Kowalik et al., 2017

Volume 3 Issue 2, pp. 730 - 745

Date of Publication: 18th September, 2017

DOI-https://dx.doi.org/10.20319/pijss.2017.32.730745

This paper can be cited as: Kowalik, J., Zawada, M., & Kucęba, R. (2017). Regional Diversification of the Level of Economic Development in Poland. PEOPLE: International Journal of Social Sciences, 3(2), 730-745.

REGIONAL DIVERSIFICATION OF THE LEVEL OF ECONOMIC DEVELOPMENT IN POLAND

Jan Kowalik
Faculty of Management, Czestochowa University of Technology, Częstochowa, Poland
janekowalik@yahoo.pl

Marcin Zawada
Faculty of Management, Czestochowa University of Technology, Częstochowa, Poland
marcinzawada04@gmail.com

Robert Kucęba
Faculty of Management, Czestochowa University of Technology, Częstochowa, Poland
robertkuceba@wp.pl

Abstract

In the modern world economy, the importance of regions and cities in economic development is increasing. In line with the policy of the European Union, efforts to level out regional developmental disparities should be made. Regional development can be explored in terms of social, economic or environmental aspects, satisfaction with the level and quality of life of inhabitants, and development of social capital. The aim of this study is to assess only the current level of economic development and its differentiation in various regions of Poland. Data from the Local Data Bank of the Central Statistical Office from the years 2007-2015 have been used in the analysis. Obtained results will allow to draw conclusions about regional policy in Poland.

Keywords

Regional Policy, Regional Development, Poland, Synthetic Indicator of Economic Development

1. Introduction

Economic development means changes of the economy production potential structure, production and consumption structure, social and economic relationships and economy functioning system. It comprises the whole sphere of human economic activity, both production activity as well as division of produced goods, not only through quantitative growth, but primarily through structural and quality changes in a widely understood process of management (Jańczuka, 2013).

Diversification in the level of economic development of individual regions in Poland translates first and foremost into differences in the quality of life of their inhabitants. Hence, the socio-economic development of regions is a matter of interest to scientists, self-governments, national and EU politicians. In line with the policy of the European Union, efforts should be made to level out regional developmental disparities.

Regional development in the economic aspect is determined by economic growth and is visible in transformation of economic factors and resources (internal and external towards the region) in an increased quantity of produced goods and services. In the social sense, it comprises changes in interpersonal relations and social structure, which are reflected in a modified way and quality of inhabitants' lives. Its elements in the technical and technological plane include all progressive changes in the scope of modernity and quality level of produced goods and services (Głuszczuk, 2011).

Diverse development of individual regions is a natural problem for every country and for the whole world, and is therefore a continuing topic for economists. One of the most popular approaches to diversify regional development is the new economic geography. This concept appeared in the early nineties of the twentieth century, and its creator was P. Krugman. The basic premise of this theory is a joined analysis of factors affecting regional development, such as economies of scale from the concentration of activity in a given region, the effect of demand created by external markets and trade costs (Rokicki, 2015).

Another concept explaining the differentiation of regional development is the concept of poles of growth. It refers to the benefits of agglomeration (scale). According to this concept, economic development is centered around the most developed companies or industries, which are the "poles of growth". They are somehow "driving forces" for development, but the disadvantage of such a state of affairs is the strong dependence of remaining, weaker entities and industries on stronger, dominant. For this reason it is important not only to reinforce the current "growth poles", but also to seek, create and develop new ones.

According to the neoclassical model, the production of a region and its development depends on the availability of factors of production, i.e. capital and labor and technological development. Demand theories, based on Keynesian economics, emphasize the legitimacy of government interventionism as one of growth drivers, and take into account a growing number of factors (e.g. internal demand, external demand - exports, economies of scale, technical and organizational innovation). At present, emphasis is placed on the accumulation of human capital, including knowledge and innovation, as well as the cumulative treatment of several factors affecting development. The endogenous concept of regional development, according to which development is generated by regional endogenous physical and social resources, is of particular importance (Ministry of Regional Development, 2009).

Under free capitalism, economic growth and wider regional development are generally differentiated and strictly dependent on the strength of actors involved in market competition. Regions that are less competitive, often located far from economic centers and outlets, fail to keep up with the leaders, and in consequence are degraded to a subordinate role, often economically and politically dependent on rich regions. Moreover, over time, these inequalities get deeper and more permanent. Richer regions gain even more access to capital, services, labor, trade, and the poor remain stagnant (Grydź, 2012).

Regional development depends on many factors related to contemporary realities of socio-economic life in Poland. The most important ones include: human capital (Dae Bum, 2015), material, financial and social capital, technological and organizational innovation and external flows of people, capital and goods.

One of the most important development factors for each territorial unit is its economic potential. The high level of economic development usually creates conditions to ensure a higher

standard of living of a population, understood as the level of satisfaction of needs with all kinds of material, cultural, educational, health and safety goods.

The aim of this article is to present the level of economic development in Poland in regional terms and to verify how large are disparities that exist in particular regions of Poland. As a measure of economic development of the regions, the Synthetic Economic Development Index of the Voivodships (SEDIV) was proposed. This indicator was built as an non-model synthetic measure, which is the arithmetic mean of standardized variables that characterize the economy of a given region.

2. Regional Policy in Poland

Regional development is one of the fundamental problems of the modern economy and is of interest to both government and local government. Regional development can be defined as a sustained increase in the standard of living of people and economic potential on a large territorial unit, which includes, among others: potential and economic structure, natural environment, the standard of living of inhabitants, as well as spatial and infrastructural development (Hołuj& Korecki, 2008). Another definition implies that regional development is linked to an increase in the region's economic potential, which results in a lasting improvement in the living standards of region's inhabitants and increase of its competitiveness (Wlaźlak, 2010).

Running a well-thought-out regional policy aimed at reducing developmental disparities of individual regions and improving competitiveness of the poorest areas is a reflection of the interest of state and local government in economic and social development in the regional context. Regional policy can be defined as a conscious action of states to use resources of a given region to increase its competitiveness and stimulate its development (Solarz, 2011).

European regional policy, defined as a long-term action of public authorities on various levels, aimed at stimulating economic and social development in regions, is a result of recognition of undesirable differences in the level of economic and social development. The aim of this policy is to create conditions for increasing competitiveness of regions and to prevent marginalization of parts of the European Union (Boskovic, 2016). European regional policy therefore supports any action that contributes to reducing economic, social and territorial disparities in the Community and thereby equalizes the standard of living and opportunities for all EU citizens irrespective of their place of residence. Regional policy is twofold: first, it

coordinates the regional (structural) policies of member states; secondly, it provides funding for common goals agreed by the Member States and the European Union.

The process of forming regional policy in Poland has taken place in several stages. Its present shape was most influenced by the accession of Poland to the European Union in 2004. This resulted in a need to adapt regional policy to the European assumptions of cohesion policy. Poland has adopted EU cohesion policy solutions in programming, management, funding, monitoring, evaluation and project selection. An important choice was the adoption of a relatively decentralized model for managing structural funds, as well as transfer of considerable responsibility and increased resources to voivodships (Hajduga, 2013).

With the approval of the EU cohesion policy, documents defining the framework for implementing this policy have been established in Poland. The first of these was the 2004-2006 National Development Plan and the Community Support Framework, which laid down the rules for the operation of the sectoral operational programs, the technical assistance program, the cross-border cooperation program, and the Integrated Regional Development Operational Program.

In 2006 work on another program document, the National Development Strategy 2007-2013 (NDS) has been completed. This document outlines six regional priorities and enhances territorial cohesion among the six priorities. As the directions of action, the competitiveness of Polish regions (infrastructure, human capital, services, entrepreneurship) and equalization of development opportunities for problem areas were addressed (Ministry of Regional Development, 2006), primarily to the five voivodships of Eastern Poland. In the NDS, the direction of regional policy of the state towards all Polish voivodships has also been taken into account.

With the next package of Structural and Cohesion Funds (under two objectives: convergence and territorial cooperation) a document "Poland. National Strategic Reference Framework 2007-2013", supporting growth and workplaces has been prepared. At that time, 16 regional operational programs, sectoral programs, macro-regional programs and technical assistance were identified for the first time (Ministry of Regional Development, 2007).

In 2010 the government adopted the current document defining priorities and actions in the sphere of regional policy - National Strategy for Regional Development 2010-2020: Regions, Cities, Rural Areas (NSRD)((Ministry of Regional Development, 2010). The objectives and

priorities of Poland's development in the territorial system have been highlighted in the document. A new place for regions in regional policy has been presented, an improved division of competences and actions within individual ministries have been showed, and the vision, principles and instruments of regional policy have been highlighted taking into consideration its horizontal character. Detailed proposals of solutions concerned mainly:

- Departure from regional policy perception only through spatial variations, measured at regional level, to exploit the potential of endogenous territories for achieving the country's development goals,
- Stimulating regional, national and international competitiveness, as well as supporting the spread of development from the fastest growing to the rest of the country,
- Departure from the division into inter- and intra-regional policies for one common policy (with common objectives), setting territorial targets for all public entities,
- Introduction of a comprehensive system of integration and coordination of public policies with a significant territorial impact on regional policy objectives set for each territory,
- Reform of the regional policy financing system by basing it on a multiannual financial plan and territorial contracts.

The strategic objective of regional policy as defined in the NSRD is to make effective use of specific regional as well as other territorial development potentials for achieving the country's growth, employment, and cohesion objectives over the long-term. Three specific objectives have been formulated in the NSRD by 2020:

- Promoting competitiveness of regions ("competitiveness"),
- Building territorial cohesion and counteracting marginalization in problem areas ("cohesion"),
- Creating conditions for effective, effective and partnership-based implementation of territorial-directed development measures ("efficiency").

3. Analysis of the Level of Economic Development of Voivodships in Poland

The set of diagnostic variables, which is the basis for determination of the synthetic indicator of economic development of voivodships (SEDIV), is composed of the following variables:

Data are from the Local Data Bank provided by the Central Statistical Office. The proposed set of variables characterizing the surveyed area is as follows:

X_1 - Gross Domestic Product per capita (in PLN)

X_2 - Gross Domestic Product (in percent)

X_3 - Internal R&D expenditure in relation to GDP (%)

X_4 - capital expenditures per capita (in PLN)

X_5 - industrial production sold per capita in PLN

X_6 - dynamics of sold industrial output

X_7 - sales dynamics in construction

X_8 - number of people working per 1000 population

X_9 - unemployment rate (in percent)

X_{10} - average monthly salary (in PLN)

X_{11} - gross disposable income per capita (in PLN)

The data comes from the Local Data Bank provided by the Central Statistical Office in Poland. The research period covered years 2009-2014.

In order to effectively analyze the level of socio-economic development of regions and to be able to assess the level of EU regional disparities, the NUTS nomenclature has been introduced. Based on this classification, the division of EU structural funds into regions with lower socio-economic development is made.

According to the latest revision of NUTS 2013, which has been in force since January 1, 2015 the following entities can be distinguished: NUTS 1, which is a group of voivodships divided into 6 regions, NUTS 2 divided into 16 voivodships and NUTS 3 which groups poviats and represents 72 units. NUTS 2 classifications was used to analyze economic development of the regions within this framework.

As shown by the statistical analysis selected for the analysis of variables, all are characterized by relatively large spatial variations over the analyzed period. This means that they have discriminating features and are carriers of information that differentiates the objects under investigation.

In a set of adopted diagnostic variables, one variable, namely unemployment, is the destimulant, and the other 10 variables are stimulants with regard to direction of impact on analyzed phenomenon. Because in order to design a synthetic meter it is required that only the

stimulants are included in the set of diagnostic features, numerical transformations within the set of destimulants have been made. This changed the direction of influence of this variable on the synthetic variable. Transformations of destimulants in stimulants were made using the formula:

$$x_{ijt}^{'} = 2\bar{x}_j - x_{ijt} \; i \in \{1,2,...,n\}; \; j \in \{1,2,...,m\} \; t \in \{1,2,...,k\} \qquad (1)$$

where: x_{ij} - value of *j*-th variable variable in *i*-th object

$x_{ij}^{'}$ - value of *j*-th variable in *i*-th object after the transformation,

$\bar{x}_j$ - arithmetic mean for the *j*-th variable.

As a result of this transformation, negative stimulus values may appear for an object that emphasizes a very unfavorable situation in the object. Obtained stimulant is interpreted as a distance from a double mean level of the phenomenon in Poland.

Next step in the development of the SEDIV indicator was the normalization of diagnostic features. Normalization of variables by setting a reference point were used in the analysis according to the formula:

$$z_{ijt} = \frac{x_{ijt}}{x_{0jt}} \; i \in \{1,2,...,n\}; \; j \in \{1,2,...,m\} \; t \in \{1,2,...,k\} \qquad (2)$$

where:

z_{ijt} - normalized value of observation of variable x_{ij} in time unit *t*,

x_{ijt} - value of j-th variable in *i*-th object in time unit *t*,

x_{0jt} - reference point for the *j*-th diagnostic variable in time unit *t*.

Such constructed ratio conversion fulfills the following postulates:

- additive postulate - obtaining a formal basis for performing basic arithmetic operations in sets of primary variable values with different titres,
- postulate of non-negative - all realization of variables are non-negative.

In constructing of a synthetic measure of regional development of voivodships in Poland, the maximal value of diagnostic variable $x_{jt} \; j \in \{1,2,...,m\} \; t \in \{1,2,...,k\}$ was assumed as the reference point for the voivodships at a given time point *t* (so-called optimal model with pattern) and thus:

$$z_{ijt} = \frac{x_{ijt}}{\max\limits_i x_{ijt}}, \quad \max\limits_i x_{ij} \neq 0 \; \; i \in \{1,2,...,n\}; \; j \in \{1,2,...,m\} \; t \in \{1,2,...,k\} \qquad (3)$$

Such transformed variables are normalized in the range <0, 1>. This means that the closer normalized values are to unity, the more advantageous place the region occupies in terms of analyzed variable. The changeable maximum value of a given variable, assumed as a pattern, is interpreted as what can be reached at most at a given time.

After normalization of variables, synthesis was performed by calculating the synthetic variable as an arithmetic mean of normalized variables:

$$s_t = \frac{1}{n}\sum_{i=1}^{n} z_{it} \qquad (4)$$

where:

n - number of objects,

$\sum_{i=1}^{n} z_{it}$ - sum of normalized values of diagnostic variables in *i*-th object in period *t*.

Values of the Synthetic Economic Development Indicators of voivodeships for particular regions of Poland and their basic measures of central tendency and differentiation are summarized in Table 1.

Table 1: *Values of the Synthetic Economic Development Indicators of Voivodships in the years 2009 - 2012*

	YEAR						Average rate of change over time
VOIVODESHIP	2009	2010	2011	2012	2013	2014	
DOLNOŚLĄSKIE	0,776	0,778	0,790	0,798	0,788	0,778	0,06%
KUJAWSKO-POMORSKIE	0,700	0,712	0,698	0,697	0,701	0,680	-0,60%
LUBELSKIE	0,621	0,653	0,664	0,700	0,659	0,650	0,91%
LUBUSKIE	0,692	0,711	0,718	0,678	0,684	0,681	-0,33%
ŁÓDZKIE	0,705	0,733	0,750	0,773	0,742	0,726	0,58%
MAŁOPOLSKIE	0,696	0,739	0,738	0,754	0,732	0,731	1,00%
MAZOWIECKIE	0,918	0,922	0,929	0,945	0,932	0,936	0,39%
OPOLSKIE	0,661	0,644	0,671	0,647	0,660	0,678	0,51%
PODKARPACKIE	0,639	0,698	0,717	0,720	0,724	0,703	1,94%
PODLASKIE	0,616	0,640	0,667	0,649	0,669	0,667	1,63%
POMORSKIE	0,759	0,745	0,770	0,805	0,774	0,777	0,45%
ŚLĄSKIE	0,783	0,787	0,803	0,800	0,779	0,762	-0,55%
ŚWIĘTOKRZYSKIE	0,665	0,677	0,677	0,672	0,644	0,637	-0,88%

WARMIŃSKO-MAZURSKIE	0,663	0,681	0,699	0,702	0,668	0,668	0,13%
WIELKOPOLSKIE	0,757	0,736	0,769	0,775	0,754	0,750	-0,17%
ZACHODNIOPOMORSKIE	0,698	0,676	0,703	0,707	0,697	0,681	-0,48%
Descriptive statistics							
Arithmetic mean	0,709	0,721	0,735	0,739	0,725	0,719	
Standard deviation	0,074	0,067	0,066	0,074	0,070	0,071	
Coefficient of variation in [%]	10,38	9,34	8,97	10,00	9,62	9,84	

Source: Source: own elaboration on the basis of CSO data

The values of measure of economic development of regions indicate that in the analyzed period the Mazowieckie, Dolnośląskie, Wielkopolskie, Śląskie and Pomorskie voivodships had the highest level of economic development. And these regions can be regarded as the main driving force of the Polish economy in analyzed period.

The lowest level of economic development in Poland is observed in Lubelskie, Podlaskie and Świętokrzyskie voivodships. These are regions that slow down the economic development of the country.

The coefficient of random variation was used to measure regional variation in terms of economic development. In the analyzed period the value of this factor is around 10% and it can be said that it is relatively constant since the difference between the periods with the largest and the smallest variance is only 1.5%. Such values of the coefficient of randomness allow us to draw the conclusion that, in terms of economic development, the voivodships in Poland are slightly differentiated. This means that the regional policy in Poland in the period under review is being conducted correctly and fulfills its role in reducing the gap between the least developed and the most developed regions. The period under review also allows us to draw conclusions about the use of EU funds for the implementation of regional policy. It should be emphasized that when looking at economic development indicators, these funds are used in accordance with regional policy and have a positive impact on the development of regions.

Looking at the dynamics of economic development of regions in Poland, the Podkarpacie voivodeship is the best in this regard, where growth dynamics is from year to year at an average pace of 1.94%. The Podlaskie, Małopolskie and Lubelskie voivodships are not much worse in this regard. Particularly the dynamics of economic development of Podlaskie voivodeship at an average level of 1,63% is worth noting. The most favorable dynamics of the level of economic development of the voivodships from the so-called eastern wall, which is considered to be the

least developed region in Poland, proves again good allocation of European funds for regional development in Poland.

The Świętokrzyskie and Kujawsko-Pomorskie voivodeships are weakest in terms of the dynamics of economic development measured by the SEDIV.

4. Classification of Regions Based On the Synthetic Measure of Economic Development of Voivodships in Poland

Calculated values of synthetic variables are the basis for classifying voivodships according to the achieved level of economic development. Analysis of economic development of regions, which is a multi-characteristic phenomenon, based on the synthetic variable, enables to classify voivodships into groups containing objects of a similar level of development.

Due to the analyzed phenomenon, in order to classify regions in Poland a method in which the classification criterion is based on two basic parameters has been chosen. Mentioned descriptive characteristics of the synthetic variable were arithmetic mean ($\bar{s}_t$) and standard deviation (S_s). This method allows to divide the set of studied objects into four groups, including objects with synthetic meter values from the following ranges:

$$\text{Group 1: } s_i \in \left\langle \bar{s}_t + S_s ; \max_i \{s_i\} \right\rangle \; i \in \{1,2,...,n\} \qquad (5)$$

$$\text{Group 2: } s_i \in \left\langle \bar{s}_t ; \bar{s}_t + S_s \right) \qquad (6)$$

$$\text{Group 3: } s_i \in \left\langle \bar{s}_t - S_s ; \bar{s}_t \right) \qquad (7)$$

$$\text{Group 4: } s_i \in \left\langle \min_i \{s_i\} ; \bar{s}_t - S_s \right) \quad i \in \{1,2,...,n\} \qquad (8)$$

Such classification gives the possibility of immediate identification of particular typological groups, given the level of development of the studied phenomenon. Objects which belong to particular groups are sorted according to the value of synthetic development meter. Objects, which belong to group 1 have the highest level of development of examined phenomenon and are the driving force for development of Polish economy, while those

belonging to group 4 represent the lowest level of development, i.e. voivodships which slow down economic growth of the country.

Values of arithmetic mean and standard deviation for the synthetic meter in the analyzed period are summarized in Table 1.

This means that countries for which the values of regional development measure are included within the ranges shown in Table 2 are to be included in the respective typological groups.

Table 2: *Ranges of classification of regions in Poland according to synthetic measure of economic development of voivodships*

Group	Year					
	2009	**2010**	**2011**	**2012**	**2013**	**2014**
Group 1	0,783 – 0,918	0,788 – 0,922	0,801 – 0,929	0,813 – 0,945	0,795 – 0,932	0,790 – 0,936
Group 2	0,709 – 0,783	0,721 – 0,788	0,735 – 0,801	0,739 – 0,813	0,725 – 0,795	0,719 – 0,790
Group 3	0,636 – 0,709	0,653 – 0,721	0,669 – 0,735	0,665 – 0,739	0, 656 – 0,725	0,648 – 0,719
Group 4	0,616 – 0,636	0,640 – 0,653	0,667 – 0,669	0,647– 0,665	0,669 – 0,656	0,667 – 0,648

Source: own elaboration

Results of the classification of voivodships in Poland based on the determined synthetic variable are presented in Tables 3 and 4.

Table 3: *Results of the voivodships classification according to the synthetic measure of economic development in 2009-2011*

Group	Year		
	2009	**2010**	**2011**
Group 1	mazowieckie, śląskie	mazowieckie,	mazowieckie, śląskie
Grupa 2	wielkopolskie, pomorskie, dolnośląskie	śląskie, wielkopolskie, pomorskie, dolnośląskie, łódzkie, małopolskie	śląskie, wielkopolskie, pomorskie, dolnośląskie, łódzkie, małopolskie
Group 3	łódzkie, kujawsko-pomorskie, zachodniopomorskie, małopolskie, lubuskie, świętokrzyskie, warmińsko-	kujawsko-pomorskie, zachodniopomorskie, lubuskie, świętokrzyskie, warmińsko-mazurskie, podkarpackie, lubelskie	kujawsko-pomorskie, zachodniopomorskie, lubuskie, świętokrzyskie, warmińsko-mazurskie, opolskie, podkarpackie

	mazurskie, opolskie, podkarpackie		
Group 4	lubelskie, podlaskie	podlaskie, opolskie	lubelskie, podlaskie

Source: own elaboration

On the basis of classification of voivodships in Poland based on the synthetic measure of economic development of regions it can be concluded that very high convergence of classification results at the given time points was obtained. The size and composition of groups in 2009-2014 are very similar. The region with the highest level of economic development is Mazovia. The second group in the whole analyzed period are Dolnośląskie, Wielkopolskie, Pomorskie and Małopolskie and Łódzkie.

Reclassification to a group with a lower level of economic development concerns Silesian, which fell to the second group and Opolskie and Świętokrzyskie voivodships, which fell from the third to the fourth group.

Table 4: *Results of the voivodships classification according to the synthetic measure of economic development in 2012-2014*

Group	**Rok**		
	2012	**2013**	**2014**
Group 1	mazowieckie,	mazowieckie	mazowieckie
Group 2	śląskie, wielkopolskie, pomorskie, dolnośląskie, łódzkie, małopolskie	śląskie, wielkopolskie, pomorskie, dolnośląskie, łódzkie, małopolskie	śląskie, wielkopolskie, pomorskie, dolnośląskie, łódzkie, małopolskie
Group 3	kujawsko-pomorskie, zachodniopomorskie, lubuskie, świętokrzyskie, warmińsko-mazurskie, podkarpackie, lubelskie	kujawsko-pomorskie, zachodniopomorskie, lubuskie, warmińsko-mazurskie, podkarpackie, lubelskie, podlaskie, opolskie	kujawsko-pomorskie, zachodniopomorskie, lubuskie, warmińsko-mazurskie, podkarpackie, lubelskie, podlaskie, opolskie
Group 4	podlaskie, opolskie	świętokrzyskie	świętokrzyskie

Source: own elaboration

Regions with the weakest level of economic development and classified in the fourth group are Świętokrzyskie and Opolskie, Podlaskie and Lubelskie voivodships. The economic situation of Lubelskie, Podlaskie and Opolskie voivodeships has improved recently sufficiently to be classified in the third group of regions in terms of economic situation.

5. Conclusions

Differentiation of the economic development of individual regions is a natural problem for every country. This problem is also noticeable in Poland. As demonstrated by analyzes of the economic development of voivodships in Poland, the level of this differentiation in particular periods covered by the analysis does not change and is around 10%. From the point of view of statistical analyzes it can be stated that diversification of voivodships in terms of economic development is not large, although noticeable. At the opposite poles of economic development in Poland we have the Mazowieckie voivodeship, Świętokrzyskie and Podlaskie voivodships. The most numerous are voivodeships with medium level regional development. Positive phenomenon is the growing dynamics of economic development of voivodships from the so-called eastern wall, which are Podkarpackie, Podlaskie and Lubelskie.

The problem of regional disparities in terms of economic development in Poland is visible both by central and local authorities and is reflected in the regional policy of Poland. Developed and implemented over the years regional development strategies effectively prevent differences in the level of development of individual regions, and in some regions these differences are leveled off.

Poland's regional development policy heads undeniably in a very good direction. However, it should be underlined, that one of the most important conditions of effective regional policy are precise identification of objectives and means of their implementation and very important EU assistance under cohesion policy. Involvement of authorities in Poland in a conscientious and meticulous way to eliminate regional disparities in development is also crucial.

State regional policy should not be entirely dominated by European regional policy, i.e. its development priorities and organizational procedures. It is important to distinguish between autonomous EU funds, regional financial policies, and development of regional instruments and procedures for regional development in order to accurately define national conditions and development interests and effectively implement state regional policy. This is of particular importance in the further development of regions with high and medium levels of economic development. In the case of this group of voivodships one should be careful not to fall into the

trap of medium development. New ways of looking for these regions should be sought so that they can compete effectively not only on a national but also European level.

Further research concerning economic development of regions in Poland should answer the question which of the factors in a relevant way determine economic development of particular voivodeships. In order to distinguish these factors, the analyses will make use of taxonomic methods, which will include main coefficient method and factor analysis.

References

Boskovic, B. (2016). European social model in the 21 century: revisited and towards social investment. . *International Journal of Social Sciences, Special Issue Vol. 2*(1), 1566-1579. http://dx.doi.org/ 10.20319/pijss.2016.s21.15661579

Dae Bum, J. (2015). Effectiveness of higher education to labor productivity. *International Journal of Social Sciences, 1*(1), 11-22. Retrieved August 22, 2017, from https://www.grdspublishing.org/index.php/people/article/view/9/7.

Głuszczuk, D. (2011). Istota rozwoju regionalnego i jego determinanty. *Ekonomia, 5*, 17th ser., 68-80. Retrieved April 20, 2017, from http://www.dbc.wroc.pl/Content/25998/Gluszczuk_Istota_rozwoju_regionalnego_i_jego.pdf

Grydź, A., (2012). Zróżnicowania międzyregionalne jako wyzwanie polityk regionalnych na Litwie i w Polsce, Challenges of the global economy. Working Papers Institute of International Business University of Gdansk, no. 31/2, pp. 52-78.

Hajduga, P., (2013). Dylematy i wyzwania polityki regionalnej w Polsce do roku 2020, Biblioteka Regionalisty no 13, pp. 57-71

Hołuj, A., Korecki, D. (2008). Uwarunkowania rozwoju regionalnego w Polsce, Zeszyty Naukowe Wyższej Szkoły Ekonomicznej w Bochni, no 7. p. 23 -34.

Jańczuk, L. (2013). Determinanty rozwoju społeczno-gospodarczego regionów w Polsce. *Roczniki Nauk Społecznych, 5*, 1st ser., 121-132. Retrieved April 18, 2017, from https://www.kul.pl/files/852/media/RNS/pdf-y/2013/2013_1-janczuk.pdf.

Ministry of Regional Development. Strategia Rozwoju Kraju 2007–2015. (2006). Warszawa. Retrieved from http://www.mrr.gov.pl

Ministry of Regional Development. Polska. Narodowe Strategiczne Ramy Odniesienia 2007–2013. (2007), Warszawa. Retrieved May 10, 2017, from https://www.funduszeeuropejskie.2007-2013.gov.pl/Dokumenty/Lists/Dokumenty%20programowe/Attachments/95/NSRO_maj2007.pdf

Ministry of Regional Development. Rozwój regionalny w Polsce. Raport 2009. (2009), Warszawa. Retrieved May 10, 2017, from www.regioportal.pl/index.php?LANG=pl&page_ID=29&art_ID=1228&pdf.

Ministry of Regional Development. Krajowa Strategia Rozwoju Regionalnego 2010-2020: Regiony, Miasta, Obszary Wiejskie (2010). Warszawa. Retrieved May 3, 2017 , from https://www.mr.gov.pl/media/3337/KSRR_13_07_2010.pdf

Rokicki, T., (2015) Rozwój regionalny na przykładzie województwa podlaskiego, [In:] Krzyżanowska, K., Roman, M., (Eds), Problemy rozwoju regionalnego i lokalnego w Polsce, Wydawnictwo Aleksander, Pułtusk, pp. 56-63.

Solarz, P., (2011) Polityka regionalna w Polsce w warunkach integracji europejskiej w latach 2004-2010, Vizja Press&IT, Warszawa, pp. 21-22.

Wlaźlak, K. (2010). Rozwój regionalny jako zadanie administracji publicznej, Wydawnictwo. Wolters Kluwer Polska, Warszawa, p. 43.