ACTA SCIENTIARUM POLONORUM *Oeconomia 13 (2) 2014, 49–60*

ASSESSMENT OF THE USE OF THE EUROPEAN UNION FUNDS TO SUPPORT INVESTMENTS ON POLISH FARMS IN THE REGIONAL PERSPECTIVE

Aleksander Grzelak
University of Economics in Poznań

Barbara Kiełbasa
University of Agriculture in Kraków

Abstract. The purpose of the article is to compare the use of aid funds from operations: Investments in agricultural holdings, Farms adaptation to the EU standards and Modernization of agricultural holdings in Poland analyzed of regions perspective (Polish voivodeships). It was found that the activity of farmers in obtaining EU funds in order to support investments is highly diversified in terms of the region. The tendency of farmers to raise funds for investments is related to the local conditions, the level of production, agricultural practices, area structure, as well as the level of technical and social infrastructure in different regions. On the basis of the obtained data, it must be considered that there is a continuing need to support investment in agriculture under the Common Agricultural Policy (CAP), but it should be devoted to the regional context.

Key words: EU funds for agriculture, SOP-Rol., RDP, investment, cluster analysis

INTRODUCTION

The concepts of investment and investing in agriculture are very broad. Investments are usually spread out over time and involve incurring risk. They are factors of development, because they stimulate the process of structural changes in agriculture through innovations. To a large extent, they determine competitiveness of the agriculture. Usually, they take the form of productive property investments, whose aim is to increase the value of the farm, improve the quality of production and the economic situation of farmers and their families. In addition, investments are used to achieve short-term goals in order to increase revenues [Lorencowicz 2013].

Corresponding authors – Adres do korespondencji: Barbara Kiełbasa, Faculty of Agriculture and Economics, University of Agriculture in Kraków, Al. Mickiewicza 21, 31-120 Kraków, Poland, e-mail: bkielbasa@ar.krakow.pl

Since agriculture is the weakest link in the agri-food chain [Czyżewski 2007], many programmes are initiated to provide external support. This support is implemented by the national funds and the EU under the Common Agricultural Policy (CAP). Financial aid allows farmers to develop agricultural activities in a faster and more thorough way. If the public support for investment activities were deficient, very few farmers would decide on the use of commercial loans [Kusz 2013].

Improving the competitiveness of farms by investing in their development, was and still is, a priority of the CAP [Czubak 2012]. In the pre-accession period, Polish farmers received financial support from the SAPARD Programme for adjustment investments on their farms. After Polish accession to the EU, there were funds available for financing investment projects from the following programs: Sectoral Operation Programme for Restructuring and Modernisation of the Food Sector and Rural Development, the so-called SOP-Rol. (measure 1.1: Investments in agricultural holdings), Rural Development Plan 2004–2006 (measure 6: Meeting the EU standards), Rural Development Programme 2007–2013 (measure 121: Modernisation of agricultural holdings).

The direct aim of these measures was improving the competitiveness of farms and also, their modernization and development. Other important priority was the adjustment of agricultural production to the EU requirements and standards. Those investments carried out in farmers households using the aid, had (and still has) the nature of the adjustment to the existing EU legislation, such as the cross-compliance requirements. Its mechanism of linking direct payments forces a number of investments in agriculture, mainly concerning the environment, animal welfare or food safety proved on the market [Kiełbasa 2011].

The main aim of this article is to compare the use of aid funds received from measures: Investments in agricultural holdings, Meeting the EU standards, Modernisation of agricultural holdings in Poland by regions (provinces, Polish voivodeships). Therefore, the following research questions were formulated:

– What is the importance of the space factor (in terms of regions) in forming the activity of farm managers when it comes to obtaining the EU funds for investments in agriculture?
– What are the clusters of provinces based on the similarity of the features defining the support from the EU funds for investments in agriculture?

The stated purpose and answers to the research problems will confirm the hypothesis: the activity of farmers in obtaining EU funds to support investments is highly diversified in terms of the provinces (regions). This demonstrates the significant impact of the level of agricultural development, the structure of the area, as well as historical factors on the level of the fund absorption.

MATERIAL AND METHODS

The analyses were carried out between the years 2004–2013 (data for 30.09.2013). The analytic materials were GUS (Central Statistical Office) data and the data from The Management Information System of Agency of Restructuring and Modernisation of Agriculture (ARMA), concerning mainly the implementation of aid instruments

in Poland from the CAP. There were selected actions supporting investments in agricultural holdings. The data on the number of farms in the provinces, agricultural area, the number of people employed in agriculture, and the average value of a single investment project in the province was used as the reference point. In order to evaluate the use of funds in the regional perspective, the grouping of provinces was made, taking into account selected features, using the cluster analysis. It was used for grouping variables or cases in groups with similar features. Thus, it allows separating the subjects that are similar and also different from one another, which enables their prioritization [Grzelak 2006]. To extract homogeneous regions, hierarchical (agglomeration) cluster analysis of Ward's method was used. Ward's method allows to estimate the distance between the clusters on the basis of the analysis of variance, and thereby, it enables such position of analyzed objects that the degree of theirs relationship with the objects belonging to the same group is the highest, and with objects from other groups is possibly the lowest [Luszniewicz, Słaby 2008]. The selection of the number of clusters has been made on the basis of agglomeration for the studied variables and cases.

RESULTS

The value of all completed projects from the measure Investments in agricultural holdings, from SOP-Rol., exceeded the limit of 8.6%. Increasing the available fund envelope was due to a high interest for this measure. The response to this interest was the movement of the free resources from other activities to the Investments in agricultural holdings measure [Analiza struktury projektów… 2007]. With these funds, such investment projects were financed, which were aimed at improving the organization of production, the competitiveness of farms and also increasing agricultural income [Sektorowy Program Operacyjny…]. Totally, in Poland more than 24 thousand of projects were subsidised, for a total amount of 2.4 billion PLN (Table 1). Most applications were submitted in the the Mazowieckie, the Lubelskie and the Wielkopolskie Provinces (voivodeships), and the least in the Lubuskie, the Silesian, the West-Pomerania and the Podkarpackie Provinces. In the Mazowieckie and the Wielkopolskie was gathered most of the sum, in total more than 30% of the amount allocated for this activity. The smallest envelope of funds was received by farmers in the Lubuskie, the Podkarpackie and the Silesian Provinces.

The second discussed measure is Meeting the EU standards of RDP 2004–2006. As part of this measure there were financed tasks that were designed to help farmers in adapting their production to the EU requirements. This support took the form of an annual payment which covered all costs of the investments that were necessary to achieve the required standards. Farmers allocated the received funds mainly for adaptation of farms to the requirements for the storage of natural fertilizers, adaptation to the veterinary requirements for production of milk and dairy products, modernization of farms producing table eggs [PROW 2004–2006...]. Out of the funds allocated for this purpose more than 72 thousands of projects were carried out, with a total value of 2.4 billion PLN (Table 1), which meant exceeding the assumed limit for this activity by 7% [Ewaluacja expost Planu... 2009]. The highest numbers of applications were submitted in the regions of the Wielkopolska, the Mazowsze and the Kujawsko-pomorskie (Table 1). On the other

hands, the lowest number was submitted by farmers from the Lubeskie, the Silesian, the Lower Silesian and the Podkarpackie Provinces. In terms of value, the greatest amount was received by farmers from the central and northern provinces – totally about 60% of the total amount allocated for this action. The lowest numbers of funds were obtained in the regions of the Lower Silesia, the Silesian and the Podkarpackie – totally less than 4% of the total allocated amount (Table 1). The number of submitted applications coincides with the number of farms operating in the province, as well as the marketability of agricultural production. Hence, in the smaller provinces, where there are fewer farms and the rate of the production yield is lower, there were less completed projects, and this in turn, greatly affects the total value of the acquired help.

From the measure Modernisation of agricultural holdings to the end of 2013 farmers could obtain direct help to adjust their holdings to the principles and norms of the EU governance. Investments in agricultural holdings carried out from these funds aimed at increasing the competitiveness of farms, quality of food production, as well as the modernization of farms, for example by replacing machinery [PROW 2007–2013...]. From this activity, until 30.09.2013 farmers received nearly 7.2 billion PLN for the implementation of almost 60 thousands projects (Table 1). In 2013, there was a shift of funds from other RDP measures that were not used and they were directed to the measure Modernisation of agricultural holdings. The purpose of this relocation was to use the available funds in the RDP budget and direct them to the operations that are the most popular among farmers. As shown by data on the absorption of the measures in terms of provinces, most applications were submitted in the Mazowieckie, the Lubelskie and the Wielkopolska Provinces, and their value amounted to more than 40% of total funds. The lowest numbers of applications were submitted in the Lubuskie, the West-Pomerania, the Silesian and the Opolskie Provinces (Table 1). The total value of projects submitted in these four provinces is less than 6.5% of all projects. Regional differentiation in the number of applications and their total value is largely determined by the number of farms operating in the province. There is a large, positive correlation between these two features ($R = 0.7$).

Agriculture in Poland varies regionally, especially in terms of potential of production, the structure of production and management efficiency. Investment needs will be therefore different in different regions (provinces) of the country. Generally, the level of using the aid and its potential impact on the development of farms in different regions of the country depends primarily on the interest of the beneficiaries in this form of aid. One should, however, take into account the diversity of agriculture in Poland, determined by significant natural conditions and historical determinants [Grzelak 2008]. The Polish area can basically be divided into two regions: the first one with northern, central and west Poland with trade agriculture, and the second one consisting of south-east provinces with the so-called semi-subsistence farms [Kulikowski 2009]. Similar, but not identical, is the situation with the use of funds for activities aimed at the implementation of investments on agricultural farms.

It may be noted that in total (in absolute terms) most of the discussed activities of the RDP went to provinces, where there are good conditions for the development of market agriculture (i.e. with developed processing infrastructure, high level of good agricultural practices, closeness of absorptive markets) and economic results of farms are higher than the average ones in the country. Taking into account the analyzed factors, these were

provinces located in the central part of the country (the Mazowieckie, the Wielkopolskie, the Kujawsko-pomorskie Provinces), and also the eastern Polish regions (the Podlaskie, the Lubelskie Provinces). The Mazowieckie Province acquired more than 17% of the total envelope of measures designed to improve the competitiveness of farms, the Wielkopolskie Province – more than 15%, the Kujawsko-pomorskie Province – 10%, the Podlaskie Province – 9.2% and the Lubelskie Province – 9%. In contrast, the lowest support was obtained in the Lubuskie, Podkarpackie, the Silesian and the Opolskie Provinces (Table 1). In these regions, fewer farms operate due to the smaller surface of these regions and farmers are relatively less active in raising funds for investment activities. Taking into

Table 1. The number and amount of completed applications within the selected programmes: SOP-Rol. 2004–2006, RDP 2004–2006 and RDP 2007–2013 for investments in agriculture in terms of Polish provinces (voivodeships)

Voivodeship	SOP-Rol. 2004–2006		RDP 2004–2006		RDP 2007–2013[a]		Total	
	investments in agricultural holdings		meeting the EU standards		modernisation of agricultural holdings			
	number of completed requests	realized payments (m)	number of completed requests	realized payments (m)	number of completed requests	realized payments (m)	number of completed requests	realized payments (m)
Lower Silesia	756	105.7	661	17.8	2 350	319.2	3 767	442.7
Kujawsko-pomorskie	1 966	196.9	13 097	440.6	4 793	578.7	19 856	1 216.3
Lubelskie	2 998	233.9	3 031	85.5	7 134	777.8	13 163	1 097.1
Lubuskie	264	40.5	566	20.3	787	136.0	1 617	196.9
Łódzkie	2 338	187.4	5 835	172.3	5 660	558.9	13 833	918.7
Malopolskie	1 200	91.0	948	24.6	2 743	257.5	4 891	373.1
Mazowieckie	4 032	365.1	13 791	479.4	10 773	1 245.6	28 596	2 090.2
Opolskie	588	70.0	626	21.9	1 390	184.5	2 604	276.5
Podkarpackie	569	54.4	687	17.9	1 906	160.4	3 162	232.7
Podlaskie	2 020	206.1	6 014	213.8	4 728	690.7	12 762	1 110.7
Pomeranian	841	117.5	4 566	133.9	1 966	298.9	7 373	550.3
Silesian	539	57.2	656	19.8	1 449	170.6	2 644	247.6
Świętokrzyskie	1 686	110.3	1 489	37.0	3468	301.2	6 643	448.6
Warmińsko-mazurskie	805	122.6	4 292	171.0	2636	405.1	7 733	698.7
Wielkopolskie	2 918	376.5	15 090	541.8	6 091	911.3	24 099	1 829.6
West-Pomerania	559	83.2	1 242	39.2	1 156	218.3	2 957	340.8
Total	24 079	2 418.4	72 591	2 437.5	59 030	7 215.0	155 700	12 070.9

[a] As on 30.09.2013.
Source: The Management Information System of ARMA.

account the descriptions, there can be observed a significant concentration of aid in the regions characterised by commodity agriculture.

As it follows from the calculations, the distribution of fund absorption is very diverse. These discrepancies arise from different agricultural practices, management and organization of agricultural production in terms of the region [Crescenzi 2004]. In regions with large farms, the total value of the analyzed aid is distributed on relatively few subjects. On the other hand, in regions characterized by a significant fragmentation of the agrarian land, capacity and motivation of farmers are largely limited due to lower scale and marketability of production.

Thus, the size of farms and area structure to a large extent determine the level of absorption of aid funds for investment in terms of regions [Kusz 2011]. It can be assumed that these are some of the key determinants of differences in the use of aid funds, confirmed by a strong positive correlation between the total sum of the mobilized support for investment (in PLN) or the number of completed projects and: the number of farms in province; the number of people working in agriculture in province; and the surface of agricultural land in province.

In all these cases, the correlation was higher than 0.97. These results indicate a large regional variation in the level of absorption of aid. This also shows a significant concentration of support for investment activities with a relatively higher level of agriculture competitiveness (in the sense of creating productive and economic effects) [Nowak, Kamińska 2013]. The level and rate of absorption of aid measures for the implementation of investment projects in the region is largely influenced by: a farm size and intensity of organization of production. From the national perspective, it can be seen that few beneficiaries received the support funds for investments. The ratio of completed projects to the number of farms amounted to 11.5%[1] (Table 2). The highest percentage was recorded in the Kujawsko-pomorskie, the Wielkopolskie, the Pomeranian and the Warmińsko-mazurskie Provinces, which means that farmers from these regions turned out to be the most active in absorbing external financial funds.

On average, 1 hectare of agricultural land accounted for more than 457 PLN, and for one employee – 5,550 PLN. Taking into account the value of applications, it can be concluded that on average, farmers applied for the amount of more than 117 thousand PLN, while taking into account the distribution of support per farm on average, this amount was approximately 7.8 thousand PLN (Table 2). On average, most projects were implemented by farmers operating in the Lubuskie, the Lower Silesia and the West-Pomerania Provinces, where the average value of a single contract was over 110 thousand PLN. Analyzing the relation of the total amount of support for investment per farm in the province, it can be concluded that the most were acquired in the Kujawsko-pomorskie, the Warmińsko-mazurskie, the Wielkopolskie, the West-Pomerania and the Podlaskie Provinces, where one farm there accounted for 10 thousands PLN. On the other hand, the highest values for one employed in agriculture were recorded in the Kujawsko-pomorskie and Warmińsko-mazurskie Regions, which could result, among others, from a relatively larger scale of production in these regions.

[1] It should be noted that, in fact, this value is lower because some beneficiaries repeatedly benefited from support under this type of EU support.

Table 2. Selected characterization data of financial assistance from the EU funds for investments in agriculture (for the period form 2004 to 30.09.2013)

Voivodeship	The ratio of completed applications to the number of farms in the ARMA register of agricultural producers	Total amount of financial aid (PLN)				Indicator of marketability	The average size of agricultural land on the farm (ha)
		per 1 hectare of agricultural land	per 1 agreement	per 1 farm by ARMA	per 1 worker on the farm		
Lower Silesia	6.7	457.6	117 525.7	7 852.8	5 550.2	70.6	16.0
Kujawsko-pomorskie	30.4	1 118.6	61 255.9	18 647.1	11 735.6	69.6	15.1
Lubelskie	7.5	774.5	83 353.5	6 215.8	4 258.6	65.5	7.5
Lubuskie	8.1	436.6	121 773.8	9 892.4	6 693.9	73.8	20.8
Łódzkie	11.3	914.7	66 415.1	7 513.3	5 322.3	70.6	7.6
Małopolskie	4.0	562.3	76 281.3	3 081.3	1 639.6	63.1	3.9
Mazowieckie	13.9	1 036.4	73 093.9	10 128.5	7 031.4	72.4	8.5
Opolskie	9.4	533.1	106 208.6	10 021.6	6 419.3	72.6	18.1
Podkarpackie	2.7	335.8	73 610.1	1 996.7	1 187.3	57.5	4.6
Podlaskie	15.8	1 037.7	87 035.2	13 731.9	9 669.6	67.2	12.2
Pomeranian	19.2	681.5	74 644.2	14 333.2	9 227.6	75.4	19.0
Silesian	5.6	544.8	93 668.9	5 230.9	2 932.1	70.6	7.2
Świętokrzyskie	7.8	814.8	67 526.7	5 280.1	3 330.9	64.3	5.5
Warmińsko-mazurskie	17.9	661.9	90 357.0	16 205.5	10 886.2	71.8	22.9
Wielkopolskie	19.9	1 022.2	75 921.5	15 126.3	9 375.7	74.8	13.5
West-Pomerania	10.4	356.8	115 263.2	11 940.6	8 242.6	74.0	30.2
Total	11.5	457.6	117 525.7	7 852.8	5 550.2	70.6	10.4

Source: Own calculations based on data from The Management Information System of ARMA, Agricultural Census 2010 – Agricultural land use CSO, Agricultural Census 2010 – Agricultural land use CSO, Statistical Yearbook of Agriculture 2012 CSO.

In order to determine regional differences and similarities in the use of aid funds, the cluster analysis was performed. For grouping four features were chosen, which were first standardized, and they were (Table 3): the value of financial aid per 1 hectare of agricultural land; the value of financial aid for one completed investment project; the value of financial aid per one farm and the value of financial aid per one employee in agriculture.

Cluster analysis allowed the separation of three groups. The first one includes six provinces: Warmińsko-mazurskie, Pomerania, Wielkopolskie, Podlaskie, Mazowieckie and Kujawsko-pomorskie. The second cluster includes also six provinces, and they are: Silesian, Podkarpackie, Małopolskie, Świętokrzyskie, Łódzkie and Lubelskie. The last, third cluster comprises four provinces: West-Pomerania, Opolskie, Lubuskie and Lower Silesia (Fig. 1).

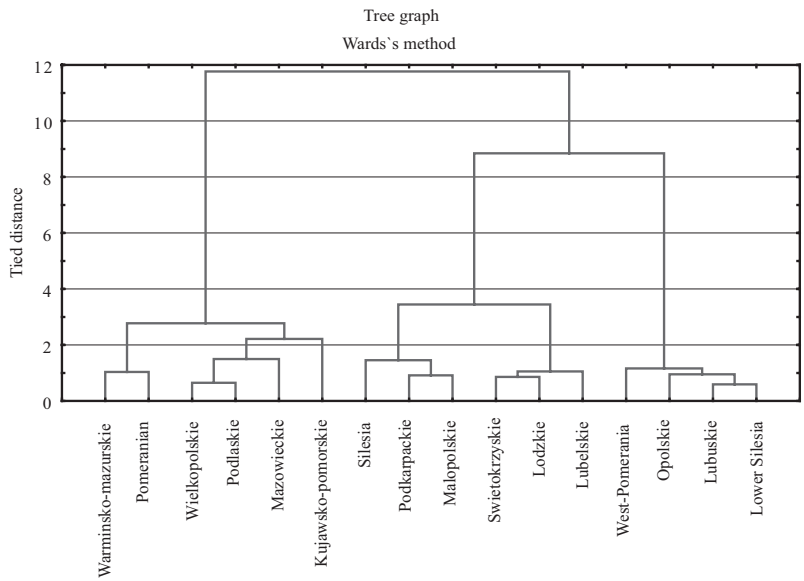

Fig. 1. Cluster analysis – tree graph of absorption of the EU funds for agricultural investments (see Table 2) in terms of voivodeships (as on 30.09.2013)

Source: Own study based on data from The Management Information System of ARMA using STATISTICA PL 10.

The groups of provinces largely reflect differences in Polish agriculture, which are related to its heterogeneity [Matuszczak 2013]. They form three areas, taking into account the natural characteristics, peculiarities of farms, the level of their competitiveness and their size. The largest area consists of provinces of northern and central Polish voivodeships. The second cluster includes provinces of the southern and eastern Poland. The third cluster is a group of provinces in the west of the country. Groups 1 and 2 comprise most farms (Table 3) due to the number of provinces (altogether 12) and the size of these areas. Over 50% of all agricultural land was in Group 1. Similarly, the number of beneficiaries and the total of financial aid. More than 92% of the beneficiaries of these aid programmes are in Groups 1 and 2 is, who raised 78% of the total amount of financial assistance for investments. In addition, there is the highest percentage of number of aid beneficiaries in relation to the number of farms (Table 3) in these groups. This demonstrates a great interest in this form of aid in regions with favourable agricultural development.

Considering the chosen characteristics in relation to the average for all regions, it can be concluded that Group 1 is the strongest one (in the sense of achieving the highest value of chosen features), because three out of four analyzed features are much higher than the national average. Group 3 is the average one, because all selected features oscillate around an overall mean. Group 2 can be described as the weakest. It covers the south-eastern Polish provinces. In terms of the selected features, averages values obtained in this group are much lower than the overall average (except for the financial assistance per 1 hectare of agricultural land) – Table 3.

Table 3. The results of the cluster analysis using Ward's method for clustering regions

Specification	Group 1 (6 voivodeships)	Group 2 (6 voivodeships)	Group 3 (4 voivodeships)
	Pomeranian, Warmińsko-mazurskie, Kujawsko-pomorskie, Podlaskie, Mazowieckie, Wielkopolskie	Łódzkie, Lubelskie, Świętokrzyskie, Silesian, Małopolskie, Podkarpackie	West Pomerania, Lubuskie, Lower Silesia, Opolskie
The number of farms in the register of agricultural producers of ARMA in 2012	554 954	668 749	132 423
Agricultural land in the group in 2010 (ha)	7 827 576	4 782 812	2 892 581
Number of beneficiaries – total in the group	100 419	44 336	10 945
The amount of financial aid – total in the group (million PLN)	7 495.9	3 317.9	1 257.0
The ratio of completed applications to the number of farms in the ARMA register of agricultural producers	18.1	6.6	8.3
Total amount of financial aid (PLN)			
• per 1 hectare of agricultural land [GUS 2010]	926.4	657.8	446.0
• per 1 agreement	77 051.3	76 809.3	115 192.8
• per 1 farm by ARMA	14 695.4	4 886.4	9 926.9
• per 1 worker on the farm [GUS 2010]	9 654.4	3 111.8	6 726.5

Source: Own calculations based on data from The Management Information System of ARMA and CSO 2013 (data on 30.09.2013).

From the regional perspective, the results indicate that the majority of funds went to the provinces in central and northern parts of the country, with a relatively favorable agrarian structure in which agriculture is considered to be well-developed. Farmers in these regions more actively applied for external aid, often carrying out large investments. The average value of the project amounted to over 7.7 thousand PLN. Particularly noteworthy is Group 3, which used little, because only 10% of the total amount of financial support. However, the average value of a single project was the highest among all groups (Table 3), which results from the operation of relatively large farms there. Farmers applied for more funds for investments in order to adapt to the new requirements and improve their competitiveness. Nevertheless, the ratio of beneficiaries to the number of farms in this group was high (8.3%). Analyzing Group 2, it can be noted that due to the agrarian structure, as well as natural conditions and production, the percentage of beneficiaries and the value of support were the lowest.

CONCLUSIONS

1. There is a considerable scope for diversification of farmers activities in the field of gaining support for investments from the EU funds for agriculture in regional terms. The tendency of farmers to raise funds for investments is related to the local conditions, the level of marketability, agricultural culture, structure of agricultural land, as well as the level of technical and social infrastructure in different regions of the country. In western Poland, the investment support is higher per 1 project, and lower per 1 hectare. In the group of Polish provinces of centre and north-east, the situation was reversed. In the first case, we are dealing with the domination of land-absorbing production, i.e. the plant production (mainly cereal), while in the second animal production is relatively more important (pigs in the Wielkopolska and the Kujawsko-pomorskie Provinces, cattle and milk production in Podlaskie Province). Consequently, this influences the descriptions of investment support.
2. Previous trends in obtaining aid for investments may initially indicate to the polarized development of agriculture in spatial terms. The most favorable prospects are shown for farms located in provinces: Pomeranian, Warmińsko-mazurskie, Kujawsko-pomorskie, Podlaskie, Mazowieckie and Wielkopolskie. It is worth noting that in these regions, it is easier to achieve the sustainable development taking into account the environmental context. Agriculture in Polish western provinces is also likely to develop, but more in the paradigm of industrial agriculture. It can be assumed that in other regions, the importance of agriculture will be decreasing.
3. The differences in the level of use of aid funds are the results of the polarization of households, which may be exacerbated. There is a further need for agricultural investment support under the CAP, but in programming related activities (i.e. RDP 2014–2020), the regional context must be taken into consideration with greater concern. Support programs for developed and commodity farms should be continued. For regions where there are a lot of small farms, programs aimed at supporting local production, local markets and niche food production (e.g. organic and regional products, traditional food etc.) should still be available.

REFERENCES

Analiza struktury projektów i charakterystyki beneficjantów Działań 1.1., 1.5. i 2.4: raport końcowy MRiRW [Analysis of the structure and characteristics of the beneficiaries of Action 1.1., 1.5. and 2.4: final report of MARD]. 2007. Agrotec Polska, IERiGŻ-PIB, Warszawa, 5–9.

Crescenzi R., 2004. EU Agricultural Policy and the Regional Differentiation in Poland. Paper for the International Conference of the Regional Studies Association in France "Europe at the Margins: EU Regional Policy, Peripherality and Rurality". France, 1–35.

Czubak W., 2012. Wykorzystanie funduszy Unii Europejskiej wspierających inwestycje w gospodarstwach rolnych (Use of European agricultural fund supporting investments in agricultural holdings in Poland). Journal of Agribusiness and Rural Development 3 (25), 57–67.

Czyżewski A., 2007. Makroekonomiczne uwarunkowania rozwoju sektora rolnego (w:) Uniwersalia polityki rolnej w gospodarce rynkowej: ujęcie makro- i mikroekonomiczne. [Macroeconomic conditions of the development of the agricultural sector. In: Universals of agricultural policy in a market economy: recognition of macro-and microeconomic terms). Wyd. UE w Poznaniu, Poznań, 46–67.

Ewaluacja ex-post Planu Rozwoju Obszarów Wiejskich 2004-2006: raport końcowy [Ex-post evaluation of Rural Development Plan 2004-2006: final report]. 2009. IERiGŻ, IRWiR PAN, IUNG PIB, BSM, Warszawa, 110–119.

Grzelak A., 2006. Wykorzystanie analizy skupień w badaniach struktur agrobiznesu na przykładzie powiązań gospodarstw rolnych z rynkiem. [Using of cluster analysis in researches of structures of agribusiness on example of connections of farms with market]. Zeszyty Naukowe Akademii Rolniczej we Wrocławiu, Rolnictwo 540, Wrocław, 179–185.

Grzelak A., 2008. Związki gospodarstw rolnych z rynkiem w Polsce po 1990 roku: próba oceny intensywności i efektywności. [The relationship of farms with market – the perspective of intensity measure base on Polish experiences after 1990]. Wyd. AE w Poznaniu, Poznań, 25–49.

Kiełbasa B., 2011. Upowszechnianie wiedzy i wdrażanie wymogów zasady wzajemnej zgodności w Polsce [Dissemination of knowledge and implementation of cross-compliance requirements in Poland). Roczniki Naukowe SERiA XVII, 7, 43–48.

Kulikowski R., 2009. Changes and spatial differentiation in Polish agriculture. Old and New Borderlines/Frontiers/Margins. Pecs: Centre for Regional Studies, 98–108.

Kusz D., 2011. Regionalne zróżnicowanie nakładów inwestycyjnych oraz poziom wsparcia publicznego inwestycji w rolnictwie polskim. [Regional diversification of investment and the level of public support investments in Polish agriculture]. Roczniki Naukowe SERiA XIII, 3, 163–167.

Kusz D., 2013. Inwestycje produkcyjne w gospodarstwach rolniczych korzystających ze wsparcia finansowego Unii Europejskiej. [Productive investments in farms benefiting from the financial support of the European Union]. Zeszyty Naukowe SGGW, EiOGŻ 103, 67–79.

Lorencowicz E., 2013. Assessment of investment activity of farmers using the EU funds on the ex ample of lubelskie voivodeship. Acta Sci. Pol. Oeconomia 12 (1), 17–26.

Luszniewicz A., Słaby T., 2008. Statystyka z pakietem komputerowym STATISTICA PL: teoria i zastosowanie. [Statistics from the computer package STATISTICA PL: theory and application]. Wyd. C.H. Beck, Warszawa, 270–307.

Matuszczak A., 2013. Zróżnicowanie rozwoju rolnictwa w regionach Unii Europejskiej w aspekcie jego zrównoważenia. [Diversification of agricultural development in the regions of the European Union in terms of its sustainability]. Wyd. Nauk. PWN, Warszawa, 327.

Nowak A., Kamińska A., 2013. Regionalne zróżnicowanie nakładów inwestycyjnych w rolnictwie w Polsce. [Provincional differentation of investment value in Polish farming]. Zeszyty Nauk. SGGW, EiOGŻ 103, 17–29.

Powszechny Spis Rolny 2010 – Pracujący w gospodarstwach rolnych. [Agricultural Census 2010 – Farm workers CSO]. 2012. GUS, Warszawa.

Powszechny Spis Rolny 2010 – Użytkowanie gruntów. [Agricultural Census 2010 – Agricultural land use, CSO]. 2013. GUS, Warszawa.

PROW 2004–2006. Plan Rozwoju Obszarów Wiejskich 2004–2006. [RDP 2004–2006. Rural Development Plan for 2004–2006]. MRiRW, Warszawa.

PROW 2007–2013. Program Rozwoju Obszarów Wiejskich 2007–2013 [RDP 2007–2013. The Rural Development Programme 2007–2013], MRiRW, Warszawa.

Rocznik Statystyczny Rolnictwa 2012 [Statistical Yearbook of Agriculture 2012 CSO], 2013. GUS, Warszawa.

Sektorowy Program Operacyjny „Restrukturyzacja i Modernizacja sektora żywnościowego oraz rozwój obszarów wiejskich 2004–2006". [Sectoral Operation Programme for Restructuring and Modernisation of the Food Sector and Rural Development 2004–2006]. MRiRW, Warszawa.

OCENA WYKORZYSTANIA FUNDUSZY UNII EUROPEJSKIEJ WSPIERAJĄCYCH INWESTYCJE W GOSPODARSTWACH ROLNYCH W POLSCE W PRZEKROJU WOJEWÓDZTW

Streszczenie. Celem artykułu jest porównanie wykorzystania środków pomocowych z działań: Inwestycje w gospodarstwach rolnych, Dostosowanie gospodarstw rolnych do standardów UE oraz Modernizacja gospodarstw rolnych, w Polsce w ujęciu regionalnym (województwa). Stwierdzono, że aktywność rolników w pozyskiwaniu funduszy UE na wsparcie inwestycji jest silnie zróżnicowana w ujęciu wojewódzkim. Skłonność rolników do pozyskiwania funduszy na inwestycje jest związana z lokalnymi warunkami, poziomem towarowości, kultury rolnej, strukturą obszarową, a także poziomem technicznej i społecznej infrastruktury w różnych regionach kraju. Na postawie uzyskanych danych należy uznać, iż istnieje dalsza potrzeba wsparcia inwestycyjnego rolnictwa w ramach wspólnej polityki rolnej (WPR), jednakże w przygotowywaniu działań z tym związanych (PROW 2014–2020) należy w większym zakresie uwzględnić kontekst regionalny.

Słowa kluczowe: fundusze EU dla rolnictwa, SPO-Rol., PROW, inwestycje, analiza skupień

Accepted for print – Zaakceptowano do druku: 24.04.2014