without exception, a non-governmental sector of social security for the population exists. This means that the current aggregate level of social security is achieved not only through the efforts of the government sector but also due to the presence of various types of non-governmental models of social security.

Together with the government sector, these models lead to even more significant income redistribution in the economy. Ignoring this factor in empirical research somewhat distorts the overall picture. Therefore, it is proposed to address this issue by conducting additional rounds of econometric modeling.

Despite the nominal GDP per capita in most countries continuing to grow after the global financial crisis of 2008, the pace of economic growth has significantly slowed down and become alarmingly low compared to the increasing rates of money supply growth, debt burden, and inflation. These issues highlight the importance of conducting comprehensive empirical research on the impact of expenditure levels on social welfare on economic growth.

## **2. Literature review**

There is a broad literature about social security expenditures. For an increase in government budget expenditures contributes to the growth of national income and can have a positive impact on the rate of economic growth. Expenditures on social policies from the government budget also promote economic development and ensure social stability; furthermore, they can be considered investments in one of the key factors of production—human capital. Supporters of the classical economic theory also acknowledge that social policy is an important component in raising the welfare level of the population. However, they argue that the responsibility for organizing and financing social policies should be shifted from the government budget to the non-governmental sector of the economy to the extent that the free market allows (Baum, 1992).

In the majority of empirical studies, the impact of budget expenditures on economic growth, measured by GDP levels (nominal, real, per capita, average rates, etc.), has been found to be consistently positive. Studies conducted by Castles and Dowrick (1990), Devarajan et al. (1993), Ezcurra and Rodríguez-Pose (2011), Korpi (1985), Kudrin and Knobel (2017), McCallum and Blais (1987), among others, have shown this positive relationship. However, the key differences in the results lie in the values of fiscal multipliers for overall social expenditures and for functional classifications of expenditures. One particular finding is that the defense and security sector, as a functional category of budget expenditures, is often identified as having the lowest fiscal multiplier and potentially exerting a negative impact on economic growth (Knobel et al., 2015). As a response to these findings, the concepts of productive and unproductive public expenditures were introduced by Balaev (2019). Differences in the rates of economic growth between countries can be attributed to factors related to employment and labor productivity levels (Castles and Dowrick, 1990). In general, there is no doubt that public expenditures, in most cases, have a positive impact on GDP. However, the level of this impact will depend on several internal and external factors related to labor productivity, the quality of institutional arrangements in the economy, the efficiency of public governance, the level of corruption, and so on (An and Mikhaylov, 2020; Moiseev et al., 2023; Mutalimov et al., 2021; Yumashev and Mikhaylov, 2020).

The field of scientific research on the impact of social expenditures on economic growth remains highly relevant in modern conditions. Some studies suggest a negative

influence of social expenditures on economic growth (Arjona et al., 2003; Cashin, 1994; Gwartney et al., 1998; Hansson and Henrekson, 1994; Nordstrom, 1992; Persson and Tabellini, 1994; Zeira, 2012).

Arjona et al. (2003) noted in their study that the influence of social expenditures on economic growth is moderately negative. To minimize this effect, the concept of active (supporting the labor market during periods of crises) and passive (all other) budgetary spending on social policies is introduced. The suggestion is to allocate budgetary resources more extensively to active expenditures (Mikhaylov, 2021, 2022; Mikhaylov et al., 2023a; Mikhaylov et al., 2023b).

The positive impact of social expenditures financed from the government budget on the pace of economic growth has been identified in research studies conducted by Landau (1985), Sala-I-Martin (1992), Perotti (1996), Wang (2005), Blankenau et al. (2007), Furceri and Zdzienicka (2012), Dao (2012), Dissou et al. (2016), and Mallick et al. (2016).

As vast amounts of data accumulate, various economic theories on the impact of social expenditures on the pace of economic growth continue to be scrutinized through new empirical research. The results from these studies vary significantly, making the subject of investigation highly debatable. An essential aspect of the research involves refining and accounting for causal relationships when constructing regression models. The rates of real economic growth influence aggregate budget expenditures, but not necessarily the other way around. Granger's analysis of causal relationships demonstrated that economic growth creates opportunities for increased budgetary spending, but the reverse is not necessarily true (Arjona et al., 2003). Hence, the existence of interrelationships between budget expenditures and the pace of economic growth may not be definitive, a conclusion that is supported by several empirical studies yielding mixed results (Annabi et al., 2011; Cullison, 1993; Kiran, 2014; Perotti, 1994).

This paper represents a significant research gap in balance between social expenditures and economic growth rates and proposes a set of measures to ensure economic growth outpaces the indexing of social expenditures.

### **3. Data and Methods**

The object of this study is to examine the relationships between the level of social security expenditures and the pace of economic growth from 1985 to 2022, based on unbalanced panel data from a sample of 38 OECD countries.

The level of social security expenditures is typically measured as a percentage of GDP or as a percentage of the total budget expenditure. Since this research incorporates all types of social security expenditures from both the government and non-governmental sectors of the economy, the indicator used is their share in the GDP structure. The OECD database contains data on mandatory and voluntary non-governmental expenditures, as well as government expenditures on social security, categorized into active (labor market and employment support programs) and passive (all other) components (OECD).

Based on the conducted literature review, the following research hypotheses are proposed:

- H0: The pace of economic growth is dependent on the level of social security expenditures for the population.
- H1: The level of social security expenditures is dependent on the pace of economic growth.

The pace of economic growth in this study was measured based on the World Bank’s World Development Indicators database (World Bank, n.d.). The research utilized both overall GDP growth rates and GDP per capita growth rates (Mikhaylov, 2023; Karlibaeva et al., 2024).

At this stage, it is possible to partially confirm hypotheses H0 and H1 for the intersections of indicators represented by the cells in **Table 2** with a Granger causality test result equal to 1.

**Table 2.** Descriptive statistics of panel data used in the study and corresponding variable notations.

No	Indicator Name	Abbreviation	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA’s
1 = 2 + 5	Total Social Expenditures	GrandTotal	0.218	17.56	21.82	21.35	26.48	38.55	162
2 = 3 + 4	Total Government Social Expenditures	Total Public	1.725	15.36	19.10	19.02	23.45	34.88	164
3	Active Social Government Expenditures	PublicActive	0.005	0.55	0.97	1.36	1.88	6.15	253
4	Passive Social Government Expenditures	PublicPassive	1.671	14.42	17.77	17.76	21.57	32.66	164
5 = 6 + 7	Total Non-Governmental Social Expenditures	PrivateALL	0.023	0.55	1.92	2.61	3.48	13.46	285
6	Mandatory Private Social Expenditures	MandatoryPrivate	0.005	0.28	0.62	1.44	1.48	10.63	711
7	Voluntary Private Social Expenditures	VoluntaryPrivate	0.024	0.37	1.09	1.78	2.17	11.19	328
8	GDP Growth Rate	GDPGR	-14.46	0.77	2.11	2.17	3.78	23.20	93
9	GDP per Capita Growth Rate	GDPPCGR	-14.84	1.46	2.85	2.82	4.42	24.37	93

Source: Compiled by the authors based on the materials of the study.

The research method involves constructing a standard panel econometric regression model. Similar studies served as the basis, where model construction was carried out with a minimal number of independent variables (Blankenau et al., 2007; Lupu and Nuță, 2023; Perotti, 1996; Sala-I-Martin, 1992). In general, the basic econometric model is represented by Equation (1).

$$y_{i,t} = \alpha + x'_{i,t}\beta + z'_i\gamma + c_i + u_{i,t} \tag{1}$$

in the given equation:

$z'_i$ —a vector of time-invariant characteristics.

$c_i$  и  $u_{i,t}$ —random components,

$$E(c_i) = 0, E(u_{i,t}) = 0;$$

in the Random Effects (RE) model, it is assumed that  $E(c_i|z'_i, X_i) = 0$ ;

in the Fixed Effects (FE) model, it is allowed that  $E(c_i|X_i) = 0$  and it depends on  $X_i$ ;

the Fixed Effects (FE) model does not allow estimating  $\alpha$  and  $\gamma$ ;

in the pooled regression (pooling), it is assumed that  $c_i = 0$ .

#### 4. Empirical results

Over 50 iterations of regression model construction were conducted, where various combinations of dependent and independent variables from **Table 2** were considered. The analysis included both total social security expenditures,

encompassing the government and non-governmental sectors of the economy, and expenditures broken down by individual components to detail the influence of different constituents on economic growth indicators.

Descriptive statistics of the panel data used in the study and the corresponding variable notations are presented in **Table 2**.

Before conducting the regression analysis, the data underwent several preliminary tests. These tests applied as recommended by researchers according to the literature (Blankenau et al., 2007; Dissou et al., 2016; Furceri and Zdzienicka, 2012; Mallick et al., 2016). Augmented Dickey-Fuller test for stationarity. Result-all data series from the formed sample are stationary. Granger causality test for the potential predictive power of the investigated variables (**Table 3**).

**Table 3.** Results of the direct and reverse Granger causality test for the data\*.

	Direct test: GrowthRate = Y; SocialExpenditures = X		Reverse test: SocialExpenditures = Y; GrowthRate = X	
	GDPGR	GDPPCGR	GDPGR	GDPPCGR
GrandTotal	0	1	0	0
Total Public	1	1	0	0
PublicActive	1	1	0	0
PublicPassive	1	1	0	0
PrivateALL	1	1	1	1
MandatoryPrivate	0	0	1	1
VoluntaryPrivate	0	0	0	1

Source: Compiled by the authors based on the materials of the study.

Notes: A value of 1 indicates the suitability of the independent variable *X* for predicting the dependent variable *Y* with a level of significance (*p*-value) not less than 0.05. A value of 0 indicates the unsuitability of the independent variable *X* for predicting the dependent variable *Y* at an acceptable level of significance.

For each iteration, five types of regression models were constructed (pooling, fixed effects, random effects, between estimator, first differences estimator). The Hausman and LM tests revealed that the best choice in all cases was the regression model with fixed effects. These tests used here as recommended by researchers according to the literature (Blankenau et al., 2007; Dissou et al., 2016; Furceri and Zdzienicka, 2012; Mallick et al., 2016).

The resulting regression models underwent the Goldfeld-Quandt and Breusch-Pagan tests for heteroskedasticity. The test results indicated the absence of heteroskedasticity and the suitability of the results for forecasting purposes.

The full cycle of data exploration and regression model construction involved altering the panel data by the time factor. Shorter sample periods contained more data and were more balanced. However, the results became more susceptible to cyclical distortions. For illustrative purposes, three additional shorter sample periods were formed from the original dataset with reduced panel data coverage.

**Table 4** presents eight regression models describing the relationships between economic growth indicators and all types of social security expenditures for the population.

**Table 4.** Results of econometric model construction (Models 1–8).

Period	1985–2022		1995–2022		1999–2022		2005–2022	
No of model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GDPGR	GDPPCGR	GDPGR	GDPPCGR	GDPGR	GDPPCGR	GDPGR	GDPPCGR
Public Active	-0.536*** (0.199)	-0.411** (0.201)	-0.868*** (0.271)	-0.711*** (0.274)	-1.472*** (0.334)	-1.343*** (0.338)	-2.036*** (0.435)	-1.891*** (0.440)
Public Passive	-0.364*** (0.047)	-0.360*** (0.047)	-0.454*** (0.060)	-0.433*** (0.061)	-0.498*** (0.068)	-0.471*** (0.069)	-0.520*** (0.101)	-0.484*** (0.102)
Mandatory Private	-0.183** (0.083)	-0.183** (0.084)	-0.503*** (0.136)	-0.516*** (0.137)	-0.423*** (0.157)	-0.458*** (0.159)	-0.313 (0.290)	-0.403 (0.293)
Voluntary Private	-0.575*** (0.175)	-0.564*** (0.177)	-0.916*** (0.254)	-0.935*** (0.257)	-0.726** (0.281)	-0.780*** (0.285)	-0.447 (0.417)	-0.569 (0.422)
Observations	672	673	572	573	513	514	394	395
R2	0.155	0.145	0.171	0.155	0.190	0.172	0.188	0.169
Adjusted R2	0.114	0.104	0.123	0.107	0.138	0.119	0.118	0.098
F statistic	29.356*** (df = 4; 640)	27.205*** (df = 4; 641)	27.835*** (df = 4; 540)	24.837*** (df = 4; 541)	28.285*** (df = 4; 481)	25.088*** (df = 4; 482)	20.918*** (df = 4; 362)	18.396*** (df = 4; 363)

Source: Compiled by the authors based on the materials of the study.

\*Note: \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

**Table 5** presents an additional 8 regression models describing the relationships between economic growth indicators, taking into account the results of the Granger causality test. The test suggests that for private expenditures, it is more appropriate to consider their sum since the data from the sample are significantly limited.

**Table 5.** Results of Econometric Model Construction (Models 9–16)\*.

Period	1985–2022		1995–2022		1999–2022		2005–2022	
No of model	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	GDPGR	GDPPCGR	GDPGR	GDPPCGR	GDPGR	GDPPCGR	GDPGR	GDPPCGR
Public Active	-0.748*** (0.153)	-0.637*** (0.154)	-0.976*** (0.213)	-0.835*** (0.215)	-1.663*** (0.259)	-1.542*** (0.262)	-1.686*** (0.318)	-1.579*** (0.322)
Public Passive	-0.436*** (0.037)	-0.420*** (0.037)	-0.589*** (0.050)	-0.560*** (0.051)	-0.615*** (0.059)	-0.579*** (0.059)	-0.780*** (0.091)	-0.726*** (0.092)
Private ALL	-0.237*** (0.078)	-0.237*** (0.078)	-0.486*** (0.130)	-0.496*** (0.131)	-0.300* (0.161)	-0.319* (0.163)	0.216 (0.288)	0.157 (0.292)
Observations	1117	1119	895	896	778	779	566	567
R2	0.188	0.171	0.212	0.191	0.237	0.212	0.236	0.209
Adjusted R2	0.158	0.140	0.176	0.153	0.195	0.169	0.178	0.148
F statistic	82.990*** (df = 3; 1076)	73.969*** (df = 3; 1078)	76.796*** (df = 3; 854)	67.295*** (df = 3; 855)	76.208*** (df = 3; 737)	66.137*** (df = 3; 738)	54.142*** (df = 3; 525)	46.229*** (df = 3; 526)

Source: Compiled by the authors based on the research materials.

\*Note: \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

Source: Compiled by the authors based on the materials of the study.

\*Note: \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

The R2 values for all 16 regression models are expectedly low since these models intentionally did not include factors such as investments, changes in population size, labor productivity, money supply, debt burden, and others. A review of the scientific literature revealed that different researchers used different combinations of factors,



some attempting to consider a wide range of independent variables to comprehensively explain economic growth, while others focused on a minimal set of independent variables with an emphasis on the impact of social security expenditure levels on economic growth rates. We opted for the latter approach, as we encountered econometric models from various studies with R<sup>2</sup> values exceeding 0.5, indicating limited capabilities to adequately model economic growth while maintaining a focus on social security expenditure as a factor.

The constructed models do not fully explain and predict the dynamics of economic growth. However, compelling empirical evidence was obtained that the level of social security expenditure has a significantly negative impact on economic growth rates. This is supported by the results of all variations of econometric models with fixed effects that were constructed. Consequently, hypothesis H2 is rejected, and hypothesis H3 is confirmed.

As the size of the sample is reduced by shortening the coverage period, the negative impact of social security expenditure on economic growth rates noticeably increases. This is attributed to fundamental changes in the construction of the social security system in the 21st century and the government policy aimed at overcoming poverty and destitution in UN member countries. This decision compelled a rapid increase in social security expenditures, primarily financed from debt sources. The burden of debt has been taken on by the state, hoping that deflationary processes of the last 40 years would keep real interest rates negative long enough to avoid triggering debt crises.

The contribution of the social security expenditure level indicator to economic growth rates is negative and can be offset through (1) reducing the intensity of income redistribution within the economy in the public sector, (2) shifting this burden to the private sector, and (3) creating conditions for economic growth to outpace the growth rates of social security expenditure by enhancing the efficiency of the social security model and creating new sources of strength for advanced economic growth (An et al., 2020; Dorofeev, 2023).

The analysis of the complete sample indicates that shifting social security expenditures from the public sector to the private sector does not significantly impact the dynamics of economic growth. Growth rates in such countries still slow down when there is simultaneous advanced growth in social security expenditure as a percentage of GDP.

## **5. Conclusions**

The ratification of International Labour Organization (ILO) Convention No. 102 by many countries, as well as the universal recognition of the United Nations Sustainable Development Goals (SDGs), which embody principles to combat inequality, poverty, and destitution, requires governments to give increased attention to social policies and strive to establish effective social security systems for their populations. These tasks necessitate funding, and according to OECD data, the volume of financing for social expenditures in many countries has been increasing each year. In the 21st century, these expenditures are increasingly being financed from debt sources, which raises concerns about the risks of excessively high levels of social

security expenditure in the economy if it hinders economic growth. This study conducts an empirical analysis of the impact of social security expenditure levels on economic growth rates.

The research novelty lies in examining data on expenditures not only on government social security but also on non-governmental social security, which has not been previously explored. Total social security expenditures for the population in OECD countries were categorized into government (active and passive) and non-governmental (mandatory and voluntary) expenditures. By constructing regression models based on panel data, convincing evidence was obtained that the level of social security expenditure negatively influences economic growth rates.

The policy implications include that countries with excessively high levels of social expenditures should take measures to ensure advanced economic growth in comparison to the rate of increase in social expenditures, so that the latter does not become an unsustainable burden for economic sustainability.

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