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COMPARATIVE STUDY OF GOVERNMENT EXPENDITURE ON SOCIAL PROTECTION IN THE VISEGRÁD GROUP AND BENELUX

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ABSTRACT. Socio-economic policies aim to promote equitable income distribution, with social protection playing a crucial role. Balancing equality and efficiency in redistribution poses a challenge for policy-makers. The welfare state-market compatibility dilemma and its impact on incentives are primary concerns. This study evaluates government expenditures on social protection in Benelux and Visegrád Group (V4) countries from 1995 to 2021. Trends in expenditure share indicate varying fiscal policy behaviors: Visegrád Group countries show convergence in expenditure share, while Benelux countries exhibit divergence. The structure of social protection spending also differs, with old age being a dominant category. These findings provide insights into welfare systems and can guide policy decisions in European regions.

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Introduction

One of the main objectives of socio-economic policies is to promote equitable income distribution. According to many Constitutions, the government bears a clear responsibility in this regard. Social protection plays a crucial role in government policies across various European countries. It provides assistance to vulnerable social groups, such as the elderly, the unemployed, the disabled, and economically disadvantaged families. Finding a compromise between equality and efficiency is a significant dilemma in the redistribution of material goods (Caminada & Veldhuizen, 2013). As income disparities decrease, earning higher incomes becomes less rewarding. Consequently, people work less, invest less effort in career advancements, allocate fewer resources to their education and skills, and are more likely to withdraw from the labor market. Consequently, redistribution can lead to weaker economies,

reduced tax revenues, and decreased material wealth (Okun, 1975). Achieving a balance in this aspect is a challenge for policy-makers.

The (in)compatibility between the welfare state and the market is a primary criticism faced by the welfare state. The efficient functioning of the market relies on incentives, while public social policy influences incentives in two ways. Firstly, by offering access to various social services and transfers, it restricts market incentives for labor (and saving) (concept of decommodification). Secondly, social expenditures require funding, and taxes create a wedge between the market wage for labor (or capital) and the net income received by workers (or capitalists), thereby reducing incentives for work (and saving) (Muñoz de Bustillo, 2019). One of the crucial indicators to assess the government's involvement in social protection is the percentage of expenditures on social protection relative to GDP. This article analyzes this indicator for selected countries during 1995-2021.

The research subjects are the Benelux countries and the Visegrád Group (V4) countries. Both groups comprise countries with similar geographic locations, political histories, cultures (Davidov et al., 2018), and shared challenges. The two groupings are also representative of the "old" and "new" European Union.

The aim is to evaluate the size and structure of government sector expenditures on social protection, with a focus on similarities and differences between the V4 countries and the Benelux countries. Three research questions are examined in the context of seven countries that are members of these groups:

1. How does the distribution of "general government expenditure on social protection in GDP" vary across the analyzed countries from 1995 to 2021?
2. Do countries with similar geographic locations, political histories, and common challenges have similar shares of expenditures on social protection?
3. What are the patterns of convergence or divergence in the share of general government expenditure on social protection in GDP within the Visegrád Group and Benelux countries over the studied period, and how do these trends differ between the two groups?

This study aims to offer valuable information for policymakers and researchers interested in these European regions' social welfare systems. The novelty of this study lies in its comprehensive comparative analysis of government expenditure on social protection in the Visegrád Group and Benelux countries over the period 1995-2021. While prior research has explored aspects of social protection systems within these regions, this study uniquely combines a longitudinal examination of expenditure trends, a clustering analysis based on expenditure structures, and an investigation into convergence or divergence patterns. By integrating these diverse analytical approaches, the research contributes a multifaceted understanding of how social protection policies have evolved and diverged between the two groups of countries, shedding light on their distinct trajectories of welfare state development. Additionally, the study extends its contribution by highlighting the intricate interplay between government spending on social protection, demographic changes, and their potential implications for economic growth and fiscal sustainability. This multifunctional analysis thus enriches the academic discourse on social policy dynamics within the context of differing regional integration histories, socio-economic challenges, and political contexts.

After the "Introduction," which highlights the significance of socio-economic policies in promoting equitable income distribution, comes the "Literature review," which contextualizes the Visegrád Group and Benelux countries, outlining their historical and political backgrounds in regional integration and social policies. The "Methodological approach" section elaborates on the data sources, analysis stages, and statistical methods used. "Conducting research and results" presents the findings, including the distribution and trends of general

government expenditure on social protection, clustering of countries based on this expenditure, and the analysis of convergence/divergence. The article concludes with a "Conclusion," summarizing key research findings.

1. Literature review

The Visegrád Group (V4) was established in 1991 after the fall of the Eastern Bloc as a form of cooperation between four Central European countries: the Czech Republic, Poland, Slovakia, and Hungary. Its purpose was to strengthen cooperation in the areas of politics, economy, and security, as well as to support the European integration of these states. More about the Visegrád Group is described by Schmidt (2016).

On the other hand, the Benelux countries (Benelux) were formed much earlier, in 1944, during World War II. The name "Benelux" comes from the initial letters of the names of the three countries in Western Europe: Belgium, the Netherlands, and Luxembourg. The creation of Benelux aimed to foster economic convergence and political cooperation among these countries, contributing to their increased influence in international relations. More about Benelux is described by Van Meerhaeghe (1980).

The V4 members share a common political history as Central European states that were part of the Eastern Bloc under the influence of the Soviet Union. After the fall of communism, these countries actively pursued integration with the West and the European Union, leading to numerous political, economic, and social reforms.

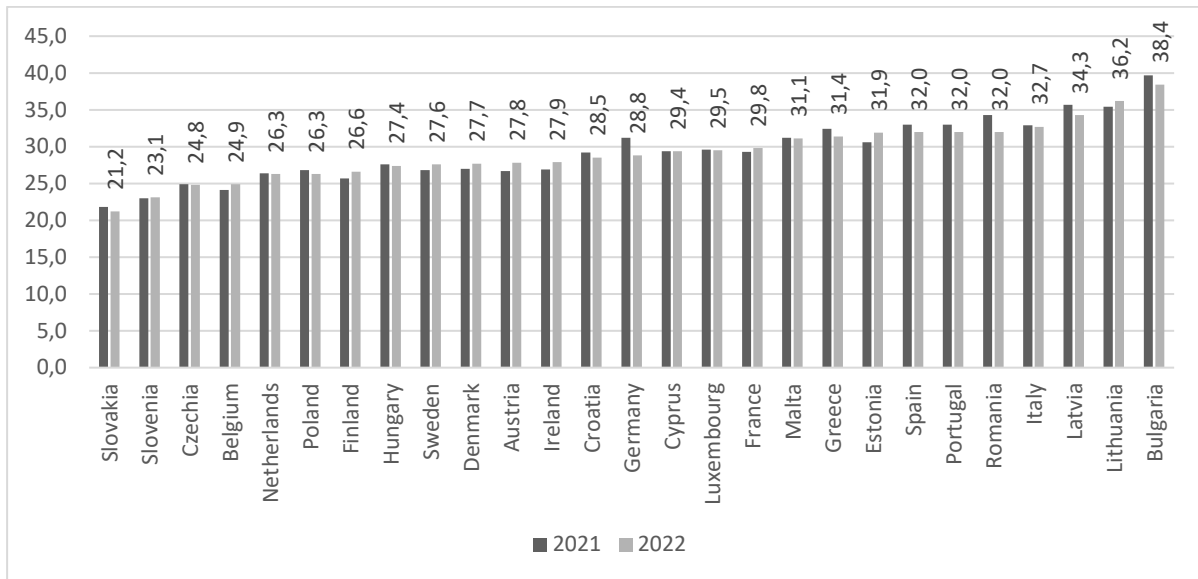
In contrast, the Benelux countries have a long history of cooperation and shared economic interests. Benelux was one of the first experiments in regional integration in Europe, eventually leading to the establishment of the European Union.

Currently, the Visegrád Group is a loose political grouping in which members cooperate on regional matters while maintaining full independence as sovereign states. On the other hand, Benelux does not have formal political structures, but the three countries still maintain close economic and political ties.

Both the Visegrád Group and the Benelux countries play significant roles in Europe, influencing regional cooperation and promoting their interests within the European Union. Both formations reflect the diversity and complexity of political relations among European countries.

Regarding social protection systems in these countries, analyses by other researchers point out similarities and differences within both groups. Social protection systems in Western and Central European countries, including the Benelux countries, have their roots in the social reforms of Otto von Bismarck in Imperial Germany in the 1880s. Compared to Eastern European countries, especially larger Central and Western European countries allocate a larger share of their national wealth to social protection (Clegg 2018). Does such fiscal policy lead to less social inequality?

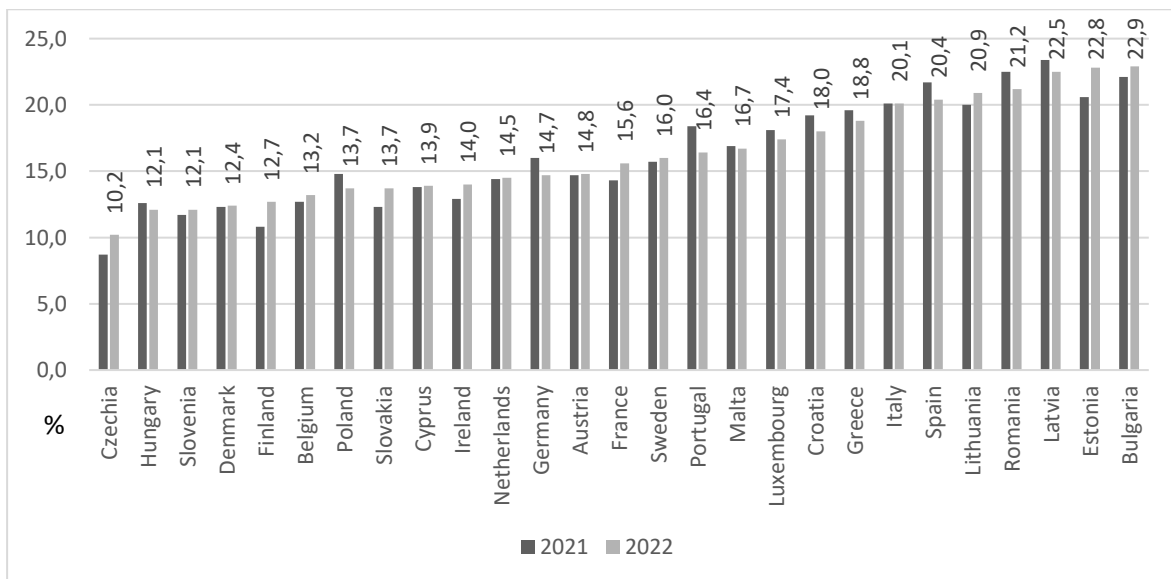
Comparing social inequalities expressed by the Gini coefficient, it can be stated that in the V4 countries, they were relatively low compared to many other European countries. The Gini coefficient quantifies income inequality within a country, where a value of 0 indicates perfect equality and a value of 100 represents complete inequality. In 2022, the Gini coefficient was the lowest in Slovakia at 21, in the Czech Republic at 25, in Poland at 26, and in Hungary the highest among the V4 countries, just over 27. Belgium and the Netherlands had Gini coefficients of approximately 25 and 26, respectively. Luxembourg had a higher level of social inequality with the Gini coefficient reaching nearly 30. Comparison of Gini coefficient values in European countries is shown on the *Graph 2*.



Graph 1. Comparison data for Gini coefficient values for European countries in 2021-2022.

Source: own elaboration based on Gini coefficient ... 2023

Despite spending more on social policy in Benelux than in many other regions, the risk of poverty indicators remains considerably higher in these countries than in Scandinavian countries (Clegg, 2018). The lowest risk of poverty rate among the Benelux countries in 2022 was observed in Belgium at 13.2%, in the Netherlands, it was 14.5% during the same time, and in Luxembourg, it was 17.4%. For comparison, among the Visegrád Group countries, the risk of poverty rate was the lowest in the Czech Republic at 10.2% and in Hungary at 12.1%. Meanwhile, the risk of poverty rate in Poland and Slovakia stood at 13.7%. The at-risk-of-poverty rate refers to the proportion of individuals whose equivalised disposable income (after accounting for social transfers) falls below the at-risk-of-poverty threshold. This threshold is set at 60% of the national median equivalised disposable income after social transfers. Comparison of at risk of poverty rate is shown on the *Graph 1*.



Graph 2. Comparison data for at risk of poverty rate (cut-off point: 60% of median equivalised income after social transfers) in European countries in 2021-2022, in percentage

Source: own elaboration based on At-risk-of-poverty ... 2023

The shares of people at risk of poverty in the V4 countries were relatively low compared to other European countries. However, as noted by Szarowska (2011), despite similarities in history, individual countries within the Visegrád Group have differently organized and oriented economies, as well as social preferences, which are reflected in the distribution of public expenditures. The researcher analyzed data from 1995 to 2009 and pointed out differences in the size of the public sector expressed as a percentage of GDP among the V4 countries. Differences were also observed in the cyclicity of government expenditures in each country in terms of their relationship to the business cycle. Government expenditures were almost perfectly correlated and procyclical in Hungary, and strongly correlated and procyclical in Poland. In the Czech Republic, government expenditures were weakly procyclical, while in Slovakia, they were countercyclical. One commonality among all V4 countries was that social protection expenditures had the highest share in total government expenditures, indicating an unstable and cyclical development of total public expenditures as a percentage of GDP and a tendency for the share of government expenditures in GDP to decrease. On average, over 80% of total expenditures were allocated to five functions: social protection, economic affairs, health, general public services, and education, suggesting similarities in the expenditure structure (Szarowska, 2011).

Halaskova (2018), on the other hand, conducted a clustering analysis of EU countries, including the Visegrád Group and Benelux, based on the structure of government expenditures on social protection, considering the years 2007-2016. Poland and Hungary, as well as Belgium and Luxembourg, were grouped together alongside other EU countries such as Spain, Germany, and Finland. As noted by the author of the study, these countries placed a significant emphasis on expenditure categories related to old age and survivors. The most significant state expenditures on social protection included spending on unemployment, housing, and social exclusion. These countries also demonstrated a relatively high share of expenditures on family and children.

In the second cluster, the Czech Republic and Slovakia were grouped with other EU countries such as Bulgaria, Cyprus, Lithuania, and Estonia. These countries had the lowest volume of expenditures in the government sector. In the structure of public expenditures on social protection, the dominant group was spending on old age and survivors as a percentage of GDP, followed by expenditures on diseases and disabilities. On the other hand, the lowest share in the structure of social protection expenditures as a percentage of GDP was allocated to expenditures on unemployment, housing, and social exclusion.

The Netherlands, on the other hand, was placed in the third cluster alongside Denmark and Ireland. In the structure of state expenditures on social protection, significant shares were allocated to spending on old age and survivors, expenditures on diseases and disabilities, as well as expenditures on unemployment, housing, and social exclusion as a percentage of GDP. In comparison to other clusters, these countries exhibited the lowest level of expenditures on social protection for old age and survivors as a percentage of GDP (Halaskova, 2018).

2. Methodological approach

Data for the study was sourced from Eurostat, employing information classified under COFOG. COFOG, an acronym for the Classification of the Functions of Government, was established in its present form by the Organisation for Economic Co-operation and Development (OECD) in 1999, and subsequently disseminated by the United Nations Statistical Division. It serves as a standardized framework for categorizing the diverse purposes of government activities. This classification system functions across three hierarchical tiers: divisions, groups, and classes. The divisions at the highest tier outline the overarching

objectives of government functions, providing a broad overview of their primary areas of focus. The subsequent tiers, comprising groups and classes, elucidate the specific methodologies through which these broader objectives are pursued and achieved. In essence, COFOG provides an organized and comprehensive structure that facilitates comprehension of the multifaceted roles and responsibilities of governments within distinct sectors. It enables a uniform approach to scrutinizing government activities and supports international comparisons concerning their functions and expenditures.

For the purpose of analyzing general government expenditure on social protection, the timeframe selected was 1995-2021. The dataset encompasses annual values for each country, enabling the identification of long-term trends. A comparative assessment of individual countries was also conducted to uncover disparities and commonalities.

Stages of the analysis for V4 and Benelux Countries:

1. Data preparation and aggregation.
2. Comparative analysis of the distribution of the variable "Share of general government expenditure on social protection in GDP."
3. Linear trend analysis of the "Share of general government expenditure on social protection in GDP" for the period 1995-2021.
4. Cluster analysis based on the "Share of general government expenditure on social protection in GDP" for the period 1995-2021.
5. Examination of sigma convergence in the "Share of general government expenditure on social protection in GDP" for the period 1995-2021.
6. Analysis of the structure of general government expenditure on social protection in 2021.

Regarding Stage 1, the analysis employed data for general government expenditure on social protection, including the share in GDP as a percentage and values in million units of national currency (used to calculate the structure of specific expenditure categories).

In Stage 2, graphical elements and descriptive measures such as mean, minimum, maximum, range, and standard deviation were used for variable comparison.

Stage 3 encompassed the use of linear trend analysis, where the time variable "t" was employed in a linear trend function, specifically the equation $y = a*t + b$. The slope "a" of the trend line indicated the direction and magnitude of the trend. Next, residual analysis was also conducted. To examine the normality of the distribution, the Shapiro-Wilk test was employed, with a significance level set at alpha (α) 0.05.

For Stage 4, cluster analysis was employed using both hierarchical (Ward's method) and non-hierarchical (k-means method) algorithms. Ward's method utilized the squared Euclidean distance as a measure of distance.

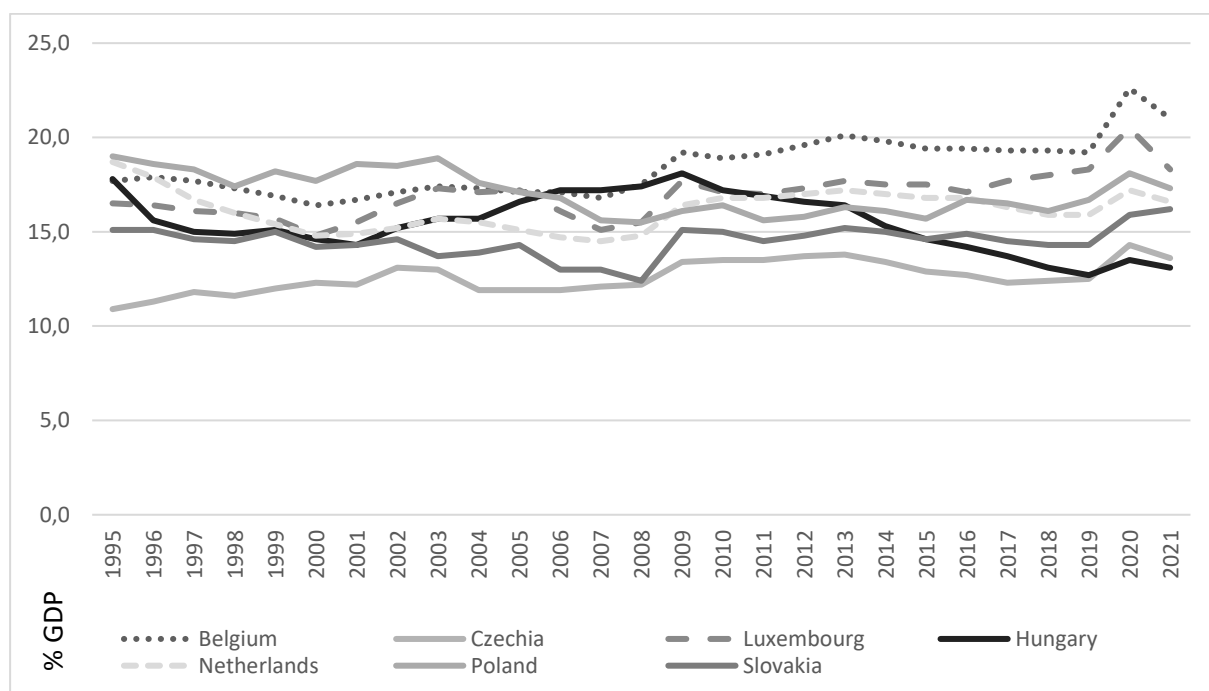
The focus of Stage 5 was on examining convergence using measures of diversity and regression analysis. The standard deviation of the natural logarithms of consumption expenditure shares was calculated for sigma convergence assessment.

Finally, in Stage 6, the structure of specific categories of general government expenditure on social protection in 2021 was calculated using data in million units of national currency. Social protection categories encompassed sickness and disability, old age, survivors, family and children, unemployment, housing, social exclusion n.e.c., R&D social protection, and social protection n.e.c.

3. Conducting research and results

3.1. Distribution of the variable general government expenditure on social protection in GDP

The distribution of the variable "general government expenditure on social protection in GDP" for the analyzed countries in the years 1995-2021 ranged approximately from 11% to 21% of GDP. Such variability is not surprising as it covers data over a relatively long period of 26 years, during which significant changes occurred in the level of socio-economic development of the discussed economies. In the analyzed years, the average government expenditure for the Visegrád Group was 14.9% of GDP, while for the Benelux countries, it was 17.2% of GDP. Comparison of share of general government expenditure on social protection in GDP in European countries is shown on the *Graph 3*.



Graph 3. Comparison data for share of general government expenditure on social protection in GDP of Benelux Countries and Visegrad Group 1995-2021

Source: own elaboration based on *General government...2023*

Among the Benelux countries, the lowest share of general government expenditure on social protection in GDP was in the Netherlands, while the highest was in Belgium. In contrast, among the Visegrád Group countries, the smallest share in GDP of general government expenditure on social protection was found in the Czech Republic, and the highest in Poland. The range of public expenditures discussed (the difference between the maximum and minimum) was highest in Belgium (6.2 percentage points), Luxembourg (5.7 percentage points), and Hungary (5.4 percentage points). The lowest range was observed in the Czech Republic and Poland, at 3.4 and 3.5 percentage points, respectively. The standard deviation was lowest for Slovakia and the Czech Republic, and highest for Belgium and Hungary. A low range and low standard deviation can be interpreted as high predictability of an expenditure policy, which is a desirable characteristic of public policy as a whole. From the obtained results, the relevant results were singled out in the *Table 1*.

Table 1. Descriptive statistics on the share of general government expenditure on social protection in GDP in the Benelux and Visegrad Group countries in 1995–2021

Specification	Mean	Median	Minimum	Maximum	Range	Standard deviation
Belgium	18,44	17,90	16,40	22,60	6.2	1,5003
Luxembourg	16,94	17,10	14,80	20,50	5.7	1,1911
Netherlands	16,17	16,30	14,50	18,70	4.2	1,0535
Czechia	12,60	12,40	10,90	14,30	3.4	0,8503
Hungary	15,47	15,30	12,70	18,10	5.4	1,5422
Poland	17,08	16,80	15,50	19,00	3.5	1,1317
Slovakia	14,52	14,60	12,40	16,20	3.8	0,8228

Source: own calculations based on *General government...2023*

3.2. Trends in the share of general government expenditure on social protection in GDP

In the years 1995-2021, a statistically significant ($p < 0.05$) upward trend in the share of general government expenditure on social protection in GDP was observed in Belgium, Luxembourg, and the Czech Republic. The share of this category of expenditures increased in GDP by 3.3 percentage points in Belgium, by 1.8 percentage points in Luxembourg, and by 2.7 percentage points in the Czech Republic. Conversely, statistically significant decreases in the share of general government expenditure on social protection in GDP were recorded in Hungary (by 4.7 percentage points) and in Poland (by 1.7 percentage points). In the Netherlands and Slovakia, no statistically significant changes in the share of social protection expenditures were observed, suggesting relatively high fiscal discipline in these countries and a limited belief in using fiscal expansion to address inequalities. The pertinent findings from the analysis were extracted and highlighted in *Table 2*.

Table 2. Analysis of trends in general government expenditure on social protection of Benelux Countries and Visegrad Group in 1995-2021.

Specification	Share of social protection in GDP		Linear trend analysis results			Residual analysis	
	1995	2021	B	R ²	p	Shapiro-Wilk test	p
Belgium	17.7	21.0	0.153	0.644	0.0000	0.961	0.3971
Luxembourg	16.5	18.3	0.110	0.518	0.0000	0.959	0.3541
Netherlands	18.7	16.6	0.017	---	0.5311	0.953	0.2671
Czechia	10.9	13.6	0.073	0.445	0.0001	0.917	0.0328
Hungary	17.8	13.1	-0.082	0.1438	0.0290	0.906	0.0186
Poland	19.0	17.3	-0.087	0.343	0.0008	0.985	0.9571
Slovakia	15.1	16.2	0.026	0.024	0.2135	0.944	0.1584

Comment: The distribution of residuals for the Czech Republic and Hungary deviated slightly from normal, but at a significance level of alpha 0.01, it can be considered normal.

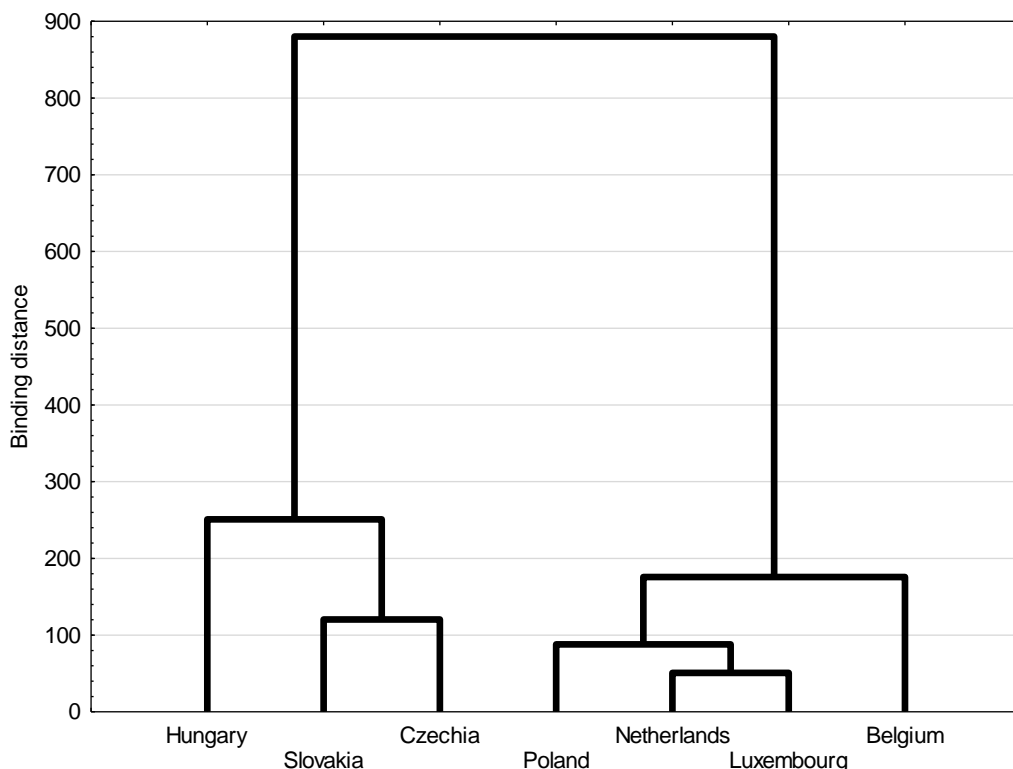
Source: own calculations based on *General government...2023*

In publications by other authors (Schuknecht, Zemanek, 2018), the so-called "social dominance hypothesis" is pointed out. According to this hypothesis, the increasing trend in social expenditure, driven by factors like aging populations and social preferences, may lead to

a decline in more productive areas of public expenditure. This, in turn, could hinder economic growth and threaten long-term fiscal sustainability. On the other hand, the studies of Delbianco et al. (2014) exemplify, contrary for the richer countries, progressive redistributive policies in favour of poorer layers of population promoting economic growth in lower income economies. Based on the EU experience, Bilian et. al (2020) argue that fair income distribution and low-income inequality really lead to economic progress and social well-being.

3.3. Clustering of countries based on the share of general government expenditure on social protection in GDP

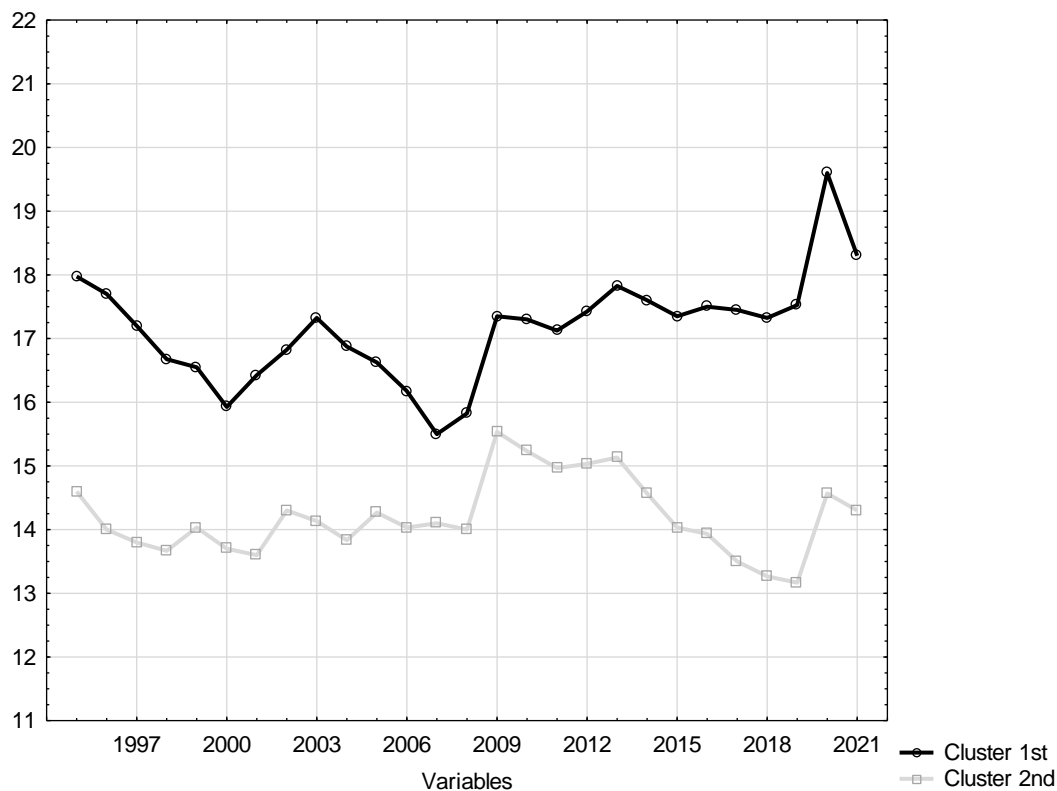
Clustering of countries based on the share of general government expenditure on social protection in GDP in the years 1995-2021 using hierarchical (Ward) and non-hierarchical (k-means) clustering methods yielded the same results. Both groupings identified two clusters of countries. In the first cluster, the Benelux countries and Poland were grouped, while in the second cluster, the Czech Republic, Slovakia, and Hungary were grouped. A dendrogram of the countries is shown on *Graph 4*.



Graph 4. Dendrogram of countries based on the shares of general government expenditure on social protection in GDP in 1995-2021.

Source: own elaboration based on *General government...2023*

The first cluster was characterized by higher shares of general government expenditure on social protection in GDP compared to the second cluster. Comparison data for mean of shares of general government expenditure on social protection in GDP in clusters is shown in *Graph 5*.



Graph 5. Comparison data for average shares of general government expenditure on social protection in GDP in each cluster in 1995-2021

Source: own elaboration based on *General government...2023*

One can point to the heterogeneity of countries in the allocation of public spending on social protection, as well as in the field of social development. The diversity in social development among various country groups has been highlighted (Vasilyeva et al., 2020).

3.4. Convergence or divergence in the share of general government expenditure on social protection in GDP

In the next step, an analysis of convergence processes was conducted in the identified groups (clusters) of countries in Point 3.3. In the years 1995-2021, the rate of change in the share of general government expenditure on social protection in GDP in Visegrad Group countries without Poland showed a negative trend. This means that in the Visegrad countries without Poland, the shares of this category of public expenditures were more concentrated around the average, and the differences between the indicated expenditure shares among the countries decreased, indicating a process of convergence. On the other hand, in the Benelux countries and in Poland, there was a process of divergence, with increasing differences in the share of social protection expenditure in GDP over the same period. However, when considering both the Visegrad Group and the Benelux countries together, no significant convergence or divergence processes were observed between the analyzed countries. Based on the results obtained, the relevant findings were identified and presented in *Table 3*.

Table 3. Analysis of trends for changes in share of general government expenditure on social protection (for standard deviation of natural logarithms) in 1995-2021.

Specification	The slope of the trend	p	R2
Countries of the Visegrad Group within Poland	-0.003	0.0028	0.2767
Benelux countries with Poland	0.001	0.0003	0.3846
All countries	0.000	0.6107	---

Comment: The residuals had a normal distribution both for the Visegrád Group countries excluding Poland (Shapiro-Wilk test 0.9456, $p=0.1672$) and for the Benelux countries including Poland (Shapiro-Wilk test 0.9362, $p=0.09808$).

Source: *own calculations based on General government...2023*

So, the analysis provided valuable insights into the convergence and divergence of social protection expenditure shares among countries. While the Visegrád Group countries displayed a trend towards convergence, the Benelux countries exhibited a divergence in this regard.

It's worth mentioning that the original architects of the precursor to the EU, known as the European Economic Community (EEC), held the belief that economic integration would naturally lead to social development. Nevertheless, the authority over social safety nets and welfare systems remained entirely within the domain of individual nations' sovereignty. This fundamental aspect has remained unchanged over time. While the Amsterdam Treaty of 1997 and the incorporation of the Social Protocol into the core Treaty marked a progression in the broader social context, they do not establish a foundation for the European Union's intervention in the levels of social protection within its member states (Moreno 2006). The majority of competencies in the field of social assistance remain under the jurisdiction of the member states. The EU has limited capabilities to impose direct requirements in this domain. There are only certain guidelines concerning minimum standards and social protection that member states should meet (Official...2007).

3.5. The structure of general government expenditure on social protection

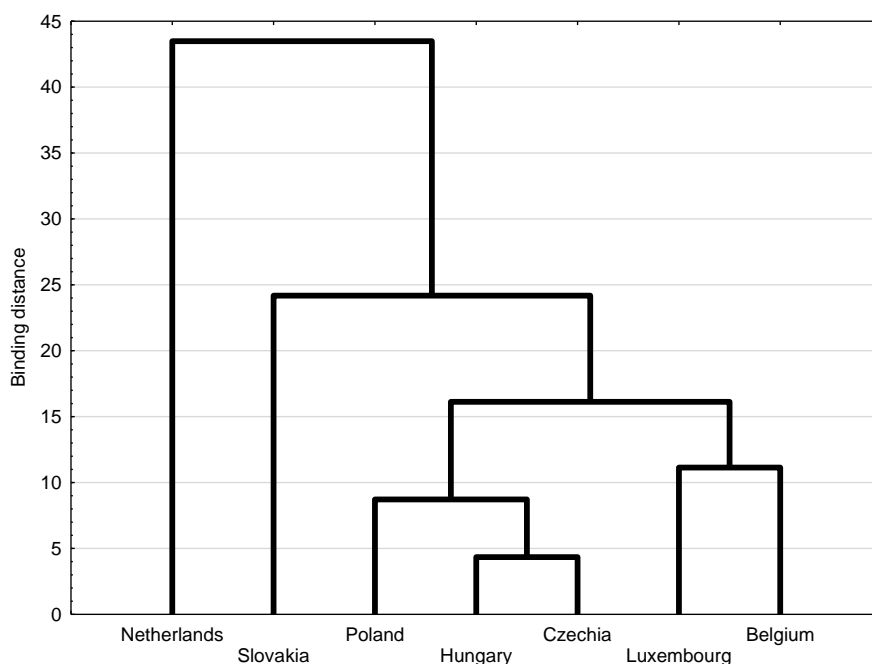
Regarding general government expenditure on social protection in Benelux and Visegrad Group countries, differences were observed not only in magnitude but also in the composition. The largest portion was allocated to old age expenditures, followed by sickness and disability. The third-largest category in terms of expenditure was family and children. Very low expenditures, or the absence thereof, were observed for the research and development of (R&D) social protection (*Table 4*).

Clustering analysis for the structure of general government expenditure on social protection in 2021 showed that the Netherlands and Slovakia had the most distinct structures compared to the other countries, forming two separate clusters. *Graph 6* displays the dendrogram illustrating the clustering of countries based on the structure of general government expenditure on social protection.

In the Netherlands, a larger proportion of expenditures were allocated to sickness and disability, being around 26%, while in other countries, this ranged from 12% to 18%. Similarly, higher percentages were allocated to housing in the Netherlands (2.8%) compared to 0.0-1.2% in other countries, as well as for social exclusion (14.7%) compared to 1.2-6.7%. On the other

hand, the Netherlands allocated a lower percentage to old age (around 39%) compared to 46-58% in other countries, and relatively low expenditures were directed towards survivors (0.3%). Expenditures on social protection n.e.c. were very low in absolute terms (11.1 million units of national currency).

Slovakia stood out as another country with a distinct pattern of government expenditures on social protection. Its specific characteristic was a high share of social protection n.e.c. (7.3%) and no expenditures on housing.



Graph 6. Dendrogram of countries based on the structure of general government expenditure on social protection in GDP in 1995-2021

Source: own elaboration based on *General government...2023*

In the remaining Benelux and Visegrad countries, the structure of general government expenditure on social protection was as follows: Belgium and Luxembourg allocated over 17% of their expenditures to sickness and disability, while the three countries of the Visegrad Group highlighted ranged from 12% in Poland to 18% in Czechia. The category of old age accounted for approximately 46% in Belgium to over 58% in Czechia. Belgium and Poland directed relatively higher percentages to survivors, approximately 7% and 10%, respectively, while Luxembourg had very low expenditures (1.2 million units of national currency). The family and children category accounted for approximately 11% in Belgium to nearly 18% in Hungary. Poland had a relatively low percentage allocated to social exclusion n.e.c. (1.8%), while other countries ranged from 3.2% in Czechia to 6.7% in Hungary. Based on the data analysis, key findings were extracted and are presented in *Table 4*.

Table 4. Structure of general government expenditure on social protection in Benelux and Visegrad Group countries in 2021.

Variables	Sickness and disability	Old age	Survivors	Family and children	Unemployment	Housing	Social exclusion n.e.c.	R&D Social protection	Social protection n.e.c.
Cluster A									
Netherlands	25,6	39,4	0,3	12,5	4,6	2,8	14,7	0,1	0,0
Cluster B									
Slovakia	25,1	51,9	4,9	7,5	2,1	0,0	1,2	0,0	7,3
Cluster C									
Belgium	17,5	45,7	7,2	10,7	9,8	1,2	5,5	0,0	2,3
Luxembourg	17,4	51,4	0,0	18,3	7,2	0,7	4,1	0,0	1,0
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Czechia	18,0	58,2	4,0	12,8	1,3	1,0	3,2	0,0	1,4
Hungary	15,9	50,0	5,7	17,7	2,0	0,7	6,7	0,0	1,2
Poland	12,0	57,3	9,7	17,0	1,5	0,1	1,8	0,0	0,6

Source: own calculations based on *General government...2023*

The dominant expenditure category in the structure of social protection was old age, which is not surprising given existing demographic changes. However, it becomes crucial for welfare states to undertake the restructuring of existing social policies to address increasing social risks without compromising productive elements. This task is not easy, particularly in light of the long-term pressure from an aging population. Pension reforms have been introduced in several EU countries to ensure the sustainability of pension systems under conditions of low or declining fertility and increasing life expectancy. These reforms include increasing the retirement age, limiting early retirement, introducing occupational and private pension schemes alongside public pension schemes, and redefining the relationship between contributions and benefits (Tashevskva et al., 2020).

Comparing country groups based on expenditure structures from our analysis with Halaskova's (2018) study, where EU countries were grouped based on the structure of government expenditures on social protection, some differences were found. Slovakia and Czechia in this study were in two different clusters, unlike Halaskova's (2018) findings.

Conclusion

In conclusion, the study demonstrated the diverse approaches taken by different countries within the same regional groups. The conducted analyses achieved the research goal and provided answers to the research questions. In the years 1995-2021, significant changes in the share of general government expenditure on social protection in GDP were observed in five out of the seven analyzed countries. In two Benelux countries, Belgium and Luxembourg, as well as in one Visegrad Group country, Czechia, there was a statistically significant increase in the share of social protection expenditure in GDP. On the other hand, Poland and Hungary experienced a statistically significant decrease in the share of social protection expenditure in GDP. The share of social protection expenditure in GDP remained stable in the Netherlands and Slovakia during the study period. Thus, similar fiscal policy behaviors were not observed

within the analyzed groups. It is worth noting that Czechia and Slovakia demonstrated high predictability in fiscal policy, which is a desirable characteristic of public policy as a whole.

Countries with similar geographical location, political history, and common challenges generally had similar shares of general government expenditure on social protection, with some exceptions. The Benelux countries had similar shares of social protection expenditure in GDP, and these were higher than those in the Visegrad Group countries. Within the Visegrad Group, Hungary, Slovakia, and Czechia had similar shares of social protection expenditure. Poland, as a member of the Visegrad Group, was closer in terms of social protection expenditure shares to the Benelux countries rather than to the other Visegrad Group countries. Poland had higher shares of the indicated indicator than the other Visegrad Group countries.

In the Visegrad Group countries, a sigma convergence process occurred between 1995-2021, meaning that the dispersion of values of the analyzed economic category (the share of general government expenditure on social protection in GDP) around the mean decreased over time. On the other hand, the Benelux countries experienced a divergence process during the analyzed period.

The study revealed the dominance of old age expenditures within the social protection structure, reflecting the demographic challenges posed by an aging population. However, the variations in expenditure allocation across categories highlighted the need for tailored policy approaches that address specific social risks and challenges faced by each country.

The study contributes to the ongoing discourse on the effectiveness of different policy strategies and provides a foundation for informed decision-making in the realm of socio-economic policies.

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