

ECONOMIC DEVELOPMENT OF RURAL AREAS IN EUROPEAN UNION MEMBER STATES IN 2000–2012

Tomasz Siudek¹, Mariana Vashchyk²

¹Warsaw University of Life Sciences – SGGW, ²National University of Life and Environmental Sciences of Ukraine

Abstract. This paper focuses on the analysis of some certain aspects of economic development of rural areas in EU Member States during 2000–2012 and aims to define its main tendencies. The synthetic indicator, constructed on the basis of the primary variables, such as GDP per capita, cereal yield, livestock production index and agriculture value added per worker, has been used to evaluate rural economic development. While creating a synthetic indicator, factor analysis has been employed. The research covered all the countries of the EU. The results indicated that among them the highest level of rural economic development in terms of applied indicators occurred in Luxembourg, the Netherlands, Slovenia, France and Malta, and the lowest – by Lithuania, Romania, Slovakia, Poland and the Czech Republic.

Key words: rural development, synthetic indicator, European Union Member States

INTRODUCTION

Sustainable development of rural areas is determined by three dimensions: economic, environmental, and social. We will discuss economic components here, otherwise it should be noted that the measures, indicators and aims of all three dimensions overlap and influence each other, being interdependent no matter how diverse they are. For example, economic decisions made by farmers will definitely impact ecological and social components, whereas preserving environmental quality is a precondition for developing a lasting economic potential of rural areas.

Measuring features of rural economy requires defining the factors that determine its growth and became of great concern in recent decades. Table 1 presents various approaches to and definitions of economic development. Being more or less universal and setting economic development and economic growth against each other [Kindleberger

Corresponding author – Adres do korespondencji: Tomasz Siudek, Department of Economics and Enterprise Organization, Faculty of Economic Sciences, WULS-SGGW, Nowoursynowska 166, 02-787 Warszawa, Poland, e-mail: tomasz_siudek@sggw.pl

Table 1. Selected definitions of economic development

Author(s) / Year	Definition / Description
Kindleberger and Herrick [1977]	Economic development means an increase in output of goods and services in the economy. It is more important than economic growth because economic development is more comprehensive process than economic growth. Economic growth is a quantitative term as it represents quantitative increase in the production of goods, services and factors of production, whereas economic development is a qualitative terms as it indicates continuous increase in real national income and structural changes in the economy of a country
Porter [1990]	Economic development is the long-term process of building a number of interdependent microeconomic capabilities and incentives to support more advanced forms of competition
World Bank. World Development Report [1991]	The challenge of development is to improve the quality of life (QOL). The improved QOL involves higher incomes, better education, higher standards of health and nutrition, less poverty, cleaner environment, more equality of opportunities, greater individual freedom, and a richer cultural life. It includes economic factors, such as capital, labour, natural resources, technology, established markets (labour, financial, goods)
Morse and Loveridge [1997]	Economic development can be defined as “a sustained community effort to improve both the local economy and the quality of life by building the area’s capacity to adapt to economic change”. This definition suggests a distinction between economic growth and economic development. Economic growth represents an increase in jobs and real income in the community. While economic development can involve job and income growth, it also involves sustainable increases in the productivity of individuals, businesses and resources to increase the overall wellbeing of residents and maintaining or even enhancing the quality of life
Harris [2000]	An economically sustainable system must be able to produce goods and services on a continuing basis, to maintain manageable levels of government and external debt, and to avoid extreme sectoral imbalances which damage agricultural or industrial production
American Economic Development council [2003]	Economic development aims to influence the growth and restructuring of a community’s economy to enhance its wellbeing. This is achieved through: job creation and retention, wealth creation for individuals and businesses, tax base enhancements, and improving the quality of life
Labrianidis [2006]	Economic development of rural areas is closely associated with the interaction between the external environment and entrepreneurial agents, thus the key economic challenge for rural areas is how can a small number of entrepreneurial individuals adjust to and exploit the characteristics of their external environment
Dorward et al. [2009]	Economic development involves, inter alia, a process where technical and institutional changes with increasing specialization and trade shift supply and demand curves to the right and reduce transaction costs, increasing supply and demand (and their elasticities) and consumer and producer surpluses
Stanny [2011]	Economic component of sustainable development includes characteristics of the economic structure of communities, through the analysis of the agricultural and non-agricultural sector and characteristics of the prosperity of local governments and the labour market

Source: Grouped by the authors based on literature search.

and Herrick 1977, Morse and Loveridge 1997], some of those approaches, however, get concentrated on the components while the others – on tools and methods to be achieved with. Economic development has been described both as a process [Porter 1990, Dorward et al. 2009] and a prerequisite to life quality improvement [World Bank 1991, Morse and Loveridge 1997] with the wide range of macro- and microeconomic factors.

Despite the fact that given definitions of economic development represent the authors of different continents, from different scientific schools and cover considerable time in-

terval, evolving over time, all of them are relatively consistent in terms of its sustainability, aims, ways of achieving and integrity with two other components of sustainable development (environmental and social ones).

With over 56% of the population in the 27 Member States of the European Union living in rural areas, which cover 91% of the territory, rural economic development is a vitally important policy area. Farming and forestry remain crucial for land use and the management of natural resources in the EU's rural areas, and as a platform for economic diversification in rural communities. The strengthening of EU rural development policy is, therefore, an overall EU priority [European Commission... 2006]. The European Commission's Rural Development Policy is one of the two pillars of the Common Agricultural Policy (CAP). It helps to meet the challenges faced by rural areas and is expected to contribute to their sustainable development [Rural Development... 2012]. Thus sustainable development is one of the main purposes of EU, becoming a fundamental objective in 1997 when it was included in the Treaty of Amsterdam as an overarching objective of EU policies. At the Gothenburg Summit in June 2001, EU leaders launched the first EU sustainable development strategy based on a proposal from the European Commission [Communication from... 2009].

In line with document the Europe 2020 and the overall CAP objectives, three long-term strategic objectives for EU rural development policy for the period of 2014–2020 can be identified, namely:

- fostering the competitiveness of agriculture;
- ensuring the sustainable management of natural resources, and climate action;
- achieving a balanced territorial development of rural economies and communities including the creation and maintenance of employment [Rural Development Policy 2014–2020... 2013].

So what are the measures of rural economic sustainability? For example, some farms that utilize sustainable agriculture practices may be more profitable than their conventional farming counterparts, although the reverse can also be true. In addition to crop production methods, many other factors can affect the bottom line, including management, marketing skills, and experience [Sustainable Agriculture... 2012]. The same is true for the community and macroeconomic (both regional and national) level: wealthy countries may be characterized by lower level of sustainability by some certain parameters in comparison with developing ones, which could also be observed for other blocks of factors (environmental and social).

MATERIAL AND METHODS

The aim of present research is to determine the essence of the economic development of rural areas in each EU Member State during the period of 2000–2012. Only economic dimension of rural sustainability was taken into account in present study, using secondary data, namely: GDP per capita, cereal yield, livestock production index and agriculture value added per worker. The data set includes variables, which characterize both agriculture and rural areas.

A main research hypothesis states that higher economic development of rural areas is typical for Western European countries if to compare with those of Central and Eastern Europe.

Theoretical part of the paper is based on literature review (Table 1) and the empirical part is based on data obtained from the World Bank, OECD, European Commission statistics databases. To determine the economic development of rural areas in the EU Member States synthetic index has been built on the basis of abovementioned secondary variables. Factor analysis was used to replace the original set of primary variables, describing the development of rural areas, by a new set of secondary variables, more convenient for practical application.

Factor analysis was based on the study of interrelationships between variables in a multidimensional extend and to clarify the reasons for the general variability [Harman 1967, Bolch and Huang 1974, Morrison 1990, Jajuga 1993, Tadeusiewicz 1993, Dobosz 2001]. This analysis is based on a linear transformation of the original n -variables X_i ($i = 1, \dots, n$) to the new secondary t -variables U_k ($k = 1, \dots, t$), which were mutually uncorrelated, and their variance sum equals total variance of the original variables X_i . Variables U_k were defined as main factors. The variance of each new factor explains certain variation value of the primary (original) variables and is represented by eigenvalue. Subsequently, isolated main factors indicated less variability every single time. The decision concerning definition the stage of termination isolating factors depended mainly on state of random variation, which remained undefined by the new factors. Three main factors were used to determine the synthetic index of rural economic development in the EU countries; those factors explained 86% of the total variation.

The value of the main factors and the value of the synthetic index of rural development in the EU countries have been calculated by the following equations:

$$U_k = a_{1k}x_1 + a_{2k}x_2 + a_{3k}x_3 + \dots + a_{nk}x_n \quad (1)$$

where: U_k – value of the main k -factor ($k = 1, 2, \dots, t$);

a_{ik} – estimated significance of primary i -variable by the primary k -factor ($i = 1, 2, \dots, n$);

x_i – value of primary i -variable ($i = 1, 2, \dots, n$);

$$W_s = b_1U_1 + b_2U_2 + b_3U_3 + \dots + b_tU_t \quad (2)$$

where: W_s – synthetic index of economic development of rural areas in the EU countries;

b_i – estimated significance of main k -factor, which reflects a certain percentage of variation ($i = 1, 2, \dots, t$);

U_k – value of main k -factor ($k = 1, 2, \dots, t$).

As it was mentioned above, the study of the economic development of rural areas in the EU countries covered the period from 2000 to 2012. Rural development ranking of EU member states has been worked out for each year from the period based on the value of the synthetic index. All the results are presented in respective tables.

RESULTS

As a result of factor analysis of the four primary variables, three main factors, which make up 86.5% of the general variation, were defined. First, second and third factors reflected respectively 36, 25 and 24% of the total variation (Table 2). The first factor was influenced mostly by the following primary variables: GDP per capita and agriculture value added per worker, second factor – by cereal yield, and the third one – by livestock production index (Table 3).

Table 2. Factor analysis of economic development of rural areas in EU countries, 2000–2012

Factor	Eigen value	Percentage of variation	Cumulative percent
1	1.46	36.57	36.57
2	1.02	25.58	62.16
3	0.98	24.38	86.54
4	0.54	13.46	100.00

Source: Calculated by the authors.

Table 3. Factors which determine economic development of rural areas in EU Member States, 2000–2012

Primary variables	Cumulative percent = 86.54%		
	Factor 1	Factor 2	Factor 3
GDP per capita (current USD) – $[x_1]$	0.8550	0.0046	-0.0025
Cereal yield (kg per 1 ha) – $[x_3]$	-0.0108	0.9998	0.0123
Livestock production index (2004–2006 = 100) – $[x_4]$	-0.0048	0.0123	0.9999
Agriculture value added per worker (constant 2005, USD)	0.8545	-0.0201	-0.0044

x_i – value of primary i -variable ($i = 1, 2, 3, 4$); U_k – value of main k -factor ($k = 1, 2, 3$).

Source: Calculated by the authors.

By value of the first factor (GDP per capita and agriculture value added per worker¹) Luxembourg, Slovenia and France have the highest ranking results, Poland, Romania and Latvia – the lowest (Table 4). Cyprus, Ireland and Belgium lead in terms of the second factor (cereal yield), the weakest are Finland, Slovenia and Malta. In the case of the third factor (livestock production index) Bulgaria, Latvia and the Netherlands dominated, and the worst were Slovakia, Lithuania and Greece.

On the whole in the European Union the highest level of rural development in terms of applied indicators had been held by Luxembourg, the Netherlands, Slovenia, France and Malta, and the lowest one – by Lithuania, Romania, Slovakia, Poland and the Czech Republic (Table 4).

Based on research results (Table 5) it is obvious that the highest economic development of rural areas takes place in Western European countries and the lowest one in the countries of Central and Eastern Europe. The Benelux and Scandinavian countries dominated among of the top ten states with the highest level of economic development in rural

¹The names of those three factors (secondary variables) were derived from the names of primary variables that were most correlated with each of these factors.

areas. Relatively high positions of Slovenia and Malta in the ranking became unexpected to some extent. The second group of countries with the lowest economic development of rural areas can be distinguished as the post-communist countries of the “new EU”. Comparing the average positions of the countries in the ranking for 2000–2012 with positions in 2012, it should be noted that the largest improvement in ranking has been recently occurred in Austria, Croatia, Estonia, Germany, Latvia, Lithuania, Poland and the United Kingdom, and the most significant worsening – in Belgium, Bulgaria, Cyprus, Greece, Hungary and Malta.

Table 4. Ranking of EU Member States based on the value of the main factors of economic development of rural areas, 2000–2012

Country	Factor 1	Rank	Factor 2	Rank	Factor 3	Rank	Synthetic index	Rank
Austria	0.5576	12	-0.0264	7	0.3057	6	0.2717	10
Belgium	1.2671	6	-0.0017	3	-0.4145	25	0.3619	8
Bulgaria	-1.5404	25	-0.0745	18	0.6055	1	-0.4348	19
Croatia	-1.0294	18	-0.0552	13	-0.2966	23	-0.4629	21
Cyprus	-0.7360	17	1.5954	1	0.0592	11	0.1534	15
Czech Republic	-1.3218	21	-0.0511	12	-0.2649	22	-0.5610	24
Denmark	1.2258	7	-0.0369	8	-0.1276	18	0.4077	6
Estonia	-1.4344	23	-0.0878	22	0.4160	4	-0.4456	20
Finland	1.3319	5	-0.1068	28	-0.2136	19	0.4077	7
France	1.6490	3	-0.0428	9	0.0416	13	0.6022	4
Germany	0.4488	13	-0.0179	6	0.3280	5	0.2395	11
Greece	-0.7043	16	-0.0695	16	-0.5038	26	-0.3982	18
Hungary	-1.3945	22	-0.0508	11	0.1848	9	-0.4779	22
Ireland	0.5708	11	0.0023	2	0.0502	12	0.2216	13
Italy	0.5895	10	-0.0599	14	0.1329	10	0.2327	12
Latvia	-1.6492	26	-0.0795	21	0.5864	2	-0.4805	23
Lithuania	-1.5245	24	-0.0911	24	-0.6049	27	-0.7283	28
Luxembourg	3.3710	1	-0.0481	10	-0.0224	17	1.2150	1
Malta	1.0186	8	-0.0989	26	0.2897	7	0.4178	5
Netherlands	1.5338	4	-0.0050	4	0.5766	3	0.7002	2
Poland	-1.6854	28	-0.0756	20	0.0253	15	-0.6295	25
Portugal	-1.0946	19	-0.0751	19	0.2655	8	-0.3548	17
Romania	-1.6737	27	-0.0902	23	-0.3223	24	-0.7137	27
Slovakia	-1.2395	20	-0.0718	17	-0.6526	28	-0.6308	26
Slovenia	1.9159	2	-0.1050	27	-0.2499	21	0.6128	3
Spain	0.1271	15	-0.0959	25	-0.0023	16	0.0214	16
Sweden	0.9989	9	-0.0663	15	-0.2291	20	0.2925	9
United Kingdom	0.4221	14	-0.0138	5	0.0371	14	0.1598	14

Source: Calculated by the authors.

Table 5. Ranking of EU member states based on the value of the main factors of economic development of rural areas, 2000–2012

Country	2000		2001		2002		2003		2004		2005		2006	
	synthetic index	rank	synthetic index	rank	synthetic index	rank	synthetic index	rank	synthetic index	rank	synthetic index	rank	synthetic index	rank
Austria	-0.0266	12	0.0623	8	0.0784	11	-0.0099	14	0.0818	14	0.1845	13	0.1599	13
Belgium	0.3950	4	0.3029	5	0.4321	4	0.3778	5	0.5048	4	0.3038	8	0.3773	8
Bulgaria	1.0272	3	0.7340	2	-0.3827	18	-0.8759	25	-0.6576	23	-0.6322	24	-0.5157	23
Croatia	-1.3323	28	-1.0488	25	-1.0393	26	-0.9643	26	-0.6609	24	-0.3388	18	-0.2701	16
Cyprus	4.4610	1	-0.2521	17	-0.1119	15	-0.1406	16	-0.1585	16	-0.2711	17	-0.4932	22
Czech Republic	-0.5622	20	-0.4470	19	-0.5329	21	-0.5978	22	-0.4239	19	-0.5183	22	-0.5919	26
Denmark	-0.0421	13	0.0516	9	0.1444	6	0.2871	6	0.4337	6	0.4410	5	0.4252	6
Estonia	-1.2175	26	-1.0434	24	-0.5790	23	-0.6225	23	-0.6545	22	-0.6837	27	-0.4051	18
Finland	-0.1162	14	-0.0208	13	0.0896	9	0.2193	7	0.3122	9	0.3528	7	0.4255	5
France	0.3048	6	0.3121	4	0.4654	3	0.4070	4	0.5517	2	0.5352	2	0.4773	4
Germany	-0.2593	16	-0.2322	16	-0.1985	17	-0.0962	15	0.1111	13	0.0920	14	0.0940	14
Greece	-0.6521	22	-0.6066	21	-0.5581	22	-0.4224	19	-0.3119	18	-0.2094	16	-0.3077	17
Hungary	-0.1606	15	-0.2180	15	-0.1465	16	-0.2387	17	-0.2708	17	-0.5866	23	-0.6613	28
Ireland	0.0085	9	-0.0167	12	-0.0594	13	0.1239	10	0.2004	11	0.2460	10	0.3747	9
Italy	-0.0122	11	0.0043	11	0.0822	10	0.0624	11	0.2053	10	0.1900	12	0.1688	12
Latvia	-1.0782	25	-1.0896	27	-1.1887	27	-1.0110	27	-0.8378	28	-0.6834	26	-0.4626	19
Lithuania	-1.2427	27	-1.4299	28	-1.3512	28	-1.1145	28	-0.7929	26	-0.5178	21	-0.5378	25
Luxembourg	1.1342	2	0.4347	3	0.7215	2	0.8248	2	1.1712	1	1.2694	1	1.3864	1
Malta	0.2364	7	0.7475	1	0.8406	1	0.8762	1	0.4603	5	0.3815	6	0.4205	7
Netherlands	0.3085	5	0.1463	7	0.1273	7	0.1938	8	0.4066	7	0.5097	3	0.5996	2
Poland	-0.9606	23	-0.9774	23	-0.8282	24	-0.7400	24	-0.7993	27	-0.6990	28	-0.4915	21
Portugal	-0.5129	19	-0.5630	20	-0.4780	20	-0.5795	21	-0.4428	20	-0.3718	19	-0.4758	20
Romania	-1.0737	24	-1.0797	26	-0.8371	25	-0.5427	20	-0.6684	25	-0.6414	25	-0.6580	27
Slovakia	-0.5680	21	-0.7298	22	-0.4081	19	-0.3621	18	-0.5108	21	-0.4898	20	-0.5219	24
Slovenia	-0.2689	17	0.2774	6	0.3471	5	0.5425	3	0.5444	3	0.4602	4	0.4930	3
Spain	-0.3615	18	-0.2696	18	-0.0932	14	0.0507	12	0.0284	15	-0.0615	15	-0.0268	15
Sweden	0.0632	8	0.0179	10	0.0927	8	0.1887	9	0.3698	8	0.2652	9	0.3287	10
United Kingdom	0.0079	10	-0.1782	14	-0.0105	12	0.0367	13	0.1120	12	0.1919	11	0.2619	11

Table 5 cont. Ranking of EU member states based on the value of the main factors of economic development of rural areas, 2000–2012

Country	2007		2008		2009		2010		2011		2012		2000–2012	
	synthetic index	rank	synthetic index	rank	synthetic index	rank	synthetic index	rank	synthetic index	rank	synthetic index	rank	synthetic index	rank
Austria	0.4070	12	0.4192	13	0.3916	10	0.4479	8	0.7137	6	0.6222	7	0.2717	10
Belgium	0.4983	7	0.5564	9	0.5879	7	0.0971	15	0.1421	16	0.1287	16	0.3619	8
Bulgaria	-0.7782	28	-0.6639	28	-0.6763	27	-0.7319	25	-0.7544	27	-0.7442	26	-0.4348	19
Croatia	-0.0093	16	-0.0597	18	-0.0078	16	-0.1689	19	-0.0452	18	-0.0717	18	-0.4629	21
Cyprus	-0.3591	19	0.7348	4	-0.2881	20	-0.3543	21	-0.3578	20	-0.4151	21	0.1534	15
Czech Republic	-0.5562	26	-0.4514	23	-0.6124	26	-0.6805	24	-0.6330	24	-0.6860	24	-0.5610	24
Denmark	0.6302	5	0.6549	7	0.5310	8	0.5797	7	0.6243	8	0.5393	8	0.4077	6
Estonia	-0.3754	22	-0.3419	21	-0.1149	18	-0.1036	17	0.1673	14	0.1813	13	-0.4456	20
Finland	0.6563	4	0.7122	6	0.6449	5	0.6152	6	0.7527	5	0.6561	6	0.4077	7
France	0.6182	6	0.7209	5	0.7403	4	0.7967	4	0.9893	3	0.9102	3	0.6022	4
Germany	0.4110	11	0.5960	8	0.6303	6	0.6312	5	0.6723	7	0.6617	5	0.2395	11
Greece	-0.3714	21	-0.2456	20	-0.3404	21	-0.3378	20	-0.3640	21	-0.4490	23	-0.3982	18
Hungary	-0.6163	27	-0.4581	24	-0.5634	25	-0.7983	28	-0.7189	26	-0.7751	27	-0.4779	22
Ireland	0.4966	8	0.3682	14	0.1698	13	0.3119	11	0.3752	10	0.2816	12	0.2216	13
Italy	0.3293	14	0.5165	10	0.4182	9	0.4254	9	0.3375	12	0.2968	11	0.2327	12
Latvia	-0.1083	17	-0.0347	17	-0.0296	17	-0.0054	16	0.1477	15	0.1356	15	-0.4805	23
Lithuania	-0.3600	20	-0.4323	22	-0.3810	22	-0.4336	23	-0.4364	23	-0.4376	22	-0.7283	28
Luxembourg	1.3333	1	1.6927	1	1.6576	1	1.3142	1	1.3988	1	1.2563	2	1.2150	1
Malta	0.4448	9	0.4857	11	0.2812	12	0.1709	13	0.0651	17	0.0209	17	0.4178	5
Netherlands	0.8089	2	1.0216	3	1.1226	2	1.2531	2	1.3278	2	1.2771	1	0.7002	2
Poland	-0.4047	23	-0.5341	26	-0.5054	23	-0.4252	22	-0.4042	22	-0.4142	20	-0.6295	25
Portugal	-0.3375	18	-0.0948	19	-0.1636	19	-0.1358	18	-0.2087	19	-0.2481	19	-0.3548	17
Romania	-0.5162	24	-0.5768	27	-0.5429	24	-0.7325	26	-0.6741	25	-0.7351	25	-0.7137	27
Slovakia	-0.5402	25	-0.4868	25	-0.7834	28	-0.7347	27	-1.0231	28	-1.0411	28	-0.6308	26
Slovenia	0.7652	3	1.0659	2	0.8323	3	1.0531	3	0.9509	4	0.9037	4	0.6128	3
Spain	0.1239	15	0.2656	16	0.0658	15	0.0992	14	0.2772	13	0.1801	14	0.0214	16
Sweden	0.4134	10	0.4819	12	0.3018	11	0.3581	10	0.4774	9	0.4435	9	0.2925	9
United Kingdom	0.3386	13	0.2838	15	0.1028	14	0.2432	12	0.3601	11	0.3277	10	0.1598	14

Source: Calculated by the authors.

CONCLUSIONS

The research results have proven the research hypothesis, stating that economic development of rural areas is higher in Western European countries than in those of Central and Eastern Europe. Thus, there is large diversification in economic development of rural areas among the EU Member States. In general, it is caused by wide range of not only economic and financial reasons, but also by historical, political and number of other prerequisites. Besides, economic development of any country is strongly dependant on the quality of the institutional framework and aspects such as: efficiency of legal provision, property rights, central and local authorities etc.

Because the indicators cover many distinct (and sometimes mutually controversial) levels of economic sustainability, it is possible, moreover, for countries to have similar “scores” for economic sustainable indicators but very different economic conditions in reality.

While there are common goals that are crucial to sustainable economic development of rural areas, there is no single approach that will guarantee sustainable success in every country. This heterogeneity has to be taken into account while developing multi-annual perspective programs, rural development policies and strategies for EU Member States in response to the requirements and specifics of their own rural areas.

In conclusion, indicators can be used to draw attention of policymakers to problem areas/spheres/regions. They also could be a set of management tools to measure progress over time.

REFERENCES

- American Economic Development council (AEDC), 2003, http://www.iedconline.org/web-pages/inside-iedc/about-iedc/#ED_Defined
- Bolch B.W., Huang C.J., 1974: Multivariate statistical methods for business and economics. Prentice-Hall, Englewood Cliffs NJ.
- Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Mainstreaming sustainable development into EU policies: 2009 Review of the European Union Strategy for Sustainable Development, COM/2009/0400 final, <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52009DC0400>
- Dobosz M., 2001. Wspomagana komputerowo statystyczna analiza wyników badań [Computer-assisted statistical analysis of research results]. Wyd. Akademicka Oficyna Wydawnicza EXIT, Warszawa [in Polish]
- Dorward A., Kydd J., Poulton C., Bezemer D., 2009. Coordination Risk and Cost Impacts on Economic Development in Poor Rural Areas. *Journal of Development Studies* 45 (7), 1093–1112.
- European Commission statistics database, <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes>
- Harman H.H., 1967. Modern factor analysis. University of Chicago Press, Chicago.
- Harris J.M., 2000. Basic Principles of Sustainable Development. Global Development and Environment Institute Working Paper 00-04.
- Jajuga K., 1993. Statystyczna analiza wielowymiarowa [Statistical multivariate analysis]. Wyd. Naukowe PWN, Warszawa [in Polish].
- Kindleberger C.P., Herrick B.C., 1977. Economic Development. McGraw-Hill, New York.

- Labrianidis L., 2006. Fostering Entrepreneurship as a Means to Overcome Barriers to Development of Rural Peripheral Areas in Europe. *European Planning Studies* 14 (1), 3–8.
- Morrison D.F., 1990. Wielowymiarowa analiza statystyczna [Statistical multivariate analysis]. PWN, Warszawa [in Polish].
- Morse G., Loveridge S., 1997. Implementing local business retention and expansion visitation programs. Northeast Regional Center for Rural Development. NERCRD Publication 72, University Park, PA.
- The Organization for Economic Co-operation and Development (OECD) statistics database, <http://www.oecd.org/statistics/>
- Porter M.E., 1990. *The Competitive Advantage of Nations*. The Free Press, A Division of Macmillan, New York.
- Rural Development in the European Union - Statistical and economic information http://ec.europa.eu/agriculture/statistics/rural-development/2012/index_en.htm
- Rural Development in the European Union. Statistical and Economic Information. Report 2012, European Union, December 2012.
- Rural Development Policy 2007–2013: European Commission. 061130_Factsheet_EN.indd 1. 18.12.2006.
- Rural Development Policy 2014–2020: European Commission. Agriculture and Rural Development, December 2013.
- Stanny M., 2011. Analiza Poziomu Komponentów Rozwoju Zrównoważonego i Ocena Stopnia ich Zrównoważeniana Obszarach Wiejskich ZPP [Spatial Analysis of the Level of Substantial Development Components and Evaluation of their Degree of Sustainability in Rural Areas of the Green Lungs of Poland]. *Acta Universitatis Lodziensis, Folia Oeconomica* 253, 99–114 [in Polish].
- Sustainable Agriculture UK Cooperative Extension Service, University of Kentucky – College of Agriculture. Reviewed by Mark Keating, Lecturer in Sustainable Agriculture (Issued 2008), Reviewed by Krista Jacobsen, Assistant Professor of Sustainable Agriculture (Revised 2012), April 2012, 1–5.
- Tadeusiewicz R., 1993. *Biometria* [Biometrics]. Wyd. Akademii Górniczo-Hutniczej, Kraków [in Polish].
- The World Bank database, <http://data.worldbank.org/indicator#topic-1>
- World Bank, 1991. *World Development Report 1991: The Challenge of Development*. Oxford University Press, New York, <https://openknowledge.worldbank.org/handle/10986/5974>

ROZWÓJ EKONOMICZNY OBSZARÓW WIEJSKICH W KRAJACH UNII EUROPEJSKIEJ W LATACH 2000–2012

Streszczenie. Celem pracy jest określenie rozwoju ekonomicznego obszarów wiejskich w krajach Unii Europejskiej w latach 2000–2014. W badaniach przy szacowaniu tego rozwoju wykorzystano wskaźnik syntetyczny, opracowany na podstawie zmiennych pierwotnych, takich jak: PKB per capita, plony zbóż, produkcja zwierzęca i wartość dodana w rolnictwie na 1 pracownika. Przy opracowywaniu wskaźnika syntetycznego wykorzystano analizę czynnikową. Badaniami objęto wszystkie kraje Unii Europejskiej. Z uzyskanych danych wynika, że najwyższy poziom rozwoju ekonomicznego obszarów wiejskich odnotowano w takich krajach, jak: Luksemburg, Holandia, Słowenia, Francja i Malta, a najniższy na Litwie, w Rumunii, Słowacji, Polsce i Czechach.

Słowa kluczowe: rozwój obszarów wiejskich, wskaźnik syntetyczny, kraje Unii Europejskiej