

THE IMPACT OF COMMON AGRICULTURAL POLICY ON SOCIO-ECONOMIC DEVELOPMENT IN POLAND

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Abstract

The aim of the article is the evaluation of the Common Agricultural Policy (CAP) in 2007-2013. In the case of asking whether to make a difference between themselves or not, please go through this question. WWO enters into force and starts working under Rural Development Program (RDP). Analysis of culinary regions in the region of 16 regions and 72 subregions. Particular attention is paid to the level and dimensions of absorption and its impact on the socio-economic position. For this purpose, two groups of natural and non-natural determinants were separated in relation to: the great gross product, the commune's good and the value of global agricultural production. Studies shown that CAP payments had the most significant impact on the development of regions in which the agricultural sector was significant. In turn, strongly urbanised regions were more focused on the absorption of funds from cohesion programs rather than agricultural policy. Demonstrating that CAP measures are an important development factor. The respondents gathered in the European Union.

Keywords: Common Agricultural Policy, agricultural holdings, Poland

JEL Code: Q10, N53, N54

Introduction

The Common Agricultural Policy (CAP) is an important research issue in the agricultural and spatial economy related to the assessment of the spatial diversity of the EU funds absorption and their impact on the socio-economic development of rural areas, in particular, agriculture. In Poland, this type of research began with the granting of pre-accession funds before the formal accession to the EU (the SAPARD program). It was continued in 2004-2006 (Rudnicki, 2016; Jezierska-Thöle & Biczkowski, 2018) and further developed in the first full membership period in 2007-2013 (Bański, 2018; Biczkowski et al., 2018; Jezierska-Thöle &

Rudnicki, 2018; Rudnicki, 2013...)¹. Numerous studies e.g.: (Renwick et al., 2013; Petrick & Zier, 2012) show that CAP funds are currently the most critical factor for the sustainable and multifunctional development of agriculture and the impact on broadly understood economic development (Carnicky & Megyesiova, 2017; Špetlík, 2017). The convergence process with other EU countries is proceeding successively (Biczkowski et al., 2018; Jankova et al., 2016; Rogalska et al., 2016). Despite the benefits, however, they require improving the efficiency of spending, due to the dominant position of farms among beneficiaries (Rudnicki, 2016; Ciaian et al., 2014). It is particularly essential in the context of the ongoing discussion on the future shape of the EU budget for 2021-2027. There are plans to limit the size of the EU subsidies for Poland, and in particular for Polish agriculture (Biczkowski et al., 2018; Jankova et al., 2016; Rogalska et al., 2016).

The aim of the article is to present the level and structure of absorption of CAP funds and to assess their impact on the level of socio-economic development of rural areas in Poland. The research question refers to whether obtaining funds contributed to deepening or reducing differences in the level of socio-economic development in Poland and how this phenomenon is spatially diversified.

1. Methodology

The article concerns a comprehensive assessment of the EU funds spent under CAP of the financial perspective 2007-2013. The data of the Agency for Restructuring and Modernisation of Agriculture, Ministry of Investment and Development and the Central Statistical Office were used. For the study, a matrix of spatial information was developed, including features characterising the use of CAP funds and the level of socio-economic development. The basic units of the spatial analysis were the 16 NUTS 2 regions divided into 72 NUTS 3 subregions.

Several statistical and mathematical methods were used in the research. The applied diagnostic features were subjected to the standardisation procedure and presented in the form of normalised values. Thanks to this, all variables were comparable, and their statistical distributions had an average of 0 and variance and standard deviation of 1. Such a targeted analysis, following the Perkal method, made it possible to present the selected diagnostic features in the form of one synthetic indicator (Racine & Reymond, 1977). The analysis also used the method of subsequent quotients (d'Hondt method), which allowed determining the

¹ Comprehensive evaluation of spending from the current perspective, ie 2014-2020 will be possible only after 2022 (in accordance with the "n + 2" principle)

basic types of CAP funds absorption. Moreover, as part of the analysis of the strength and direction of correlation between the selected features, a correlation coefficient (by productive moment) was used, taking numerical values ranging from [-1] to [+1], where the value 0 indicated the lack of a statistical correlation.

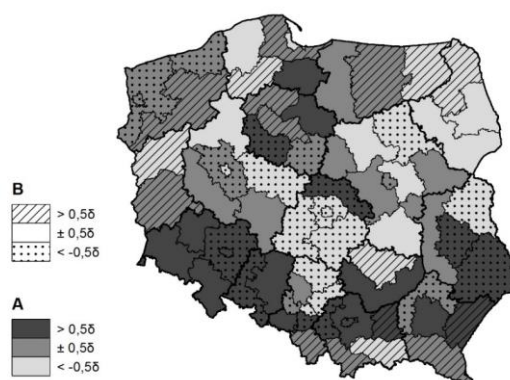
2. External determinants in agriculture

2.1. Natural determinants in agriculture

In order to comprehensively interpret the studied phenomena, the external conditions of agriculture were taken into account. They were defined as a set of phenomena and processes independent of farms but affecting their spatial diversity. They were divided into environmental (environmental-agricultural and environmental-ecological) and non-environmental conditions (economic and historical). The indicators used were then subjected to the standardisation procedure, resulting in three levels distinguished: low (below -0.50δ), medium ($\pm 0.50 \delta$) and high (above 0.50δ).

The environmental-agricultural conditions were defined based on the index of agricultural quality of the production space (WjRpp)². Unfavourable environmental conditions of agriculture were found in the subregions of central and northern Poland of postglacial origin and the predominance of sandy deposits, as well as mountainous regions. Favourable natural conditions, apart from individual subregions of northern Poland (Grudziądz, Inowrocław, Starogard), were found in the units of southern Poland (Fig. 1).

Fig. 1: Environmental conditions of agriculture - (A) natural-agricultural, (B) natural-ecological



²It is the sum of the point bonitation of the components of the natural environment most important for agricultural production, i.e., soil, agroclimate, terrain and water conditions. In Poland, it is a criterion for delimiting areas with unfavourable farming conditions (LFA). Its average value is 66.6 pts and ranges from 55.0 pts in Podlaskie Voivodeship to 81.6 pts in Opolskie Voivodeship

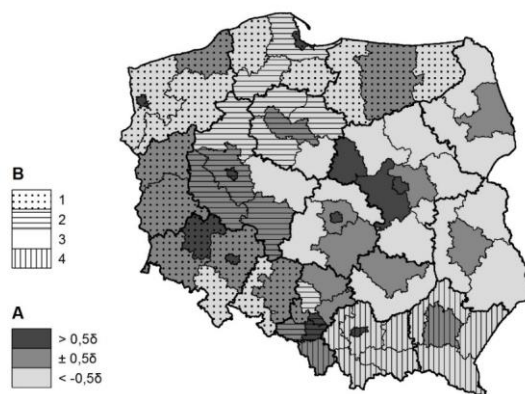
Source: own study

Due to the role of agricultural sustainability, the analysis also took into account the environmental-ecological conditions, which were defined as the total share of biotic elements of the land use structure - forests, waters and areas under legal protection. The average value of the indicator was 64.9%; it ranged from 41.4% in Łódzkie Voivodeship to 86.5% in Podkarpackie Voivodeship (Fig. 2B).

2.2. Determinants of agriculture

In the analysis of economic conditions, the size of GDP in '000 PLN per capita (annual average in 2007-2013) was adopted. The average level of this indicator in Poland was PLN 37 800 (from PLN 26 000 - 27 000 in Lubelskie and Podkarpackie Voivodeships to PLN 59 200 in Mazowieckie Voivodeship). The low level of economic development (below -0.50δ , i.e. PLN 30 500) was recorded in 37 subregions, generally peripherally located in central and eastern Poland. High index values (above 0.50δ , i.e. PLN 45 000) were recorded in 12, mainly urban, subregions (see Fig. 3). The last factor is the historical conditions, which significantly differentiated the level of agricultural culture in Poland. It was the result of the specificity of Poland's historical and economic development. During the transition from feudal to the capitalist model, Polish lands belonged to the three partitioning powers (Austria, Prussia, Russia), each with a different economic and political system and thus different pace and directions of development (Kostrowicka et al., 1984). Therefore, for the analysis, the subregions were divided according to their former partition power.

Fig. 2: Non-environmental determinants of agriculture: economical (A), historical (B)



Source: own study

3. Study results

3.1. Level and structure of absorption

The total amount of CAP payments under the 2007-2013 financial perspective amounted to EUR 36.24 bn euros. The distribution of payments showed a sizeable spatial diversity, from EUR 1 bn in Śląskie Voivodeship to EUR 5.3 bn in Mazowieckie Voivodeship.

Farms constitute the largest group of CAP beneficiaries. Their average share was 79.4% of the total amount of CAP payments (from 62.9% in Śląskie Voivodeship to 89.9% in Podlaskie Voivodeship, see Tab. 1). An essential problem in the modernisation of the agricultural sector in Poland is a too large number of farms, mostly small (less than 5 ha), economically weak, and the resultant primarily social character. In their case, diversification of sources of income (multifunctional development) or reorientation of activities to non-agricultural purposes is very important. The devaluation of rural development factors strongly associated with agricultural production increases the need to look for specialisation of farms (Biczkowski et al., 2018). The analysis showed that pro-environmental activities (agri-environmental program, afforestation) predominated, for which approximately 33% of the total CAP funds were allocated. They were aimed at improving the land use structure and subsidising farms conducting agricultural production in areas with unfavourable natural conditions.

The analysis of the absorption structure of CAP funds was carried out by main payment groups:

(I) Direct payments (symbol "B") - EUR 19.7 bn, which accounted for 54.9% of the total CAP payments in Poland (ranged from 47.5% in Małopolskie Voivodeship to 65.8% in Opolskie Voivodeship); including:

- (I.1.) Uniform area payments (symbol "j") - EUR 13.1 bn, which accounted for 66.1% of total direct payments (from 59.6% in Lubelskie Voivodeship to 71.3% in Lubuskie Voivodeship),
- (I.2.) Supplementary area payments - PLN 5.5 bn (including payments to the area of basic crops, area of fodder plants and grown on permanent pastures as well as to hops, tobacco and potato starch),
- (I.3.) Special support - EUR 1.3 bn (including EUR 0.25 bn to the area of leguminous plant crops as well as cows and sheep) and other direct payments - EUR 1.1 bn, including payments for sugar, soft fruit, fruit and vegetables and energy crops;

(II) Payments from the RDP program (symbol "P") - EUR 14.4 bn, i.e. 39.9% of the total CAP payments (from 32.7% in Opolskie Voivodeship to 49.8% in Małopolskie and Śląskie Voivodeships), including:

- (II.1) Improvement of the competitiveness of the agricultural and forestry sectors (37.9% of total RDP payments, from 24.1% in Zachodniopomorskie Voivodeship to 45.4% in Mazowieckie Voivodeship),
- (II.2) Improvement of the natural environment and rural areas (32.9% of total RDP payments, from 15.9% in Śląskie Voivodeship to 54.1% in Zachodniopomorskie Voivodeship),
- (II.3) Quality of life in rural areas and diversification of the rural economy (23.7% of total RDP payments, from 15.7% in Podlaskie Voivodeship to 40.5% in Śląskie Voivodeship),
- (II.4) Rural leader (5.5% of total RDP payments, from 2.8% in Podlaskie Voivodeship to 11.4% in Małopolskie Voivodeship);

(III) Financial aid for fruit producer groups - EUR 1.9 bn, which accounted for 5.2% of the total CAP payments (from 0.1% in Zachodniopomorskie Voivodeship to 14.0% in Mazowieckie Voivodeship).

3.2. Assessment of the impact of the CAP on the socio-economic situation of rural areas

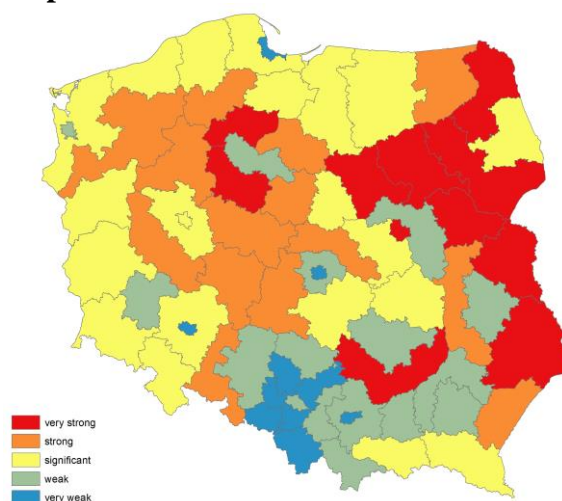
As part of the assessment of the impact of the CAP on the socio-economic situation, the payments (EUR 36.24 bn) were referred to four diagnostic traits (Tab. 1):

- total payments of all EU aid programs (32.3% on average) - from 12.4% in Śląskie Voivodeship to 48.5% in Podlaskie Voivodeship,
- Gross Domestic Product (1.5% on average) - from 0.3% in Śląskie Voivodeship to 4.6% in Podlaskie Voivodeship,
- total gmina income (32.1% on average) - from 6.7% in Śląskie Voivodeship to 91.9% in Podlaskie Voivodeship,
- the value of global agricultural production (24.9% on average) - from 19.5% in Wielkopolskie Voivodeship to 31.9% in Podkarpackie Voivodeship; (Biczkowski et al., 2018) and research results (Fig. 3).

Such distribution of results stems primarily from the rank of the agricultural sector in particular regions. In the highly urbanised and industrialised regions (e.g. Śląskie Voivodeship), the share of resources coming from CAP is of relatively minor importance. Meanwhile, in the regions with strongly developed agriculture (Podlaskie, Wielkopolskie

Voivodeships), CAP payments are essential in the economy of the region and strongly affect the broadly understood socio-economic development. In line with the adopted research procedure, the above features were combined as the average normalised value and defined as an indicator of the impact assessment of CAP funds on the socio-economic situation of rural areas in Poland.

Fig. 3: Indicator of the impact assessment of CAP funds on the socio-economic situation



Source: own study

Such a focused analysis was the basis for the assessment of the impact of EU funds on the development of agriculture in Poland. What was particularly important was the answer to the question whether obtaining such significant CAP resources by agricultural holdings contributed to the deepening or reduction of differences in the level of agricultural development in Poland and how this phenomenon was spatially diversified. To this end, the normalised values of the above mentioned indicators were used, and the differences between them were determined. It was shown that during the examined period of CAP payments, they least contributed to the development of Śląskie and Małopolskie Voivodeships. A high level of the indicator, showing a positive impact on the socio-economic situation, was found in Podlaskie as well as Lubelskie and Warmińsko-Mazurskie Voivodeships (see Tab.1).

The pace of changes in the economy (measured by the GDP ratio) in the years 2007-2013 was, on average, from 1% to over 4%. Despite the slowdown in the global economy, Poland maintained a positive GDP growth rate. The ability to overcome economic crises was partly due to the transfer of EU funds, which were a factor mitigating the adverse effects of the crisis.

Tab. 1: Funds of the CAP in Poland - selected elements of the impact assessment on the level of socio-economic development

Specification		%				Impact rate of CAP funds on the socio-economic situation
		all EU assistance programs	Gross Domestic Product (GDP)	Own income of communes	global production of agriculture	
Poland		32,3	1,5	32,1	24,9	0,00
Dolnośląskie		26,8	1,0	20,0	28,1	-0,19
Kujawsko-pomorskie		44,7	2,5	52,2	22,6	0,42
Lubelskie		44,0	3,7	88,8	28,2	0,85
Lubuskie		30,9	1,9	41,0	31,8	0,16
Łódzkie		30,0	1,6	33,1	20,6	-0,06
Małopolskie		20,7	0,8	17,2	26,3	-0,34
Mazowieckie		32,1	1,0	22,8	25,4	-0,12
Opolskie		37,7	2,1	45,3	22,4	0,22
Podkarpackie		20,7	1,5	36,3	31,9	-0,07
Podlaskie		48,5	4,6	91,9	26,9	1,04
Pomorskie		25,7	1,3	24,4	27,3	-0,15
Śląskie		12,4	0,3	6,7	24,2	-0,61
Świętokrzyskie		33,0	2,2	52,7	27,3	0,26
Warmińsko-mazurskie		35,2	3,3	66,6	27,2	0,52
Wielkopolskie		46,6	2,0	47,1	19,5	0,30
Zachodniopomorskie		33,6	2,0	37,3	27,3	0,15
Determinants	Indicator					
Natural	Weak	34,0	1,7	35,5	29,0	0,11
	Significant	31,6	1,3	29	19,7	-0,11
	Strong	31,3	1,5	33,1	29,8	0,05
Ecological	Weak	28,4	1,0	22,0	19,2	0,24
	Significant	36,9	2,0	44,3	32,2	0,29
	Strong	31,8	2,0	41,9	26,1	0,13
Historical (3 partitions)	Prussia	29,2	1,5	30,0	27,1	0,03
	Russia	36,5	1,7	37,5	24,5	0,12
	Austria	20,0	0,9	21,2	32,1	-0,25
Weak	1	42,4	3,1	67,9	60,8	0,96
Significant	2	28,8	1,4	30,7	11,8	-0,21
Strong	3	12,8	0,3	6,1	18,8	-0,67

Source: own calculations

Conclusion

The value of payments (around EUR 36.24 bn) indicated that in the analysed period the CAP funds were the most critical factor of socio-economic development of rural areas in Poland. They constituted a complex payment system resulting from numerous actions and types of payments supporting the development of the agricultural sector and rural areas. The spatial distribution of CAP funds was very territorially diverse, both in terms of the volume of payments made and their structure according to EU aid activities and programs. Studies shown that CAP payments had the most significant impact on the development of regions in which the agricultural sector was significant. In turn, strongly urbanised regions were more

focused on the absorption of funds from cohesion programs rather than agricultural policy. The volume of funds that Poland received as part of the EU policies and their efficient implementation requires continuous monitoring and evaluation as well as the compilation of detailed reports and analyses. It will allow control over the effectiveness and legitimacy of the investments being carried out. It may be particularly important in the face of ongoing discussions on the future EU budget and the reduction of funds, including for Poland. The proposed changes to the EU budget may result in problems in economic development and the convergence of the least-developed areas, i.e. the "eastern wall" in Poland.

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