

СЕКЦІЯ 2

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ECONOMIC ASPECTS OF SOCIAL POLICY OF THE EUROPEAN UNION COUNTRIES

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Summary. The study of the social policy of the European Union member states in various aspects is an actual issue, subject to a number of scientific research interests. This paper focuses on the main social indicators – total social costs, social benefits and net social contributions as the main measure of the social policy in the countries. Its aim is to research these indicators within a 10-year period (2008-2017) as the European Union countries are being selected and grouped according to their achievements in the social policy field.

Key words: cluster analysis, social policy, European Union, net social contributions.

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ЕКОНОМІЧНІ АСПЕКТИ СОЦІАЛЬНОЇ ПОЛІТИКИ КРАЇН ЄВРОПЕЙСЬКОГО СОЮЗУ

Анотація. Вивчення соціальної політики країн-членів Європейського союзу в різних аспектах є актуальним питанням, а також предметом низки наукових дослідницьких інтересів. Ця робота зосереджена на головних соціальних показниках – загальних соціальних витратах, соціальних виплатах та чистих соціальних внесках як головній мірі соціальної політики країн. Мета роботи – дослідити зазначені показники на протязі десятирічного періоду (2008-2017), в той час як країни Європейського союзу були відібрані та згруповані на основі їх досягнень в сфері соціальної політики.

Ключові слова: кластерний аналіз, соціальна політика, Європейський союз, чисті соціальні внески.

The social policy of the European Union countries dates back to the conclusion of the Treaty establishing the European Economic Community in 1957 and its accompanying problems remain topical nowadays. In their attempts to smooth out social inequality, countries offer different solutions that give rise to contradictory views on the outcome achieved. Even though the term “European social space”, which is above nationality in addressing social problems in the Community, emerged in the early 1980s, the policy persuaded at national level remains a leading one in overcoming social inequality (Pavlova-Banova, 2017). The method used to divide the EU countries is non-hierarchical iterative algorithm “K-means”-clustering. It provides an opportunity to classify data and establish their similarities and differences. The founder of this method is considered to be Hugo Steinhaus

(Brotikovskaya, D. and Zobinen, D., 2019). The basic idea of the algorithm is the cluster random data division, after which the vectors are grouped according to their proximity to the selected center of a particular indicator. Its aim is to divide N observations of K-clusters so that each individual observation belongs to a fixed cluster located at the least distance from the observation. The determination of distance between the indicators is based on the calculation of so-called “Euclidean space” (Pawlas, I.), which is mathematically defined by the following formula:

$$d_{j_0} = \sqrt{\sum_{j=1}^m (z_{ij} - z_{j_0})^2},$$

A similar of grouping is used in the research of many authors exploring different objects of its kind. **Gołębiewska A.**, (Blajer-Gołębiewska, A., 2014) classifies the economies of the EU regarding their economic activities in the 21st century in terms of geographical, historical and political indicators. **Angelov A.** (Ангелов, А., 2019) examines public costs of education in the EU member states and makes the division of the countries in terms of basic educational indicators. Through multivariate comparative analysis **Zarkova S.** (Zarkova, S., 2018, pp. 44-54) explores and differentiates regional differences according to the European classification of the territorial units for statistical purposes in Bulgaria (NUTS), assessing the degree of economic, social and demographic challenges and divides Bulgarian regions into four current groups according to these factors.

Three main indicators are used to identify differences in the socio-economic policy: social protection indicator, social security contributions and net social contributions in proportion to the country’s GDP. Two specific years (2008 and 2017) were selected, from a ten-year period in order to compare and establish the movement of countries in the different groups. For the purposes of this study the main source of information is the Eurostat database¹ and in particular data on the effectiveness of social protection indicator, social benefits and net social contributions expressed as a percentage of the indicator of economic growth – Gross Domestic Product. **The Social protection indicator** measures the effectiveness of social protection in the country. It is based on the total costs of social protection committed by all people of the state. It includes the cost of social security, social assistance and labour market programmes. **Social benefits** are generally government-funded transfers to households, aimed at reducing the financial burden of a number of risks or needs. **Net social contributions** are those contributions made by households to social security funds aimed at ensuring payment of social benefits. These indicators best represent the assessment of social economy undertaken in the countries and their combination allows the ability to monitor the countries’ actions.

¹ Data is collected from the following sources:
<http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>
<https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00102&plugin=1>
<https://ec.europa.eu/eurostat/tgm/table.do?tab=table&plugin=1&language=en&pcode=tec00019>

The member states of the European Union are divided into separate groups².

Table 1

Formed clusters from the European Union member states

Countries	2008	2017	Countries	2008	2017
BEL	1	1	HUN	1	2
BG	2	3	MA	3	3
CZ	3	2	NE	3	2
DEN	3	3	AU	1	1
GER	1	1	POL	3	2
EST	3	2	POR	3	2
IR	3	3	RO	2	3
GR	1	1	SLOV	1	2
SP	3	2	SLOK	3	2
FR	1	1	FIN	1	1
CR	3	2	SW	3	3
IT	1	1	UK	3	3
CY	2	3	LIT	3	2
LAT	2	3	LUX	1	2

The analysis of Table 1 allows to bring out groups of countries by year, in this case – three of them have common characteristics. In 2008, **the first group** included: Belgium, Germany, Greece, France, Italy, Luxembourg, Hungary, Austria, Slovenia and Finland; **the second group** included: Bulgaria, Cyprus, Latvia, Romania; and **the third group** included: Czech Republic, Denmark, Estonia, Ireland, Spain, Croatia, Lithuania, Malta, Netherlands, Poland, Portugal, Slovakia, United Kingdom and Sweden

Ten years later, after overcoming the economic crisis, which began in 2008 and subsequent many social imbalances, the clusters formed undergo changes. Transfer to a different cluster is observed in sixteen of the analyzed EU member states: Bulgaria, Czech Republic, Estonia, Spain, Croatia, Cyprus, Lithuania, Latvia, Luxembourg, Hungary, Malta, Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia,

On this basis, it can be concluded that the actions in the field of social policy with regard to the above mentioned indicators can identify the countries in the three groups. The first group is with relatively low levels towards medium ones, the second group brings together countries with “medium-favourable” range of the surveyed indicators and the third group includes the countries with the most adequate conditions contributing to the relatively good social status of the population in the countries.

The main factors, which determined the first and the second groups are the financial and economic crisis, and difficulties in applying the social policy to

² Austria, Belgium, Bulgaria, Germany, Greece, Denmark, Estonia, Ireland, Spain, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Netherlands, United Kingdom, Poland, Portugal, Romania, Slovenia, Slovakia, Hungary, Finland, Croatia, the Czech Republic and Sweden.

integrate migrants waves from EU and non-EU countries. As for the third group, timely and adequate reforms in relation to social spending policies and the European regulatory measures have their own contributions. It is necessary to attract the attention of the undertaken social policies to overcome significant differences in all countries.

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