



## An Analysis of Social Protection Expenditure Performance in Upper-Middle-Income Countries

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### ABSTRACT

Social protection expenditures are a fundamental component of welfare policies and economic stability. This study evaluates the performance of social protection expenditures across twenty-six upper-middle-income countries classified according to the World Bank's Atlas method. Using 2023 data, five key indicators—social protection expenditure, tax revenues, unemployment rate, institutional quality, and the share of the elderly population—were analyzed through the MAIRCA method. The results indicate that Bulgaria, Serbia, and Belarus achieved the highest performance, while Paraguay, Azerbaijan, and South Africa recorded the lowest. Türkiye ranked nineteenth, sharing similar structural characteristics with low-performing countries. The findings highlight that fiscal capacity, institutional quality, and demographic structure are the main determinants of social protection performance. The study suggests that countries with low performance should focus on broadening the tax base, improving institutional efficiency, and enhancing the inclusiveness of social protection systems.

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## 1. Introduction

Social policies were first adopted in Germany during the 19th century with the introduction of social insurance, becoming increasingly significant in the 20th century due to social and economic problems stemming from industrialization and urbanization (Özaydın, 2015: 41). Between 1945 and 1975, insurance for old age, disability, death, illness, maternity, workplace accidents, and occupational diseases were primarily established in Western European countries, leading to a significant increase in universal social welfare expenditures (Zencirkıran, 2014: 35). In the late 1990s, the Asian Crisis and the adverse effects of global poverty rendered social protection an essential tool for achieving the Millennium Development Goals. The World Bank, ILO, and the United Nations have highlighted the importance of social security for economic growth and development and for reducing income inequality and poverty (Merrien, 2013). Today, the demand for social protection expenditures continues to rise, particularly in developed countries. Social protection expenditures have gained popularity because individuals view social policies as a right, due to shifts in demographic structure, high unemployment rates, and the link between social protection expenditure and national development levels (Bugra & Adar, 2007: 12-14).

Retirement benefits, which make up a significant portion of social protection expenditures, effectively protect against income inequality caused by reduced income during retirement (Bhorat et al., 2017: 189). Job search assistance, job training programs, and unemployment benefits are also effective social protection expenditures that promote fair income distribution and help reduce poverty (Causa et al., 2015: 227-268).

In upper-middle-income countries, social protection expenditures hold a pivotal position in influencing both economic growth and income distribution. The social protection systems in these economies have not yet achieved the institutional maturity observed in advanced countries; however, they possess relatively stronger fiscal capacities compared to low-income nations. Hence, upper-middle-income countries represent a transitional and analytically appropriate group for evaluating the performance of social protection expenditures, as they reflect both developing and developed characteristics within their socio-economic structures (ILO, 2021; World Bank, 2023).

This study aims to assess the performance of social protection expenditures in twenty-six upper-middle-income countries classified according to per capita national income based on the World Bank's Atlas method. The classification ensures a consistent and internationally recognized framework for comparing countries with similar economic structures and fiscal capacities. National data were analyzed using the MAIRCA (Multi Attributive Ideal-Real Comparative Analysis) method, which is a Multi-

Criteria Decision Making (MCDM) approach. In this study, five criteria were analyzed alongside data collected from twenty-six countries, with the weights of these criteria determined through the mean weight method.

This study fills an important gap in the literature by providing a multidimensional and comparative evaluation of social protection expenditure performance across upper-middle-income countries. Previous research has predominantly focused on high-income or OECD economies and relied on econometric techniques to analyze the determinants of social protection expenditure. In contrast, this study employs the MAIRCA method, a Multi-Criteria Decision-Making approach, to assess the relative performance of twenty-six countries using fiscal, institutional, and demographic indicators. By applying this novel methodological framework to a country group that represents a transitional stage between developing and developed economies, the study contributes new empirical evidence to the literature on social protection performance.

## 2. An Overview of Global Social Protection Expenditures

Social protection encompasses assistance and support provided through various means across a broad spectrum. Therefore, there is no single definition or approach to social protection. Different values, cultures, traditions, institutions, and political structures can influence the definition and content of social protection. Social protection programs include social assistance, services, and insurance (Kapar, 2015: 186). Social protection expenditures consist of those funded by national social security institutions and social protection programs implemented by other organizations. While these expenditures may vary among nations, they encompass all income support and assistance programs, including medical care, sickness allowances, family assistance, maternity benefits, and cash support for the poor (Bergh et al., 2017: 13). The expenditures listed in the European Union's documentation on risks and requirements that may necessitate social protection include healthcare, disability, old age, family/child support, unemployment, housing, social exclusion, or other unclassifiable needs (Eurostat, 2016: 8). While a substantial portion of social protection program financing comes from contributions made by the state, various types of income are also incorporated into the financing system. This includes employer contributions, social contributions made by individuals under the protective scope, and other income sources such as donations, dividends, and interest income (TÜİK, 2014: 3-4).

The figure below illustrates the national income shares designated for social protection according to income groups.

**Figure 1: Public social protection expenditure for 2023 (% of GDP)**



Source: ILO, World Protection Report 2024-2026, 69

In 2023, countries allocated an average of 12.9% of their GDP to social protection (excluding health care) and 6.5% to health care. However, significant differences exist across national income groups. High-income countries allocated around a quarter of their GDP to social protection, while upper-middle-income countries allocated 11.8%, lower-middle-income countries allocated 5.8%, and low-income countries allocated only 2% of their GDP.

The figure below illustrates the percentage distribution of social protection expenditures.

**Figure 2: Distribution of social protection expenditure by social protection guarantee for 2023 (%)**



Source: ILO, World Protection Report 2024-2026, 70

As seen in Figure 2, 33% of the shares allocated to social protection worldwide are used for healthcare, 38.7% for pensions, 24.6% for workers, and 3.8% for children. In upper-middle-income countries, about half of the social expenditures (47.6%) were allocated to pensions. The amount designated for healthcare was 27.7%, while the payments allocated to workers were 21.7%. Additionally, 3% was allocated to children. In low-income countries, more than half of the social protection expenditure was directed solely toward healthcare. A significant portion also consists of payments made to workers. A much lower share (12%) was allocated to pensions in low-income

countries compared to other groups. Since allocations for pensions and children were exactly the opposite in low-income countries, it was due to demographic differences.

Current expenditure is insufficient, especially in low- and middle-income countries. The financing gap for social protection expenditures in these countries is equivalent to 3.3% of annual GDP. To bridge this gap, all low- and middle-income countries require an additional US\$1.4 trillion each year. Most of these funds (60.1%) would go toward basic healthcare, 17.8% on child benefits, 8.3% on pensions, 7.1% on disability, 5.2% on unemployment benefits, and 1.5% on maternity. In Europe and Central Asia, the financing gap is the lowest at 1.9% of annual GDP (ILO, 2024: 71).

### 3. Literature Review

Studies on social protection expenditures have primarily focused on the efficiency of expenditure, economic growth, poverty, income inequality, and the consequences of expenditure. However, various financial, economic, demographic, and political factors influence social protection expenditure. Developed countries must allocate a quarter of their GDP to these expenditures, and poor countries have struggled with issues like poverty, human development, and growth due to insufficient expenditure. This raises questions about which factors are significant in financing social protection expenditures and to what extent.

Tax revenues are the primary determinant of a government's capacity to sustain social protection programs through the general budget and social insurance systems. Higher tax revenues enable governments to expand social transfers and public services, thereby exerting a direct influence on social protection expenditure through the fiscal channel (ILO, 2014). A strong growth trend has begun when tax revenues reach 15% of GDP, typically leading to increased social protection expenditures. However, since the tax revenues of developing and low-income countries are below this threshold, their social protection expenditures remain inadequate (Coady, 2018). In their study on developing countries, Murshed et al. (2017) found that greater fiscal capacity significantly boosts social protection expenditures. They also discovered that high levels of external debt diminish social protection expenditure capacity. Spasova & Ward (2019) reported that public revenues increased while social contributions decreased in financing general social expenditure in a study conducted on EU countries from 2005 to 2016. It was noted that 40% of social protection expenditure was allocated to pensions and healthcare due to the aging population and the resulting political preferences. Sustainable financing is one of the most critical factors for social protection. The larger the share of tax revenues in GDP, the more resources are allocated for social protection programs. Famulska et al. (2020) conducted a study on 28 EU countries and found that the higher the tax revenues, the greater the share of social protection expenditure in total public expenditures; however, this was not the case for other expenditures. In a

study of African and Latin American countries, it was reported that non-resource tax revenues had a positive and significant effect on social protection expenditure (Nsabimana, 2021). Geyik & Şeren (2021) found in their study of Türkiye that there is a unidirectional causality between tax revenues and social protection expenditure in the long term. Vinci et al. (2022) concluded in their study of eighty high- middle, and low-income countries that social protection expenditures cannot be separated from tax policies and that there are positive, strong correlations between them. In a study conducted on Central and Eastern European countries from 2000 to 2019, a significant positive correlation was identified between the unemployment rate and social protection expenditure, while no significant correlation was found between tax revenues and social protection expenditure (Tashevska et al., 2022). Bölükbaş & Bölükbaş (2022) examined the causality between social protection expenditure and tax revenues. They analyzed Türkiye and the PIIGS countries and reported that while there is a unidirectional causality between tax revenues and social protection expenditure in Türkiye and Ireland, there is a bidirectional causality between expenditures and tax revenues in Greece.

Demographic dynamics, particularly population ageing, are among the most significant structural factors influencing social protection expenditure. As the share of the elderly population increases, governments face greater fiscal pressure to finance pension and healthcare systems, which constitute the largest components of social protection. Dang et al. (2006) discovered in their study of nine OECD countries that individuals over the age of 65 received about three times more cash transfers than the average person. Comprehensive and generous welfare models consume the largest share of public expenditure. Sanz & Velazquez (2007) found that the increase in the elderly population in OECD countries from 1970 to 1997 accounted for a significant portion of the rise in public expenditure. They particularly emphasized the growing demand for social protection expenditure during this time. It was reported that these expenditures exceed other public expenses due to the rising trend in social protection expenditure and an aging population (Tashevska et al., 2020). Kaymak and Dökmen (2021) identified a strong correlation between the elderly dependency ratio and healthcare and social protection expenditure in OECD countries from 2008 to 2018. Piekut & Rybaltowicz (2024) noted that in the Benelux and Visegrad countries, pensions make up the largest portion of social protection expenditure, necessitating the development of specific policies to address the social risks and challenges faced by each nation.

Unemployment represents one of the most critical labor market factors affecting social protection expenditure, as it directly increases the demand for income support and social transfer programs. From a theoretical perspective, rising unemployment intensifies social risks by reducing household income, which in turn compels governments to expand social assistance and unemployment insurance schemes. In welfare state theory, unemployment is considered a primary driver of countercyclical

fiscal expenditure, as social protection systems are designed to stabilize income and consumption during periods of economic downturn (Esping-Andersen, 1990). Ding (2012) examined unemployment and welfare expenditure in a study of 34 OECD countries from 1980 to 2012, reporting that income assistance and retirement benefits had a significant and positive impact on all types of unemployment. They found that healthcare expenditures exert a marginally significant and positive effect on total unemployment. Halaskova & Bednar (2020) explored 27 EU countries, revealing significant and positive correlations between the unemployment rate, social protection expenditure, human development, and poverty. They emphasized that social protection expenditure reflects the socio-economic development of EU countries. Social protection expenditures are linked to various social, financial, and economic variables. A study conducted on 31 OECD countries reported strong and positive correlations between unemployment, the elderly population, social globalization, public debt, and social protection expenditure (Haelg et al., 2022). In his research on OECD countries, Çelikay (2023) found that the effect of social protection expenditure on chronic unemployment was more pronounced in countries with high expenditure. This effect is short-term and weak in countries with low social protection expenditure. Orhan et al. (2024) found that economic factors significantly influence social protection expenditure in two groups of countries within the OECD and EU. They reported that unemployment, income, and inflation are the most significant determinants of social protection expenditure levels. The most impactful democratic factor was the proportion of the elderly population.

Institutional quality and corruption play a crucial role in determining both the level and the effectiveness of social protection expenditure. From a theoretical perspective, higher levels of corruption weaken fiscal discipline, distort resource allocation, and reduce the efficiency of social protection expenditure. Several studies have indicated that corruption decreases the efficiency of public expenditure (Delavallade, 2006; Dzhumashev, 2014; Cordis, 2014). A study conducted on EU countries and Russia found that the efficiency of social expenditures correlated with levels of national corruption. It was stressed that the most critical factor in combating corruption is the development of effective policies and enhancing quality of life (Timofayev, 2011). Another study conducted in OECD countries revealed that expenditure on health and environmental protection rises in the presence of high corruption levels, while social protection expenditure diminishes (Zohal, 2011).

#### **4. Dataset and Methodology**

This research investigated the levels of social protection expenditure in twenty-six upper-middle-income countries. The study criteria included social protection expenditure, tax revenues, unemployment rates, the corruption perception index, and the senior population, all of which could affect social protection expenditure. The

selection of these five variables was guided by both theoretical and empirical evidence from previous studies. Tax revenues are considered a fundamental determinant of a country's fiscal capacity to finance social protection programs (Coady, 2018; Vinci et al., 2022). The unemployment rate reflects labor market pressures and the demand for social safety nets (Halaskova & Bednar, 2020). The corruption perception index represents the quality of governance, which can influence the effectiveness and efficiency of social protection expenditure (Timofeyev, 2011). The share of the elderly population captures demographic dynamics that are directly linked to pension and healthcare expenditures (Kaymak & Dökmen, 2021; Piekut & Rybaltowicz, 2024). Thus, these variables collectively capture fiscal, economic, institutional, and demographic dimensions relevant to social protection expenditure performance. Data from 2023 were obtained from the World Bank, ILO, Transparency International, and Our World in Data databases. The variables analyzed using MAIRCA are discussed in detail in the following lines and Table 1.

**Table 1. The Variables affecting social protection expenditures**

Criteria	Scale	Reference	Code	Orient
Social protection expenditures	%GDP	ILO	K 1	benefit
Tax revenues	%GDP	OECD database	K 2	benefit
Unemployment rate	%	World Bank database	K 3	cost
Corruption perception index	0 - 100	Transparency International	K 4	benefit
Population ages 65 and above	%	World Bank database	K 5	benefit

***Social protection expenditures (including healthcare expenditure) (GDP%) (max) (K1):***

This encompasses social security benefits, administrative costs, and other expenses such as public healthcare.

***Tax revenues (including social security contributions) (GDP%) (max) (K2):*** This includes both direct and indirect taxes along with social contributions.

***Unemployment rate (UR) (% of total labor force) (min) (K3):*** Unemployment indicates the portion of the labor force that is not working but is actively seeking employment.

***Corruption perception index (CPI) (max) (K4):*** This index rates the perceived level of corruption in the public sector, scoring between 0 and 100.

***Population ages 65 and above (max) (K5):*** The percentage of the total population that is aged 65 or older.

#### 4.1. MAIRCA Method

MAIRCA is an MCDM method introduced to the literature by Pamucar, Vasin, and Lukovac in 2014. This method calculates the difference between ideal and empirical

ratings. These differences are defined as gap values, which are calculated for all criteria followed by the total gap values for the alternatives. The alternative with the smallest difference, or total gap value, is regarded as the best option. The method's advantages include providing equal opportunities for all alternatives at the initial step, producing more consistent results compared to the best-known MCDM methods, and having a clear mathematical algorithm. Rather than calculating the distance to the ideal solution, as in traditional MCDM methods like TOPSIS, VIKOR, etc., it focuses on the gap between the ideal and empirical ratings. Because it is a linear normalization-based method, it produces more reliable and consistent results than methods like TOPSIS and ELECTRE. Furthermore, its initially unbiased approach to all alternatives, giving them equal opportunity, is a notable feature. All these advantages constitute the motivation for using the MAIRCA method in this study (Ecer, 2021: 35; Ayçin, 2020: 5).

The MAIRCA method includes the following steps (Pamucar et al., 2018: 1646-1649; Gigović, 2016: 11-13; Ecer, 2021: 34-36; Ayçin, 2020: 5-7):

*Step 1:* The initial decision-making matrix is outlined in Equation 1. The  $x_{ij}$  value expresses the performance of the  $i$ th alternative according to the  $j$ th criterion. This matrix contains  $m$  decision alternatives and  $n$  criteria ( $A_i, i = 1, 2, 3, \dots, m; C_j, j = 1, 2, 3, \dots, n$ ).

$$X = [X_{ij}]_{m \times n} = \begin{bmatrix} x_{11} & x_{12} & \dots & x_{1n} \\ x_{21} & x_{22} & \dots & x_{2n} \\ \dots & \dots & \dots & \dots \\ x_{m1} & x_{m2} & \dots & x_{mn} \end{bmatrix} \quad i = 1, 2, 3, \dots, m; \quad j = 1, 2, 3, \dots, n \quad (1)$$

*Step 2:* At first, the assumption that the decision-maker is neutral regarding the alternatives holds true. In this scenario, the preference for any of the available options is dictated by Equation 2.

$$P_{Ai} = \frac{1}{m} \quad \sum_{i=1}^m A_i = 1 \quad i = 1, 2, 3, \dots, m \quad (2)$$

*Step 3:* The theoretical ratings matrix ( $T_p$ ) is calculated. This matrix is obtained by multiplying the criterion weights ( $w_i, i = 1, 2, 3, \dots, n$ ) by the alternative preference values ( $P_{Ai}$ ).

$$T_p = \begin{bmatrix} P_{A1} \cdot w_1 & P_{A1} \cdot w_2 & \dots & P_{A1} \cdot w_n \\ P_{A2} \cdot w_1 & P_{A2} \cdot w_2 & \dots & P_{A2} \cdot w_n \\ \dots & \dots & \dots & \dots \\ P_{Am} \cdot w_1 & P_{Am} \cdot w_2 & \dots & P_{Am} \cdot w_n \end{bmatrix} = \begin{bmatrix} t_{p11} & t_{p12} & \dots & t_{p1n} \\ t_{p21} & t_{p22} & \dots & t_{p2n} \\ \dots & \dots & \dots & \dots \\ t_{pm1} & t_{pm2} & \dots & t_{pmn} \end{bmatrix} \quad (3)$$

*Step 4:* In this step, the real ratings matrix ( $T_r$ ) is defined. To achieve this, the theoretical rating matrix is multiplied ( $T_p$ ) by the initial decision-making matrix, X.

$$T_r = \begin{bmatrix} t_{r11} & t_{r12} & \dots & t_{r1n} \\ t_{r21} & t_{r22} & \dots & t_{r2n} \\ \dots & \dots & \dots & \dots \\ t_{rm1} & t_{rm2} & \dots & t_{rmn} \end{bmatrix} \quad (4)$$

Equation 5 is applied to the benefit type criteria, while Equation 6 is applied to the cost type criteria.

$$t_{rij} = t_{pij} \left( \frac{x_{ij} - x_i^-}{x_i^+ - x_i^-} \right) \quad (5)$$

$$t_{rij} = t_{pij} \left( \frac{x_{ij} - x_i^+}{x_i^- - x_i^+} \right) \quad (6)$$

$x_i^+$  represents the maximum value of the relevant criterion  $x_i^+ = \max(x_1, x_2, \dots, x_m)$  and  $x_i^-$  the minimum value of the relevant criterion  $x_i^- = \min(x_1, x_2, \dots, x_m)$ .

*Step 5:* The total gap matrix (G) is calculated at this stage. The elements of the G matrix represent the gap between the theoretical matrix (Tp) and the actual ratings matrix (Tr).

$$G = T_p - T_r = \begin{bmatrix} g_{11} & g_{12} & \dots & g_{1n} \\ g_{21} & g_{22} & \dots & g_{2n} \\ \dots & \dots & \dots & \dots \\ g_{m1} & g_{m2} & \dots & g_{mn} \end{bmatrix} = \begin{bmatrix} t_{p11} - t_{r11} & t_{p12} - t_{r12} & \dots & t_{p1n} - t_{r1n} \\ t_{p21} - t_{r21} & t_{p22} - t_{r22} & \dots & t_{p2n} - t_{r2n} \\ \dots & \dots & \dots & \dots \\ t_{pm1} - t_{rm1} & t_{pm2} - t_{rm2} & \dots & t_{pmn} - t_{rmn} \end{bmatrix} \quad (7)$$

The element of the gap matrix (gij) is calculated using Eq 8.

$$g_{ij} = t_{pij} - t_{rij} \quad g_{ij} \in [0, \infty) \quad (8)$$

If the theoretical rating value and the actual rating value of an alternative for a criterion are equal (tpij=trij) and both have a value other than zero, then the gap will be 0 (gij=0). In other words, this alternative will be the ideal option for this criterion. Conversely, if the theoretical rating value and the actual rating value of an alternative for a criterion are both equal to zero (tpij=trij=gij=0), then this alternative will be considered the anti-ideal option for this criterion.

*Step 6:* The final values of the criteria functions (Qi) are determined for each alternative by summing the rows of the gap matrix in Equation 9.

$$Q_i = \sum_{j=1}^n g_{ij} \quad i = 1, 2, 3, \dots, m \quad (9)$$

The alternatives are ranked from smallest to largest based on the  $Q_i$  values in this last step.

## 5. Empirical Findings

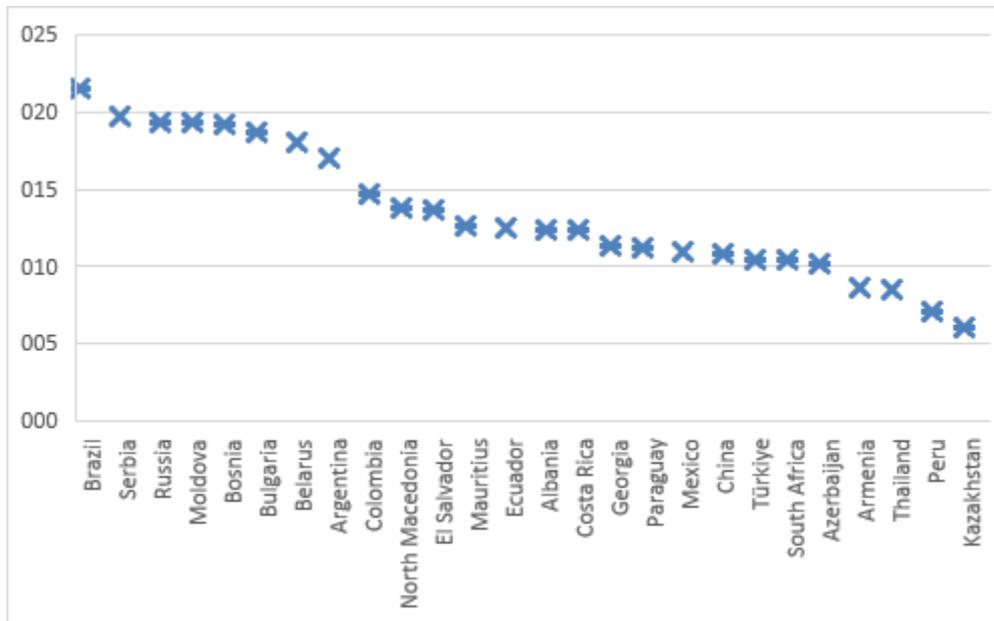
This study examined the performance of social protection expenditures in upper-middle-income countries. The data collected for the study variables—namely, social protection expenditure, tax revenues, unemployment rates, corruption perception scores, and the rate of the elderly population—were analyzed using the MAIRCA method. In the first step, the decision-making matrix was created and is presented in Table 2.

**Table 2. Initial decision-making matrix**

Country/Criteria	K1	K2	K3	K4	K5
Albania	12.40	24.70	11.6	37	17
Argentina	17.00	29.10	6.2	37	12
Armenia	8.70	22.50	8.6	47	14
Azerbaijan	10.20	13.50	5.6	23	8
Belarus	18.00	32.60	3.6	37	18
Bosnia	19.20	36.50	10.4	35	19
Brazil	21.50	32.60	8	36	10
Bulgaria	18.70	30.30	4.3	45	22
China	10.80	22.30	4.7	42	14
Colombia	14.70	22.20	9.6	40	9
Costa Rica	12.40	14.20	8.3	55	11
Ecuador	12.50	13.90	3.4	34	8
El Salvador	13.70	19.90	2.8	31	8
Georgia	11.30	22.60	11.6	53	15
Kazakhstan	6.00	20.80	4.8	39	8
Mauritius	12.60	19.50	6.1	51	13
Mexico	11.00	13.90	2.8	31	9
Moldova	19.30	30.20	1.6	42	13
North Macedonia	13.80	27.20	13.1	42	15
Paraguay	11.20	10.80	5.8	28	6
Peru	7.10	15.70	4.8	33	9
Russia	19.40	11.00	3.3	26	16
Serbia	19.70	39.30	8.7	36	20
South Africa	10.40	27.80	28	41	6
Thailand	8.50	16.20	0.9	35	16
Türkiye	10.5	25.00	9.4	34	9

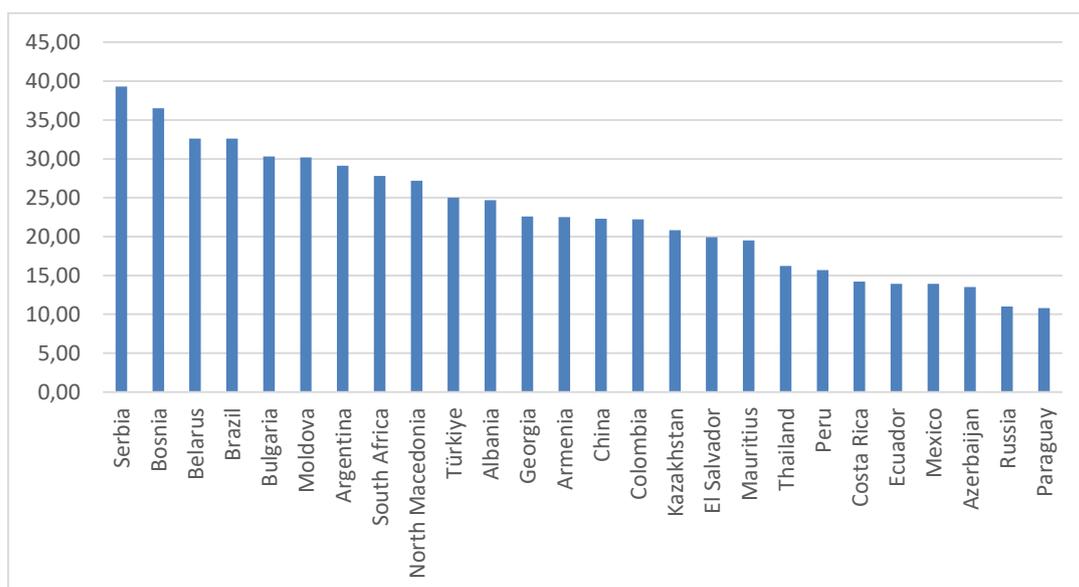
The Box and Line Chart, plotted for easier analysis of the social protection expenditure data presented as the first criterion in Table 2, is shown in Graph 1.

**Graph 1. Social Protection Expenditure Box and Line Chart**



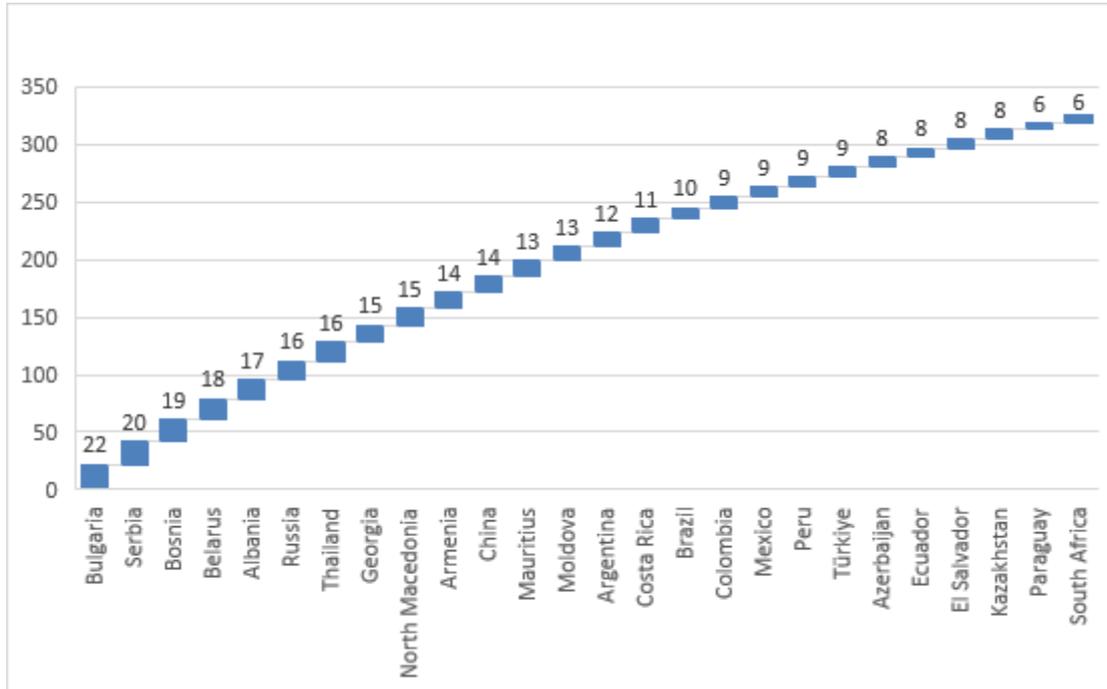
As shown in Graph 1, the countries with the highest social protection expenditure are Brazil, Serbia, and Russia. Kazakhstan has the lowest expenditure. Türkiye ranks as the 10th highest spender on social protection among twenty-six countries. Graph 2 presents the column chart plotted with tax revenues, which is the second criterion in Table 2.

**Graph 2. Tax Revenue Column Chart**



According to Graph 2, Serbia, Bosnia, and Belarus have the highest tax revenues, while Paraguay has the lowest. Türkiye ranks 10th in terms of tax revenue. The graph below illustrates the elderly population rates of upper-middle-income countries.

**Graph 3. Elderly Population Rate Waterfall (Cascade) Chart**



As illustrated in Graph 3, Bulgaria, Serbia, and Bosnia have the highest proportions of elderly residents, while South Africa and Paraguay have the lowest. Additionally, Türkiye is one of the countries with the smallest elderly population at 9%.

After this brief summary of the most significant variables, it is appropriate to share the findings of the MAIRCA analysis. The unemployment rate criterion was considered cost-oriented, while all other criteria were viewed as benefit-oriented. An objective method, mean weight, was used to establish the weight of each criterion. Therefore, all criteria were assigned an equal weight of 0.20. The analysis presents the total gap matrix generated from the theoretical and actual ratings, calculated using the equations outlined in the methodology, as shown in Table 3.

**Table 3. Total Gap Matrix**

Country/Criteria	K1	K2	K3	K4	K5
Albania	0.005	0.004	0.003	0.004	0.002
Argentina	0.002	0.003	0.002	0.004	0.005
Armenia	0.006	0.005	0.002	0.002	0.004
Azerbaijan	0.006	0.007	0.001	0.008	0.007
Belarus	0.002	0.002	0.001	0.004	0.002
Bosnia	0.001	0.001	0.003	0.005	0.001
Brazil	<b>0.000</b>	0.002	0.002	0.005	0.006
Bulgaria	0.001	0.002	0.001	0.002	<b>0.000</b>
China	0.005	0.005	0.001	0.003	0.004
Colombia	0.003	0.005	0.002	0.004	0.006
Costa Rica	0.005	0.007	0.002	0.000	0.005
Ecuador	0.004	0.007	0.001	0.005	0.007
El Salvador	0.004	0.005	0.001	0.006	0.007
Georgia	0.005	0.005	0.003	<b>0.000</b>	0.003
Kazakhstan	0.008	0.005	0.001	0.004	0.007
Mauritius	0.004	0.005	0.001	0.001	0.004
Mexico	0.005	0.007	0.001	0.006	0.006
Moldova	0.001	0.002	0.000	0.003	0.004
North Macedonia	0.004	0.003	0.003	0.003	0.003
Paraguay	0.005	0.008	0.001	0.006	0.008
Peru	0.007	0.006	0.001	0.005	0.006
Russia	0.001	0.008	0.001	0.007	0.003
Serbia	0.001	<b>0.000</b>	0.002	0.005	0.001
South Africa	0.006	0.003	0.008	0.003	0.008
Thailand	0.006	0.006	<b>0.000</b>	0.005	0.003
Türkiye	0.005	0.004	0.002	0.005	0.006

The gap values presented in Table 3 indicated that Brazil had the most favorable social protection expenditure, Serbia had the best tax revenue, Thailand had the lowest unemployment rate, and Georgia received the highest corruption perception score. The final criterion function and country rankings were determined using the values in this matrix and Equation and are shown in Table 4.

**Table 4. The Final Criteria Functions and Rankings**

Country	Qj	Rank	Country	Qj	Rank
Bulgaria	0.007	1	Armenia	0.019	14
Serbia	0.009	2	Russia	0.019	15
Belarus	0.011	3	Colombia	0.020	16
Bosnia	0.011	4	Thailand	0.020	17
Moldova	0.011	5	El Salvador	0.022	18
Brazil	0.014	6	Türkiye	0.023	19
Argentina	0.016	7	Ecuador	0.024	20
Georgia	0.016	8	Kazakhstan	0.024	21
Mauritius	0.017	9	Mexico	0.025	22
North Macedonia	0.017	10	Peru	0.026	23
China	0.018	11	South Africa	0.027	24
Albania	0.018	12	Azerbaijan	0.028	25
Costa Rica	0.019	13	Paraguay	0.028	26

According to the findings in Table 4, Bulgaria has the highest performance in social protection expenditure, while Paraguay ranks the lowest. Among the twenty-six countries, Türkiye is ranked 19th for low performance.

## 6. Conclusion

The social and economic challenges faced after the industrial revolution also laid the groundwork for the emergence of the modern state, the welfare state, and social policies. Public expenditure, particularly on social protection, plays a crucial role in the connection between the welfare state and social justice, equitable income, and poverty alleviation. The pandemic has highlighted, once again, the vital significance of social protection funding. Beyond funding pensions, healthcare, unemployment benefits, and support for mothers, children, and individuals with disabilities—key areas of social protection—it also offers substantial yet indirect financial assistance for education, job searching, and transportation. Thus, social protection funding complements and bolsters other services as well. Nevertheless, many countries are still far from establishing adequate resources for social protection expenditures.

In 2023, high-income countries allocated about a quarter of their GDP to social protection, while upper-middle-income countries allocated 11.8% of their GDP, lower-middle-income countries 5.8%, and low-income countries allocated just 2% to social protection expenditure. Globally, 33% of the funds designated for social protection were spent on healthcare, 38.7% on pensions, 24.6% on worker benefits, and 3.8% on children's programs. In upper-middle-income countries, nearly half of social protection expenditure (47.6%) went to pension payments. In low-income countries, more than half of social protection expenditure was directed solely toward healthcare, followed by benefits for workers. The total differences in social protection expenditure closely relate to tax revenues. Countries with higher tax revenues can allocate more funds to social protection than others. Comparing the allocations to various social protection functions revealed that demographic, political, and economic factors determine this distribution.

This study examined social protection expenditure in upper-middle-income countries using data from 2023. The analysis was based on five criteria across twenty-six countries. The MAIRCA findings demonstrated that Bulgaria was the highest-performing country, followed by Serbia and Belarus. These countries have higher tax revenues, including social contributions, than the others, with a larger elderly population and relatively low unemployment being key factors that position them ahead of other nations. The European Union has long been recognized for its strong commitment to social protection and welfare policies, reflecting the core principles of the European Social Model, which emphasizes social inclusion, solidarity, and equality (European Commission, 2021; Bonoli, 2005). EU member states generally allocate a larger share of their public expenditure to social protection programs compared to other

regions of the world. In this context, Bulgaria’s relatively strong performance among upper-middle-income countries can be partly attributed to its integration within the EU framework. EU membership promotes harmonization in social policy standards and fiscal governance, while also providing access to structural funds that support social protection reforms and poverty reduction initiatives (Greve, 2019; Hemerijck, 2013). Therefore, Bulgaria’s leading position may be viewed as a reflection of EU-level policy coordination and welfare-oriented governance. Similarly, the strong performance of Serbia and Belarus—countries that are in the process of aligning with or integrating into the European Union—can also be explained by their socio-demographic similarities and convergence toward EU social policy standards. This finding is consistent with previous research suggesting that institutional membership and integration tendencies positively influence both the level and effectiveness of social protection expenditure (Obinger & Starke, 2015).

Paraguay, Azerbaijan, and South Africa exhibited the lowest performance in social protection expenditures among the upper-middle-income countries analyzed. With the exception of South Africa, these countries have tax revenue levels below 15% of GDP and also record the lowest proportions of elderly population within the sample. This demographic structure may also reflect relatively shorter life expectancy compared to other countries. Türkiye, as an upper-middle-income country, shares several structural similarities with this group; however, it ranked 19th in terms of social protection expenditure performance. Türkiye’s lower ranking can be attributed to its relatively low tax revenue ratio, weaker institutional quality, higher unemployment rate, and insufficient level of social protection expenditure. These factors collectively point to fiscal and institutional constraints that limit the effectiveness and coverage of social protection mechanisms. These differences highlight that the interaction of fiscal, demographic, and institutional conditions plays a decisive role in shaping social protection expenditure performance across upper-middle-income countries, consistent with the findings of Halaskova and Bednar (2020), Vinci et al. (2022), and Piekut and Rybaltowicz (2024).

Countries exhibiting low performance in social protection expenditures should prioritize strengthening their fiscal capacity and institutional efficiency to ensure the sustainability and effectiveness of social protection systems. Expanding the tax base, improving tax compliance, and formalizing the labor market would enhance governments’ ability to finance social programs through a stable revenue framework. Addressing corruption and promoting transparency in budget allocation are also essential to reduce inefficiencies and ensure that resources reach intended beneficiaries. Furthermore, integrating social assistance programs with active labor market policies could improve targeting accuracy and promote employment among vulnerable groups. In demographic terms, developing adaptive pension and healthcare schemes for ageing populations and establishing inclusive social insurance mechanisms for informal workers are key strategies to improve long-term social protection

performance. Ultimately, policy efforts in low-performing countries should focus on expanding coverage, improving the quality of benefits, and aligning social protection with fiscal and institutional reforms to achieve both equity and sustainability in welfare provision.

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**Author Contributions:**

Betül İnam  - Idea, Design, Drafting, Final Approval and Responsibility, Literature Review. Overall Contribution - 50%.

Dilek Murat  - Data Collection, Interpretation of Data, Critical Review, Final Approval and Responsibility. Overall Contribution - 50%.

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