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**AGRICULTURE AND FOOD ECONOMY
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Spatial differences in the level of absorption of Common Agricultural Policy funds by agricultural holdings in Poland over the years 2004-2006

Abstract. The article offers a territorial analysis of funds acquired by Polish agricultural holdings in the years 2004-2006 via direct payments and through participation in measures of the Rural Development Programme and the Sectoral Operational Programme 'Restructuring and Modernisation of the Food Sector and Rural Development'. The analysis was based on the data on subsidies obtained in individual spatial units (voivodeship, powiat) as expressed by two indices: PLN per farm and PLN per hectare of agricultural land. It was found that owing to the structure of payments with a predominance of area payments, those areas were preferred that had a favourable farm-size structure and a high, historically developed level of farming. Such an allocation of the EU subsidies had contributed very little to the levelling out of structural differences in Polish farming.

Key words: Common Agricultural Policy, agricultural holdings, absorption of EU funds

Introductory remarks

Poland's membership of the European Union and the resulting eligibility of Polish agricultural holdings for a wide array of Common Agricultural Policy (CAP) instruments offer them good prospects of modernisation. This issue is especially significant because Poland shows wide spatial differences in farming, mainly owing to its natural, historical and urbanisation determinants [Bański 2007; Głębocki & Rudnicki 2008]. It is therefore important both in cognitive and application terms to enquire if the Community means obtained so far have helped to level out the structural differences, or on the contrary, if they have tended to aggravate the polarisation of spatial agricultural structure in Poland. The present article seeks an answer to this question with reference to the CAP programmes implemented by the Agency for Restructuring and Modernisation of Agriculture (AR&MA) in the first period of Poland's EU membership (2004-2006). The analysis concerned two operational programmes launched by the Ministry of Agriculture and Rural Development and the European Agricultural Guidance and Guarantee Fund (EAGGF), viz. the Rural Development Programme (RDP) and the Sectoral Operational Programme 'Restructuring and Modernisation of the Food Sector and Rural Development' (SOP_Agri for short). Defined in PLN, the level of absorption of the EU funds was analysed per hectare of agricultural land (AL) and per farm (the number and area of farms according to an AR&MA list of agricultural producers). Those indices provided a basis for a

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spatial analysis, both by regions and by the Agency's 314 powiat offices [Rudnicki 2009, pp. 6-10].

Absorption level

As a result of Poland's accession to the EU and of the Common Agricultural Policy implementation, 35.6 billion PLN were transferred over the years 2004-2006 to nearly 1.5 million farms listed in the AR&MA register of agricultural producers. Such a large sum of payments, exempt from the income tax, justifies a statement that in that period the EU funds were the chief development factor in Polish agriculture.

Predominant in the structure of the funds obtained were the direct payments to producers (59.7%) with the aim of helping to support their incomes without a need to raise prices of their produce for consumers. Their amount was proportional to the area of agricultural land irrespective of the kind of farming activity pursued. In accordance with the Direct Payment to Farmland Act of 18 December 2003, the direct payment scheme embraced land kept in good agricultural and environmental condition, and consisted of two elements: a single area payment (SAP) and complementary national direct payments (CNDP) [Kisiel, Babuchowska & Marks-Bielska, 2008].

In the years 2004-2006, agricultural holdings received a total of 9,393.7 million PLN (27.8% of EU means) under the single payment scheme. The payment rate established in relation to the 'old' EU states on the basis of the euro exchange rate and negotiated under the Accession Agreement (55% in 2004, 60% in 2005, 65% in 2006) kept growing from 210.53 PLN/hectare in 2004 to 225.00 PLN/hectare in 2005 and 276.28 PLN/hectare in 2006. This boosted the amount of payments flowing to Polish agriculture under this head from 2,853 million PLN (2004) to 3,160 million (2005) and 3,880 million (2006).

In the first period of Poland's EU membership, the financial support for agricultural holdings (greater than SAP) involved complementary national direct payments of 11,340.5 million PLN (31.9% of the total). They embraced four categories of crops:

- so-called 'other crops': 10,930.8 million PLN was granted (rates in PLN per hectare AL: 297.78 PLN in 2004, 282.35 PLN in 2005 and 313.45 PLN in 2006); the list of those crops was published each year in a Council of Ministers' ordinance concerning crops eligible for complementary payments; in the study period those payments could be claimed for the following types of crop: cereals and their hybrids, oilseeds (rape and its cultivars, sunflowers), protein crops (broad beans, broad bean cultivars, sweet lupins, peas), leguminous (vetches, lentils, chick-peas), nuts (walnuts, hazel nuts), fibre flax and linseed, fibre hemp, crops grown for seed (grains, oilseeds, fibre crops, grasses and legumes), crops grown for fodder on meadows, pastures and arable land (grasses, leguminous, forage legumes, mixtures of grasses and leguminous, and forage root crops except fodder potatoes) [Instrukcja ... 2004, 2005, 2006];
- hop: the amount of assistance per hectare of plantation was established at 1,013.81 PLN in 2004, 870.02 PLN in 2005, and 962.75 PLN in 2006, which gave a total of 6.4 million PLN granted to agricultural holdings;
- energy crops: the amount of assistance per hectare of plantation of energy willow and the thornless cultivar of dog rose was set at 54.46 euro in 2005 and 70 euro in 2006,

which gave a total of 2.5 million PLN granted (this figure only concerns years 2005-2006; after 2006 the list of eligible energy crops was greatly expanded);

- sugar payment: the amount of assistance was set at 33.94 PLN per tonne of material; as a result, 61.2 thousand sugar beet growers in Poland obtained 400.8 million PLN (this support was first launched in 2006 [Sprawozdanie;... 2004; 2005; 2006].

In the years 2004-2006, apart from area payments, agricultural holdings could apply for funds under two operational programmes: the Rural Development Programme (RDP) and the Sectoral Operational Programme 'Restructuring and Modernisation of the Food Sector and Rural Development' (SOP_Agri).

Table 1. Level and structure of absorption of the EU funds by agricultural holdings in Poland in the years 2004-2006.

Programme	Measures	Assistance	
		million PLN	%
Direct payments	SAP - single area payment	9,893.7	27.8
Direct payments	CNDP - complementary national direct payments	11,340.5	31.9
	Direct payments total	21,234.2	59.7
RDP	1. Structural pensions	2,083.8	5.9
RDP	2. Support for semi-subsistence farms undergoing restructuring	1,316.3	3.7
RDP	3. Support for agricultural activity in less-favoured areas (LFA)	3,702.6	10.4
RDP	4. Support for agri-environmental ventures and improvement of animal wellbeing	814.9	2.3
RDP	5. Afforestation of farmland	384.5	1.1
RDP	6. Adjustment of farms to the EU standards	2,437.5	6.8
	RDP total	10,739.6	30.2
SOP_Agri	A. Investment on farms (AR&MA)	2,441.9	6.9
SOP_Agri	B. Setting-up of young farmers (AR&MA)	708.9	2.0
SOP_Agri	C. Diversification of agricultural and agriculture-related activity to ensure a diversity of ventures or alternative sources of income (AR&MA)	284.6	0.8
SOP_Agri	D. Development and improvement of agriculture-related technical infrastructure (AR&MA)	149.5	0.4
	SOP_Agri total	3,584.9	10.1
	EU programmes and measures, 2004-2006 total	35,558.7	100

Source: own compilation on the basis of data from the AR&MA System of Managerial Information.

Under the RDP, 10,739.6 million PLN were transferred to agricultural holdings, which accounted for 30.2% of the total amount granted over the years 2004-2006. Launched within the programme were six measures [Plan ... 2004]:

- structural pensions: 2,083.8 million PLN were granted, or 5.9% of the total sum (the measure, addressed to farmers of pre-retirement age, was intended to accelerate the process of generational exchange among farm operators and improve the farm-size structure);
- support for semi-subsistence farms undergoing restructuring: 1,316.3 million PLN

was granted, or 3.7% of the total sum (the measure ensured financial assistance necessary to help preserve the financial liquidity of farms with a production scale of up to 4 ESU);

- support for agricultural activity in less-favoured areas (LFA): 3,702.6 million PLN were granted, or 10.4% of the total sum (the measure ensured financial assistance to holdings situated in unfavourable natural conditions; it was intended to counteract depopulation of rural areas and loss of their agricultural character, and to promote environment-friendly farming);
- support for agri-environmental ventures and improvement of animal wellbeing: 814.9 million PLN were granted, or 2.3% of the total sum (the measure was intended to encourage farmers to undertake steps to protect the environment; it was available in the form of seven packages embracing the entire country or selected priority zones);
- afforestation of farmland: 384.5 million PLN were granted, or 1.1% of the total sum (the aim was to afforest agricultural land of low farming quality);
- adjustment of farms to EU standards: 2,437.5 million PLN were granted, or 6.8% of the total sum (the aim was to adjust farms to Community standards in such fields like environmental protection, hygiene, animal wellbeing and food safety (Table 1).

The SOP_Agri programme transferred the smallest assistance out of the Community funds (3,584.9 million PLN, or 10.1% of the total). The sums obtained by agricultural holdings were granted under four operational measures [Sektorowy ... 2004]:

- investment on farms: 2,441.9 million PLN were granted, or 6.9% of the total sum (the measure was intended to support projects of farm modernisation);
- setting-up of young farmers: 708.9 million PLN were granted, or 2.0% of the total sum (the target group of financial assistance were young farmers, up to 40 years of age, who started running a farm on their own);
- diversification of agricultural and agriculture-related activities to ensure a diversity of ventures or alternative sources of income: 284.6 million PLN were granted, or 0.8% of the total sum (the aim of the measure was to support investment projects designed to start an additional economic activity in farms, e.g. agro-tourism, or services for agriculture and small-scale processing of agricultural products);
- development and improvement of farming-related technical infrastructure: 149.5 million PLN were granted, or 0.4% of the total sum (the measure was intended to improve the equipment of farms with modern infrastructure, especially of the kind important from an environmental point of view, e.g. water-and-sewage facilities (Table 1).

Under the above measures over the years 2004-2006, agricultural holdings in Poland obtained 35,558.7 million PLN. However, the level of absorption of the Community funds showed wide spatial differences, both by voivodeship (from 859 million PLN in Lubuska Land and 776 million in Silesia to 4,583 million in Wielkopolska and 5,168 million in Mazovia) and by AR&MA poviat office (from under 10 million PLN in Chrzanów poviat in Małopolska with 5.5 million and Skarżysko-Kamienna in Świętokrzyska Land with 9.9 million, to more than 300 million PLN: Poznań poviat in Wielkopolska with 319 million, Białystok poviat in Podlasie with 342 million, Ostrołęka poviat in Mazovia with 386 million, and the top-ranking Biała Podlaska poviat in Lublin voivodeship with 423 million). Another indicator of big territorial differences in the absorption level is also the fact that close to 60% of the total funds granted

went to six (out of 16) voivodeships: Łódź (7.3%), Kujavia-Pomerania (7.9%), Podlasie (8.1%), Lublin (9.1%), Wielkopolska (12.9%) and Mazovia (14.5%) (Table 2).

Table 2. Indices of the level of absorption of the CAP funds by agricultural holdings in Poland in years 2004-2006.

Voivodeship	CAP funds		Absorption, thousand PLN per farm	Absorption, thousand PLN per hectare of agricultural land
	million PLN	%		
Lower Silesia	1,872.5	5.3	30.1	2.2
Kujavia-Pomerania	2,802.1	7.9	40.2	2.7
Lublin	3,227.3	9.1	17.8	2.5
Lubuska Land	859.0	2.4	40.8	2.3
Łódź	2,596.2	7.3	19.7	2.7
Małopolska	1,308.7	3.7	9.5	2.6
Mazovia	5,167.6	14.5	23.7	2.8
Opole	1,057.9	3.0	34.9	2.1
Subcarpathia	1,278.9	3.6	10.1	2.4
Podlasie	2,872.6	8.1	34.5	2.9
Pomerania	1739.9	4.9	43.5	2.5
Silesia	776.4	2.2	14.1	2.3
Świętokrzyska Land	1,357.3	3.8	14.3	2.8
Warmia-Mazuria	2,321.3	6.5	53.5	2.4
Wielkopolska	4,583.5	12.9	36.8	2.7
West Pomerania	1,737.6	4.9	58.2	2.2
POLAND – total	35,558.7	100.0	24.5	2.6

Source: own compilation on the basis of data from the AR&MA System of Managerial Information.

Absorption indices

The analysis of spatial differences in the above-presented level of absorption of the EU funds over the studied period (direct payments, the RDP and SOP_Agri measures) concentrated on two indices: the funds obtained per 1 farm and per 1 hectare of agricultural land.

On average, an agricultural holding in Poland (by the AR&MA register) was supported with a total of 24.5 thousand PLN (8.2 thousand annually). This index displayed big territorial differences, both by region (voivodeship) (from 9.5 thousand PLN in Małopolska to 58.2 thousand in West Pomerania (Table 2) and by poviat (from 5.7 thousand PLN in Chrzanów in Małopolska to 85.3 thousand PLN in Łobez in West Pomerania (Fig. 1).

The amount of the EU funds obtained by a farm depended on both its size (the effect of area payments) and its operator's activity in applying for the RDP and SOP_Agri funds. That is why a very low absorption level (under 10 thousand PLN per farm) was characteristic of South-Eastern Poland, mostly the voivodeships of Subcarpathia (14 poviats) and Małopolska (16 poviats, with the threshold of 10 thousand PLN only crossed by three poviats in the north: Miechów, Olkusz, and Proszowice). Apart from those regions, such a low absorption level was

only recorded in single poviats: Będzin, Wodzisław and Żywiec in Silesia as well as in Skarżysko-Kamienna and Starachowice in Świętokrzyska Land.

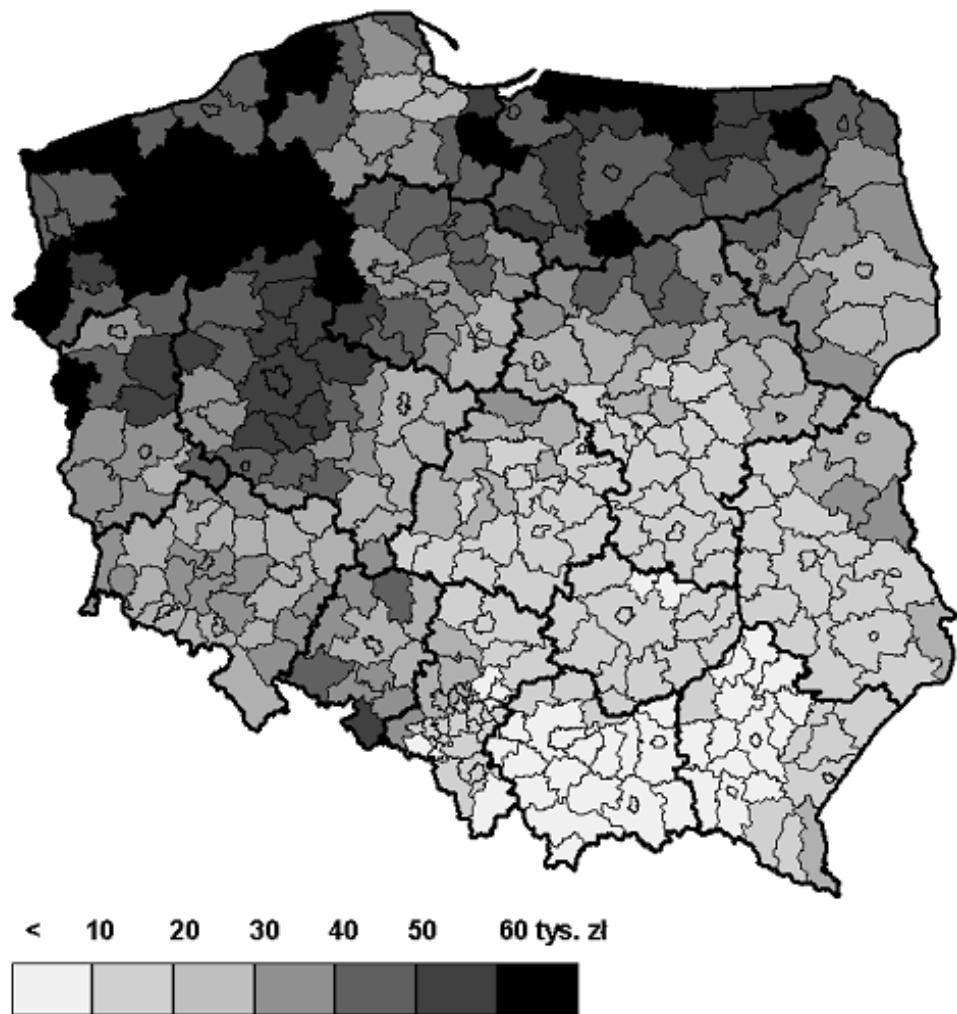


Fig. 1. Level of absorption of the CAP funds: the sum of direct payments, RDP and SOP_Agri funds per 1 farm.

Source: as in Table 1.

Much higher absorption indices characterised poviats with a favourable farm-size structure, especially those where farmers took an active part in the implementation of the RDP

and SOP_Agri measures. This is confirmed by the example of 47 AR&MA powiat offices where the sum of payments obtained by a farm exceeded 50 thousand PLN (including 24 powiats with the index exceeding 60 thousand PLN). They were largely located in the voivodeships of northern and north-western Poland (Fig. 1): Kujavia-Pomerania (3 powiats), Lubuska Land (3), Pomerania (5), the most numerous being in Warmia-Mazuria (12 powiats), Wielkopolska (11) and West Pomerania (12).

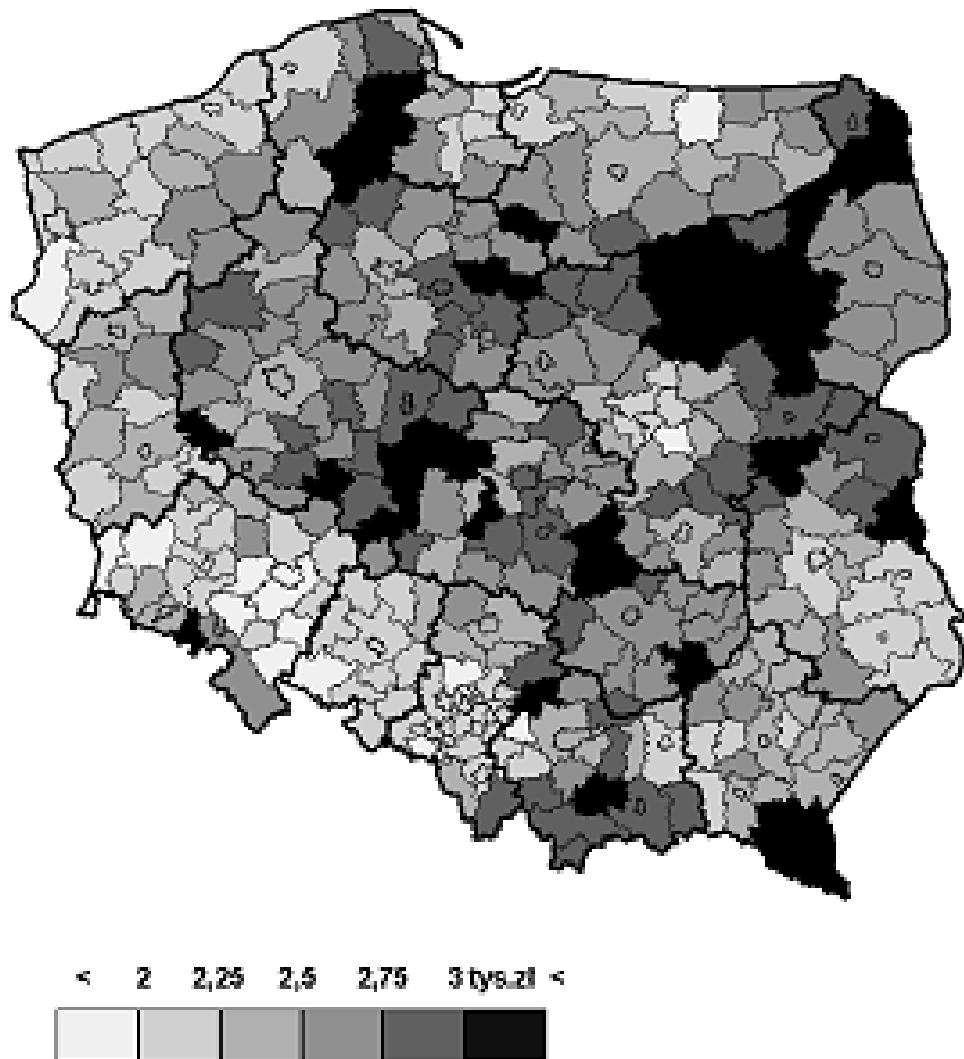


Fig. 2. Level of absorption of the CAP funds: the sum of direct payments, RDP and SOP_Agri funds per 1 hectare AL
Source: as in Table 1.

In comparison with the figures registered in South-Eastern Poland (i.e. the former Austrian partition, with an average of 9.4 thousand PLN/farm) as well as in the central and eastern parts of the country (the former Russian partition, with an average of 21.5 thousand PLN/farm), the indices in the northern and western parts of the country were high. They were determined historically, the lands belonging in the 18th/19th centuries to the former Prussian partition and in the interwar period to Germany (42.4 thousand PLN on average, mostly an effect of the farm size and the scale of direct payments) and to Poland (40.2 thousand PLN on average, a great assistance from the RDP and SOP_Agri funds). In other words, the absorption of the EU funds per farm was higher in areas with a higher, historically developed level of farming. This regularity tended to deepen the structural differences in Polish agriculture.

The level of absorption of the CAP funds was also determined by calculating the sum of the granted direct payments as well as the RDP and SOP_Agri subsidies per 1 hectare of agricultural land. Over the years 2004-2006, this figure averaged 2,562 PLN/ ha AL for the whole of Poland. By region, it ranged from 2,124 PLN in Opole voivodeship to 2,869 PLN in Podlasie (Table 2) and by AR&MA powiat office from 1,907 PLN in Chrzanów powiat (Małopolska) to 3,568 PLN in Rypin powiat in Kujavia-Pomerania (Fig. 2).

The differences in the funds obtained per 1 hectare AL were a result of spatial disproportions in complementary national direct payments (CNDP) claimed by agricultural holdings, primarily those under the RDP and SOP_Agri measures. That is why low values of the per-hectare absorption index were recorded in the voivodeships of northern and western Poland characterised by the highest average sizes of agricultural holdings in the country. This factor ensured for them substantial area payments, which limited their claims for the RDP and SOP_Agri funds. This dependence was borne out by the low payments per 1 hectare AL in the voivodeships of Lower Silesia, Lubuska Land, Opole, Silesia, and West Pomerania (from 2.1 to 2.3 thousand PLN/hectare AL). The situation was found to be especially poor in Lower Silesia, with as many as seven powiats out of a national total of 14 with the lowest absorption level, under 2.0 thousand PLN/hectare AL. Apart from this region, single powiats with such low indices were recorded in the voivodeships of Małopolska (Chrzanów powiat), Mazovia (Piaseczno), Opole (Nysa), Silesia (Tarnowskie Góry, Wodzisław), Warmia-Mazuria (Kętrzyn), and West Pomerania (Gryfino).

The highest values of absorption index (PLN per hectare AL) were recorded in Mazovia voivodeship (2.8 thousand PLN), Podlasie (2.8 thousand) and Świętokrzyska Land (2.8 thousand). By powiat, a very high absorption level (over 3 thousand PLN/hectare AL) was found to occur in 37 units, of which as many as 15 were located in the north-eastern part of the country (seven powiats in Mazovia, six powiats in Podlasie, and two powiats in the northern part of Lublin voivodeship). The powiats of this group also formed minor clusters in the borderland between Wielkopolska and Łódź voivodeships (6 powiats), in Kashubia (Chojnice, Kartuzy, Kościerzyna powiats), the Bieszczady Mountains (Bieszczady, Lesko, Sanok), Dobrzyń Land (Golubie-Dobrzyń, Rypin), and the Opoczno region (Opoczno powiat in Łódź voivodeship and Końskie powiat in Świętokrzyska Land). Single powiats with high index value could be found in Lower Silesia (Kamienna Góra powiat), Małopolska (Limanowa, Olkusz), Świętokrzyska Land (Staszów), Wielkopolska (Wolsztyn), and Warmia-Mazuria (Nowe Miasto) (Fig. 2).

In comparison with the per-farm index, the per-hectare figures displayed smaller spatial disproportions. This was largely due to the predominance of direct area payments in the total absorption amount. In accordance with the CAP preferences, higher index values were recorded primarily in agricultural holdings situated in areas less favourable to farming. This fact ensured

for them compensatory payments in support of farming in less-favoured areas (LFA) and under agri-environmental programmes, and offered greater opportunities for participating in the farmland afforestation programmes. Such an 'additional' financial impulse for agricultural development was found primarily in the mountain regions, the Kashubian Lakeland, in the borderland between Wielkopolska and Łódź voivodeships and in north-eastern Poland (Fig. 2).

Summing up

The conducted analysis showed that over the years 2004-2006 the funds from Common Agricultural Policy programmes were the chief factor of modernisation of Polish agriculture owing to their large scale (35.6 billion PLN) and a great variety of payments (SAP, four CNDP categories, six RDP measures and two SOP_Agri measures). It was found that area payments predominated in the structure of absorption of the EU funds (60%). On the one hand, this fact resulted in high payments per farm in areas with a favourable farm-size structure, and on the other, in mitigating the differences in terms of funds acquired per 1 hectare AL (a rise in the absorption level was mainly recorded in areas eligible for additional RDP measures because of unfavourable natural conditions of farming). Such an allocation of the EU funds had contributed very little to the levelling out of differences in the spatial structure of Polish agriculture. To enhance the impact of EU funds on this process, it is necessary, first, to reduce the proportion of area payments, which are often of a social benefit nature (being available to small agricultural holdings), and secondly, to increase the proportion of funds from the operational measures.

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Instrukcja wypełniania wniosku o przyznanie płatności bezpośrednich do gruntów rolnych lub o przyznanie płatności z tytułu wsparcia działalności rolniczej na obszarach o niekorzystnych warunkach gospodarowania (Guidelines for filling an application form for a direct agricultural payment or a payment in support of farming in less-favoured areas). [2004], [2005], [2006]. ARiMR, Warsaw.

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