ВЪЗДЕЙСТВИЕ НА ЗЕЛЕНАТА ИКОНОМИКА ВЪРХУ РАВНИЩЕТО НА ЗДРАВНОТО СЪСТОЯНИЕ НА НАСЕЛЕНИЕТО В НЯКОИ СТРАНИ ЧЛЕНКИ НА ЕС

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Резюме: Голяма част от политиките на Европейския съюз са свързани с насърчаване на идеята за екологосъобразна и ресурсно щадяща икономика, съблюдаваща принципите на зелената икономиката. Последната се дефинира като основен инструмент, чрез който могат да се постигнат целите на устойчивото развитие. Зелената икономика се възприема като универсален подход, който оказва въздействие върху дългосрочното развитие на националните икономики и съдейства за разрешаване на редица проблеми, свързани с икономиката, общественото благосъстояния и опазването на околната среда. Целта на статията е да се направят комплексни оценки за равнището на зелената икономика и равнището на здравното състояние на населението в някои страни членки на Европейския съюз и да се установи степента на зависимост между тях. Първата комплексна оценка се основава на следните показатели: потребление на неорганични торове; екологични данъци и такси по икономически дейности; принос към международния ангажимент в размер на 100 милиарда щатски долара за разходите, свързани с климата; капацитет за производство на електроенергия от възобновяеми източници и отпадъци; производство в промишлеността, а втората на: средна продължителност на живота; дял на хора с добро или много добро възприятие за здравето като ценност; замърсители на въздуха и парникови газове; причини за смърт; общи разходи за здравеопазване. Установено е, че степента на зависимост между двете комплексни оценки е голяма, тъй като стойността на коефициента на корелация (r) е 0.87.

Ключови думи: зелена икономика, здравно равнище, комплексна оценка, коефициент на корелация, показатели.

JEL: Q01, I10, Q5.

IMPACT OF THE GREEN ECONOMY ON THE LEVEL OF HEALTH STATUS OF POPULATION IN SOME EU MEMBER STATES

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Abstract: Many of the European Union's policies are related to promoting the idea of a ecological and resource-efficient economy, respecting the principles of the green economy. The latter is defined as the main tool through which the goals of sustainable development can be achieved. The green economy is perceived as a universal approach that has an impact on the long-term development of national

economies and helps to solve a number of problems related to the economy, public welfare and environmental protection. The aim of the article is to make complex assessments of the level of the green economy and the level of health status of the population in some European countries and to establish the degree of interdependence between them. The first complex assessment is based on the following indicators: consumption of inorganic fertilizers; environmental taxes and fees by economic activities; a contribution to the USD 100 billion international commitment to climate-related spending; capacity for production of electricity from renewable sources and waste; production in industry, and the second one is based on: average life expectancy; share of people with good or very good perception of health as a value; air pollutants and greenhouse gases; causes of death; general health expenditure. It was found that the degree of dependence between the two complex estimates is large, since the value of the correlation coefficient (r) is 0.87.

Key words: green economy, health level, complex assessment, correlation coefficient, indicators.

JEL: Q01, I10, Q5.

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Introduction

The social aspect in the concept of the green economy finds expression in the realization of social investments. The latter are related to the topic of poverty reduction by investing in education and health services. Social investment is a prerequisite for economic development, with an emphasis on a healthy and educated workforce. The World Bank notes that the future success of national economies depends on the degree of investment activity in human resources and the opportunities they have to generate green growth, i.e. economic growth resulting from the efficient use of natural resources, with a view to ecological balance, biodiversity and the maintenance of ecosystems (World Bank, 2011; World Bank, 2012).

1. Problem statement

In most countries around the world, healthcare service is a public good with mixed funding. Currently, the health sector is defined as quasi-market, i.e. market imitation, which aims to create competition between economic agents. In essence, quasi-markets theoretically began to be present in the subject of economic theory in the late 20th century. The reasons that determine their occurrence are different. The review of economic theories connects the need for the emergence of quasi-markets with the reforms and new management models that are beginning to be present in the organization of the public sector in developed countries. The term quasi-market appears in the work of L. von Mises "Human Activity". The restructuring of the public economy finds expression precisely in the possibility to create competitive relationships between economic agents by imitating market principles in the behaviour of participants. Its modernization is associated with the theory of new management in the public sector, which is perceived as a quasi-market approach to its management. This new way of organizing and managing public services requires the use of traditional methods of strategic management and to set corporate goals in the functioning of public institutions (Rinkova, 2013). An example of the functioning of a quasi-market is the health services market.

In most countries around the world, the health sector stands at serious risk - not only financially but also structurally (Sassi, Archard, and Le Grand, 2001). When analyzing the health sector, it should not be limited to the specific health service necessary for diagnosting the disease (Stuckler, 2009). The analysis requires to cover other important areas, including: disease prevention; control of the course of the disease and concomitant recovery; prenatal and postpartum care, etc. All activities in the individual areas depend directly on the state of the natural environment - air, water, soil, safe food supply and opportunities for leisure in healthy open spaces, as well as the financial stability of the health system (Malkovska, and Dragozova, 2018). This means that the health sector, as an important component of public infrastructure, is directly dependent on the establishment of sustainable development of communities. When talking about investments in health care it is necessary to mention

that made in early childhood, they subsequently generate a strong social effect. McCain and Mustard (1999) show that investing in the overall health status of individuals increases their well-being.

During the preparation of the Rio + 20 Conference, emphasis is placed on the important role of health in the context of sustainable development. This has led to increased interest from various international and governmental organizations to include health on the Rio + 20 agenda. These efforts were related to proving that health should be among the topics of interest during the conference. On this occasion, the World Health Organization publishes material highlighting the key role of health in the principles set out in the concept of sustainable development. In this context, the World Health Organization summarizes the following information (World Health Organization, 2012):

- Health is a significant factor affecting the applied characteristics of sustainable development. Without health there is no sustainable development. In particular, individuals with good health status are more able to learn and develop their skills, and participate more actively in the labour market. As a consequence of the abovementioned, they do not "weigh" on the social-insurence system, contribute to raising public welfare, and therefore have a positive impact on economic growth.
- On the other hand, achieving sustainable development will lead to a higher health status of the population. Intelligent management in sectors such as transport, house building, energy, and especially agriculture, can generate additional health benefits and limit the risks associated with a number of diseases.

In this line of thoughts, it is essential to realize that health is the result of the proper implementation of sustainable development policies, especially those with environmental concerns (Horrigan, Lawrence, and Walker, 2002). In this context, if the environmental area of sustainable development is stimulated with a focus on reducing the use of natural resources, this will have a negative impact on the economy. In addition to the abovementioned, the smaller productive capacity of the economy will generate less GDP, which in turn is associated with less public spending on health care, as well as less personal resources available to individuals to meet needs for health services.

The problem thus posed seems large-scale, but here is the place for the following clarification. Investments in ecology generate health (Bass, 2013; Byron, Jin, and Dalton, 2015). In particular, green production saves non-renewable natural resources, on the one hand, and generates positive externalities related to clean air, water and soil. Reducing fine particulate matter in the air reduces respiratory diseases (Barbier, 2011; McAfee, 2016). Thus, the prevention and preconditions for creating a high health status of the population through the activities listed above are associated with lower costs than stimulating overproduction, stimulating over-consumption and ultimately: a growing economy with high healthcare costs associated with treating sick individuals. Therefore, it is necessary to look for alternative mechanisms of functioning of the economy other than the dominant ones at present (Todorov, 2016; Toshkova, 2018). In the foreground is the inability of the dominant economic theory to deal with a pressing problem: stimulating economic growth and critically reducing scarce natural resources. In this line of thought, the real advantages of the green economy are highlighted as a modern approach to generate economic growth without violating the principles set out in the concept of sustainable development. In addition to the above, the green economy is perceived as a theory that complements and enriches the concept of sustainable development (Miteva, 2015; Ivanova, 2013).

In recent years, the thesis "Health through a green economy" has been raised and the advantages and opportunities of this type of economy have been identified (Our Planet, 2018). A. Miteva defines the green economy as a type of economy that focuses on investments in order to reduce carbon emissions and pollution; improving resource in particular, energy dependence, and stimulating care for biodiversity (Miteva, 2015). The author adds that the goals of the concept of green economy development need to comply with the goals set in the concept of sustainable development. Therefore, it is essential that the green economy prioritize health-promoting interventions as a priority social investment worldwide. This requires the triune nature of sustainable development to finally work. And perhaps most importantly: economic production and consumer models to adapt and take into account the needs of the natural environment. Sht. Nozharov emphasized the possibility of the green economy to become a modern "renaissance" of the political economy and strengthening of regulations related to the restoration of the environment through the introduction of mechanisms to neutralize market defects (Nozharov, 2014).

2. Health through a green economy

The functioning of the green economy is of great importance for the health status of the population. Green urban transport, for example, has been shown to reduce the severity of infectious diseases (Sumner, and Layde, 2009; World Health Organization, 2012). Transportation systems lead to traffic, pollution and congestion. World Health Organization studies have shown that public transport systems that have invested in eco-innovation can lead to the following positive trends: less sedentary lifestyles, increased physical activity, reduced environmental pollution, lower accident rates, decreased respiratory rate and increased work rate (World Health Organization, 2012; Liu, Gao, and Lu, 2017). Statistics show that currently three billion households cook and heat using solid fuels (wood, coal), which is one of the most active air pollutants. Because of this, it is estimated that pracically one million of the world population die of chronic obstructive pulmonary disease (COPD) or cancer each year, and one million children die of pneumonia (Brockman, and Fox, 2011). The health sector can play a key role by promoting green health efforts that have a positive impact not only on the environment but ultimately on improving health outcomes (Ploeg, 2013; Wang, Lian, and Lin, 2016).

3. The health sector and sustainable development: mutual influences

The high level of health status of the population is an indicator that some of the set goals of sustainable development, related to the interaction between man and nature, are being realized in the context of the desire for achieved economic growth (Barbier, 2013). For example, the health sector can provide real evidence of the impact of the green economy on the economic well-being of the world population, without compromising the resources of future generations. In this line of thought, the practical and applied result of holding symposia, scientific conferences and conducting experimental studies made it possible to systematise indicators to measure the impact of the green economy, applying the health principle as fundamental in its constituent, on the public welfare (Clark, 2013; Damon, and Sterner, 2012). Along with distinction of the indicators, countries participating in such events place an emphasis on the presence of health in all policies. Suitable areas for developing indicators can be the following:

- Sustainable cities - the focus is on the percentage of urban population exposed to air pollution that is above the WHO recommended air quality limits.
- Greener transport - this includes the percentage of urban roads with special facilities for walking and cycling.
- Nutrition and sustainable agriculture - here the focus is on the proportion of the population with access to healthy foods.
- Disease screening - here the focus is on the rates of heart disease, diabetes, obesity, colon cancer.
- Possibility to build healthy green jobs: here the focus is on the percentage of workers exposed to risks, illnesses and injuries in the performance of their work responsibilities.

Taking advantage of the theoretical achievements of the sustainable development concept, a number of countries have created programs and directives on environmental protection, with a focus on the depletion of non-renewable natural resources (Stevens, and Kanie, 2016). Environmental protection and restoration occurs through the use of two other resources: financial (as a result of economic activities) and human (social). In this way, the combined perception of financial, natural and social capital creates the full semantic essence of sustainable development. The concept of sustainable development itself is linked to the pooling of global efforts to address a serious problem - the depletion of planetary scarce resources and the search for alternative substitutes (Ivanov, 2019). To find alternative substitutes for natural resources and to look for new consumer and production models that are more adequate to the limited resource capacity, the green economy and achieving a higher health status, by applying the principles set out in it, play an essential role (Dragozova-Ivanova, Paligorov, Ivanov, and Kovacheva, 2016; Dasgupta, 2001; Bailey, and Caprotti, 2014). It is imperative to introduce a new - heterodox view of economic theory, describing how the economy is practiced (Dequech, 2008). This alternative to the dominant approach at the moment is based on the nature-society-economy triad, with an emphasis on the natural environment, considered to be the most important factor on which the economic and social dimensions of society depend.

4. Research methodology

The purpose of the scientific article is to check whether there is a relationship between the level of the green economy and the level of health in some European countries. Achieving the goal requires the following tasks to be accomplished:

1. To justify indicators characterizing the level of the green economy.
2. To justify indicators characterizing the health level.
3. To be generated complex estimates of the green economy and health levels in some European countries.
4. To examine whether there is a correlation between the level of the green economy and the level of health in some European countries.

Research stages

The first stage is preparatory and covers the processing of primary information from questionnaires. This stage includes several important activities such as: selection of a target group of citizens to be studied, gathering basic information (number, place, time). The selection of the citizens to be examined is carried out at random. The survey was conducted among the respondents in the city of Sofia in the period December 2019 - February 2020. In the course of the survey a total of 163 questionnaires were distributed, filled in and processed.

The survey did not seek a comprehensive public opinion, but a personal impression of the citizens on the most significant indicators characterizing the level of the green economy and the level of health status of the population. The questions are aimed directly at obtaining information on the respondents' assessment of the degree of significance of the respective indicators. The purpose of the survey is to establish by assessing the respondents the most significant indicators available as data in Eurostat, which characterize the level of the green economy and the level of health status of the population. Accordingly, 15 indicators from the Eurostat database characterizing the green economy and 15 indicators from the Eurostat database characterizing the level of health status of the population of an individual country are used. Based on the respondents' assessment of the degree of significance of the respective indicators, they were reduced to 5 indicators for the green economy and 5 indicators for the level of health status of the population. The indicators are used for 12 EU Member States (Austria; Bulgaria; Croatia; France; Germany; Greece; Italy; Netherlands; Poland; Portugal; Romania; Spain) by 2018. For most significant, the respondents determined the following indicators characterizing the green economy:

1. Consumption of inorganic fertilizers - 20% of the respondents;
2. Eco taxes and fees on economic activities - 18% of the respondents;
3. Contribution to USD 100 billion international commitment on climate-related spending - 10% of respondents;
4. Capacity for energy generation from renewable resources and waste - 23% of respondents;
5. Production in industry - 14% of the respondents.

For the most significant respondents defined the following indicators characterizing the health status:

1. Average life expectancy - 22% of respondents;
2. Share of people with good or very good perceptions of health as a value - 11% of respondents;
3. Air pollutants and greenhouse gases - 26% of the respondents;
4. Causes of death - 12% of respondents;
5. Total healthcare expenditures - 17% of the respondents.

The second stage of the study involves the construction of two complex assessments. The first relates to the level of the green economy and the second to the level of health. The complex assessments received relate to 12 EU Member States. The data on the basis of which the two complex estimates are constructed are presented in Table. 1 and Table. 2. The values of the indicators characterizing the level of the green economy in the 12 EU Member States for 2018 are presented in Table 1. By comparison, the indicator “consumption of inorganic fertilizers” with the highest values is the Netherlands; in terms of the second indicator best performing on “eco taxes and fees on economic activities”, from the twelve EU Member States, ranks Germany; in terms of the third indicator, “contributing to the USD 100 billion international commitment to climate-related spending”, Germany still holds the best position; in relation to the fourth indicator – “capacity for production of electricity from renewable sources and waste” France is the country with the best values of this indicator and in relation to the fifth indicator – “production in industry”, Greece is the country with the lowest, the best values compared to the other eleven countries.

Table 1
Indicators for green economy for 2018

State	Consumption of inorganic fertilizers, *tones*	Eco taxes and fees on economic activities, *million euro*	Contribution to USD 100 billion international commitment on climate-related spending, *million euro*	Capacity for energy generation from renewable resources and waste, *megawatts*	Production in industry, *index, 2015 = 100*
Austria	100096	8855,83	164,14	14516,246	117,4
Bulgaria	339329	1648,08	0,1	3379	117,2
Croatia	15564	1853,35	0,02	2199,5	101,6
France	2145000	56120	4377,38	25792,829	102,9
Germany	1496649	59728	6729,6	10940	113,3
Greece	179436	6823	4,59	3409	94,6
Italy	529886	57775	632,62	22498,587	95,5
Netherlands	6012	25820	405,44	37	97,2
Poland	1178764	13457,94	4,29	2390,768	131,4
Portugal	100450	5270,52	2,17	7235,833	102,8
Romania	468639	4239,84	0,86	6700,653	142,4
Spain	1033494	22065,98	529,06	20079,572	98,1

Source: Eurostat

The values of the indicators characterizing the health level in the 12 EU Member States for 2018 are presented in Table 2. Spain is ranked best by the indicator "average life expectancy"; regarding to the second indicator, the "share of people with good or very good perceptions of health as a value" with the best values from the 12 EU Member States is Greece; of the third indicator – "air pollutants and greenhouse gases" with the best position is the Netherlands; on the fourth indicator - causes of death Spain shows the best values for this indicator and on the fifth indicator – "total health care costs" Germany is the country with the highest values compared to the other eleven countries, amounting to 368 597 million EUR.

Table 2
Indicators for health status of the population for 2018

State	Average life expectancy, *years*	Share of people with good or very good perceptions of health as a value, *percent*	Air pollutants and greenhouse gases, *particulates < 2.5μm*	**Causes of deaths,** *Rate*	Total healthcare expenditures, *million euro*
Austria	81,8	71,7	13,8	939,62	38457,19
Bulgaria	75	66,5	23,8	1601,83	4182,67
Croatia	78,2	60,7	19	1336,01	3325,9
France	82,9	67,7	12	837,86	259638,38
Germany	81	65,5	12,7	1016,89	368597
Greece	81,9	76,4	14,7	957,87	14492,25
Italy	83,4	73,3	19,4	843,13	152705
Netherlands	81,9	75,7	11,3	980,25	74448,03
Poland	77,7	59,2	23,8	1218,15	27756,39
Portugal	81,5	49,3	12	1005,01	17456,49
Romania	75,3	70,6	20,4	1478,79	9671,85
Spain	83,5	73,7	12,1	829,04	103488,62

Source: Eurostat

The methodology for complex assessment is by Kolev (2019). From a statistical point of view, the level of the green economy and the level of health are complex traits that are compounded by several one-dimensional indicators expressed in various measuring units (tonne, million euro, megawatt, year, etc.). Their aggregation requires the one-dimensional indicators to be transformed from named to unnamed values. For this purpose the classic standardization formula is applied (Kolev, 2019):

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{\sigma_j}, \quad (1)$$

where z_{ij} is the standardized value of the j-th indicator at the i-th country;
x_{ij} is the value of the j-th indicator at the i-th country;
$\bar{x}_j$ – the average for the relevant j-th indicator. It is calculated through the formula (2):

$$\bar{x}_j = \frac{\sum_{i=1}^{n} x_{ij}}{n}, \quad (2)$$

where n is the number of units in the relevant aggregation;
σ_j – the standard deviation of the j-th indicator. It is calculated through the following formula:

$$\sigma_j = \sqrt{\frac{\sum_{i=1}^{n}(x_{ij} - \bar{x}_j)^2}{n}} \quad (3)$$

Linear ordering and comparative analysis in regard to complex indicator competitiveness is done on the basis of point-pattern in multidimensional space and establishment of location of the twelve member states of the European Union. This is used to calculate multidimensional indicators (quantifications) normalized within boundaries from 0 to 1. Linear ordering should be applied on the basis of the indicators presented in point 2. For this purpose, their standardized values are used and the coordinates of the pattern point in m-dimensional space are determined. Such are the extremal values of the standardized indicators in 2018. They are categorized as stimulators and suppressors. As regards the former, the higher value is related to the increase of the quantitative assessment of the level of the multivariate indicator, while regarding the latter, it is related to its decrease. In formula (4) the stimulating indicators are taken at their maximum values and the suppressing indicators are taken at their minimum values (Kolev, 2019).

$$k_{ie} = \sqrt{\sum (z_{ij} - z_{ej})^2} \quad (4)$$

where k_{ie} is the Euclidean distance between the level of the green economy/health level of the i-th country and the pattern point;

z_{ij} – the standardized value of the j-th indicator of the level of the green economy/ health level of the i-th country;

z_{ej} – the standardized value of the j-th indicator at the reference point.

The quantitative estimation (multivariate indicator) of the level of the green economy/health level of the i-th country is determined through the formula (5):

$$K_i = 1 - \frac{k_{ie}}{k_e} \quad (5)$$

where K_i is the multivariate indicator (quantitative estimation) of the level of the green economy/health level of the i-th country;

k_e – sum of the mean value of the twelve Euclidean distances determined through formula (5) and their doubled standard deviation multiplied by security coefficient, which is in correspondence with the probability the complex indicator to range from 0 to 1.

4. Estimates of the level of the green economy and the level of health status of the population of some EU member states

The standardized values of the indicators characterizing the level of the green economy and the health level of the twelve EU Member States by 2018 are calculated on the basis of the data in Table 1 and Table 2 and the application of formula 1. The standardized values of the indicators are shown in Table 3 and Table 4.

Table 3
Standardized values for the green economy indicators for 2018

State	Consumption of inorganic fertilizers	Eco taxes and fees on economic activities	Contribution to USD 100 billion international commitment on climate-related spending	Capacity for energy generation from renewable resources and waste	Production in industry
Austria	-0,2345	-0,1726	-0,1263	0,1570	0,1558
Bulgaria	-0,1292	-0,2675	-0,1491	-0,2245	0,1519
Croatia	-0,2717	-0,2648	-0,1491	-0,2649	-0,1572
France	0,6656	0,4494	0,4605	0,5433	-0,1314
Germany	0,3802	0,4969	0,7881	0,0345	0,0746
Greece	-0,1995	-0,1994	-0,1485	-0,2234	-0,2958
Italy	-0,0453	0,4712	-0,0610	0,4305	-0,2780
Netherlands	-0,2759	0,0506	-0,0927	-0,3389	-0,2443
Poland	0,2403	-0,1120	-0,1485	-0,2583	0,4332
Portugal	-0,2343	-0,2198	-0,1488	-0,0923	-0,1334
Romania	-0,0722	-0,2334	-0,1490	-0,1107	0,6511
Spain	0,1764	0,0012	-0,0755	0,3476	-0,2265
Coordinates of the reference point	**-0,2759**	**0,4969**	**0,7881**	**0,5433**	**-0,2958**

Source: Eurostat and autor's calculations

Table 4
Stadartized values of health indicators for 2018

State	Average life expectancy	Share of people with good or very good perceptions of health as a value	Air pollutants and greenhouse gases	**Causes of deaths**	Total healthcare expenditures
Austria	0,1457	0,1581	-0,1557	-0,1705	-0,1320
Bulgaria	-0,5338	-0,0388	0,4798	0,5955	-0,2207
Croatia	-0,2140	-0,2585	0,1748	0,2880	-0,2229
France	0,2556	0,0066	-0,2701	-0,2883	0,4399
Germany	0,0658	-0,0767	-0,2256	-0,0811	0,7216
Greece	0,1557	0,3361	-0,0985	-0,1494	-0,1940
Italy	0,3056	0,2187	0,2002	-0,2822	0,1634

Netherlands	0,1557	0,3096	-0,3146	-0,1235	-0,0390
Poland	-0,2640	-0,3153	0,4798	0,1517	-0,1597
Portugal	0,1157	-0,6902	-0,2701	-0,0949	-0,1863
Romania	-0,5038	0,1165	0,2638	0,4532	-0,2065
Spain	0,3156	0,2339	-0,2638	-0,2985	0,0361
Coordinates of the reference point	**0,3156**	**0,3361**	**-0,3146**	**-0,2985**	**0,7216**

Source: Eurostat and autor's calculations

On the basis of the standardized values in Table 3 and Table 4 and the application of Formula (4) and Formula (5), in Table 5 and Table 6 is presented complex assessments of the green economy and levels of health status of some European countries.

Table 5 shows the ranking of the twelve EU Member States in the level of the complex indicator for Green Economy for 2018. As can be seen with the highest complex indicator for Green Economy rating is Italy (0.472), followed by Germany (0.460), France (0.399) and Spain (0.338). This ranking is not accidental, since the data for the countries listed above show the greatest potential for electricity production from renewable sources and waste, as well as the highest revenues from eco taxes and economic activity fees. The latter shows the active state intervention regarding the regulation of the private sector with regard to industrial pollution. Romania (0.009), followed by Poland (0.025) and Bulgaria (0.103), with the lowest values of a complex assessment of the complex indicator of a green economy. The three countries note some of the highest production values in industry, which means that their economies are not environmentally friendly production models, and do not adhere to the ideology of green and circular economies. In addition, they make a very small contribution to the USD 100 billion international commitment to climate change spending.

Table 5

Ranking countries by level of the complex indicator for Green Economy for 2018

State	**Complex assessment for green economy**
Italy	0,472
Germany	0,460
France	0,399
Spain	0,338
Austria	0,239
Netherlands	0,212
Portugal	0,197
Greece	0,169
Croatia	0,132
Bulgaria	0,103
Poland	0,025
Romania	0,009

Table 6 shows the ranking of the twelve EU Member States by the level of the complex indicator for health level for 2018. As can be seen with the highest complex score for the complex indicator for green economy is France (0.800), followed by Germany (0.756), Spain (0.685) and Italy (0.651). This ranking is not accidental, as data for the countries listed above indicate the highest life expectancy and also account for the highest overall health costs. The four EU Member States report very good results on air pollutants and greenhouse gases. The latter testifies to the effective environmental policies of these countries and the pursuit of improving the health status of their societies. With the lowest values of complex assessment for the complex indicator for health status is Bulgaria (0.191), followed by Romania (0.285) and Poland (0.301). The three countries report some of the lowest values of the average life expectancy, which means that the health status of their societies is not high. The aforementioned three EU Member States have the highest values for air pollution and the release of greenhouse gases into the atmosphere, which seriously affect the health of individuals. The high levels of air pollutants also indicate another problem for these countries: the inadequate responses of their ruling Governments to the implementation of the green economy principles, which are principles that are resulting and complementary to those related to sustainable development.

Table 6
Ranking countries by level of the Complex Indicator for Health status of population for 2018

State	**Complex health assessment**
France	0,800
Germany	0,756
Spain	0,685
Italy	0,651
Netherlands	0,638
Austria	0,586
Greece	0,562
Portugal	0,365
Croatia	0,341
Poland	0,301
Romania	0,285
Bulgaria	0,191

In this article, the relationship between the complex assessments of the green economy level and the level of health status presented in Table 5 and Table 6 is examined by regression analysis. For adequacy, 11 regression models embedded in SPSS were checked. It is found that the correlation between the two complex estimates is adequately described by the parabola of the second degree. The degree of dependence between the two complex estimates is measured by the correlation coefficient whose value in this case is 0.87, which determines the degree of dependence between the degree of complex evaluations being large. The above confirms the aim set out in this article, namely that complex assessments of the level of the green economy and the level of health status of the population in some European countries have established a high degree of interdependence between them.

Conclusion

Based on the complex assessments made for the level of the green economy and the level of health status of the population in some European countries and the established high degree of dependence between them, the following conclusions can be made:

- Italy (0.472) has the highest overall score on the complex green economy, followed by Germany (0.460), France (0.399) and Spain (0.338).
- Romania (0.009) has the lowest values of a complex assessment of the complex green economy, followed by Poland (0.025) and Bulgaria (0.103).
- France (0.800) has the highest overall score on the complex green economy, followed by Germany (0.756), Spain (0.685) and Italy (0.651).
- Bulgaria (0.191) followed by Romania (0.285) and Poland (0.301) with the lowest values of a complex assessment for the complex level of health.
- the value of the correlation coefficient (r), measuring the degree of dependence between the two complex estimates, is 0.87, which determines the degree of dependence as large.

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