Regional differentiation of direct support for farmers in Poland as exemplified by selected regions

INTRODUCTION

The absorption of EU funds by Polish farmers, as represented by the amounts of payment per hectare of agricultural area, displays strong spatial diversification (Rudnicki, 2013). It results, among others, from the production specialisation of regions and interregional differences in the area structure of agricultural holdings. This, in turn, is largely determined by natural and climatic conditions (Tłuczak, 2015). According to Kozera (2011), the actual absorption capacity of EU funds is influenced by a range of factors, some of which are historically – or politically – conditioned.

Resources distributed from the direct payments scheme constitute a large portion of funds obtained by farmers. In Poland, the sum allocated for financing direct payments in 2018 slightly exceeded EUR 3.46 billion, with less than EUR 29 million (i.e. approx. 0.83%) coming from the state budget.

The dispersion of the average level of support granted to farmers under the direct payment scheme may be analysed on a variety of levels. In particular, the dispersion of the average level of support (as expressed in monetary units per
hectare of agricultural area) among the Member States of the European Union is measured, and its consequences are studied. According to Hamulczuk and Rembisz (2009), to ensure the improved efficiency of the sector, the dispersion of direct payment levels should follow from the productivity of production factors, and the volume of transfers to agriculture should take into account the relation between the level of income in agriculture and the level of income in non-agricultural sectors of the economy.

Another aspect measured is the unequal allocation of support among the beneficiaries in individual Member States and in the whole European Union. This is paired with considering, i.a., the significance of this issue in the context of implementing the assumed objectives of the direct payments scheme. Sinabell, Schmid and Hofreither (2009) emphasise that direct payments are addressed particularly at a small number of very large agricultural holdings and that the situation remains stable over time. It follows from Severini and Tantari’s (2015) calculations that the concentration of direct payments is highly unequal in the Member States of the European Union and reaches very high values in some of them; the majority of the variability of support concentration can be explained by differences in the level of concentration of land. Beluhova-Uzunova, Atanasov and Hristov (2017), in summarising the results of their analyses, state that the distribution of direct support in Bulgarian agricultural holdings is highly unequal. At the same time, they stress the need for a strong political will to direct support to a priority sector with a high value added, with a view to reducing regional and structural differences.

The studies conducted in this area also involve the issue of the impact that introducing various instruments have on the average level of support per holding when considered by region. According to Sadłowski (2018b), the optional instruments applied in Poland increased the average support provided to farms in central and eastern Poland; the average amount of support paid per farm would have been bigger in northern, western and southern voivodeships if optional instruments had not been implemented.

The objective of this study is to measure the dispersion of the unit level of support (EUR/holding), paid under the direct payments scheme, among voivodeships with a similar average agricultural holding size and to identify the reasons for this dispersion. To achieve this objective, the author verified the hypothesis that the dispersion of the average level of support per beneficiary among regions with only slight differences in the average holding size follows from the differences in the structure of support absorbed by farmers from the respective regions.

The discussed issues are important and topical due to the reform of the Common Agricultural Policy in relation to the next financial perspective and the process of designing the direct payments scheme at the national level within the new EU legal regulations, which is connected with this reform.
The author used statistical description methods, along with combo charts displaying shares and a choropleth map for result visualisation. A comparative analysis covered three Polish regions (Łódzkie, Śląskie and Lubelskie voivodeships), in which the average farm size is almost identical. The source material was data from the Agency for Restructuring and Modernisation of Agriculture regarding 2018.

The next section of this study discusses the instruments making up the direct support scheme for farmers in Poland, including the rules of granting individual payments and the unit amount of support (rates of payments). This is followed by a presentation and discussion of the results of calculations of the basic indicators providing information about the average level of support and its dispersion. Moreover, a comparative analysis of the structure of support absorbed in particular regions was performed. The summary returns to the hypothesis presented in the introduction and presents the basic conclusions for economic practice, while indicating the primary restrictions of the so-called coupled support.

**Characteristics of direct support instruments**

The direct support system currently used in Poland includes a dozen instruments\(^4\) which can be grouped as follows:

1) decoupled area payments: the single area payment, the payment for agricultural practices beneficial for the climate and the environment, the redistributive payment, and the payment for young farmers;

2) crop area payments (for grain legumes, fodder plants, starch potatoes, sugar beets, hops, tomatoes, strawberries, flax and hemp);

3) livestock payments (for young cattle, cows, sheep and goats); and

4) payments for historical production volumes – tobacco payment\(^5\).

The objective scope and level of financing\(^6\) of those instruments exhibit certain differences, as a result of which they have a varied power of impact on Polish agriculture.

Area payments, which are granted irrespective of any specific crop production (i.e. the single area payment, the payment for agricultural practices beneficial for the climate and the environment, the redistributive payment, and the payment for young farmers), are not competitive to one another. Each of these payments can be granted simultaneously in respect of a given agricultural area, together with one of the sector-specific crop area payments (i.e. the crop area payment for grain legumes, the crop area payment for fodder plants, the crop area payment for starch potatoes,

\(^4\) See the Act… (2015).

\(^5\) In Poland tobacco payment currently constitutes the only instrument of the so-called transitional national aid. This implies that this payment is the only aid envisaged under the direct support scheme, which is financed from the state budget.

\(^6\) The level of financing must correspond to the limits determined in the Regulation… (2013).
the crop area payment for sugar beets, the crop area payment for hops, the crop area payment for tomatoes, the crop area payment for strawberries, the crop area payment for flax, and the crop area payment for hemp). In other words, all the decoupled area payments, plus one of the sector-specific crop area payments can accumulate, i.e. a given agricultural area can be covered by these payments simultaneously.

<table>
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<th>Table 1. Direct payment rates in 2018</th>
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<td><strong>Support instrument</strong></td>
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<td>payment for agricultural practices beneficial for the climate and the environment</td>
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A separate group of sector-specific payments, next to crop area payments, provided from the so-called coupled support scheme in Poland, is formed by livestock payments. These include the payment for young cattle, the payment for cows, the payment for sheep, and the payment for goats. These payments are independent of the use of land resources.

__De facto__ these are not coupled payments sensu stricto, as the level of support granted under these instruments does not depend on the volume of agricultural production, but on the crop area of certain plants, or on the number of animals representing certain species.
The same applies to the tobacco payment – the level of support granted is unrelated to land resources intended for tobacco cultivation in the year during which the payment is applied for, as it is granted for the volume of tobacco production in the reference period, i.e. 2005–2006. Except for the need to satisfy the conditions for granting a single area payment, the current decisions of a farmer regarding such issues as crop area or outlays, do not influence the amount received as the tobacco payment. As has already been stressed, this payment is based on the production volume in the reference period which, when the application is submitted, is already a past period and is not subject to “updates”.

Contrary to the decoupled tobacco payment, in the case of other instruments provided under the direct payments scheme, the exact amount of funds absorbed by farmers depends on numerous variables characterising their agricultural holdings in the year during which the payment is applied for. Most of these variables can be influenced by the ongoing decisions made by farmers. Strictly speaking, the amount of funds absorbed through:

1. the single area payment – is proportional to the total area of land used by the farmer for agricultural purposes, decreased by that part of the area which constitutes a surplus in the agricultural holding over the area generating a revenue of EUR 150,000 in respect of that payment (Sadłowski, 2018a);
2. the payment for agricultural practices beneficial for the climate and the environment – is proportional to the total agricultural area used by the holding employing certain agricultural practices (crop diversification, maintaining existing permanent grassland, and having a so-called ecological focus area on the agricultural area);
3. the redistributive payment – is proportional to the number of hectares used for agricultural purposes within the area forming part of the holding, falling within the range (3, 30] (Sadłowski, 2019);
4. the payment for young farmers – is proportional to the agricultural area of the holding which belongs to a farmer who is considered young, decreased by that part of the area which constitutes a surplus in the agricultural holding over the area of 50 ha (Sadłowski, 2017);
5. a given sector-specific payment for crop production – is proportional to the area designated for a given type of crop production, wherein:
   – as regards the crop area payment for grain legumes – the rate applicable to a crop area in the holding exceeding 75 ha corresponds to half of the rate applicable to an area not exceeding that limit,
   – as regards the crop area payment for fodder plants – the supported area in the holding is limited to 75 ha;

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8 Pursuant to Article 17 (1)(1) of the Act… (2015), farmers are entitled to a decoupled tobacco payment if they satisfy the conditions to grant, and have applied for, the single area payment.
6. a given sector-specific livestock payment – depends on the number of animals of a given species, with certain limitations of various kinds (the age and sex of the animal, the minimum stock size and quantity limits).

Therefore, the share in the annual financial envelope distributed in the country within the direct payments scheme, which is attributable to farmers operating in a given region, will change from one year to another. These changes are the result of ongoing decisions made by agricultural holding managers (e.g. regarding the manner of using land resources) and various types of processes taking place (e.g. changes to the farmers’ age structure or parcel conversion). These determine the directions and dynamics of structural changes taking place in agriculture in individual regions.

Table 1, which compares the individual payment rates applicable in 2018, shows that the level of unit area-related support at that time ranged in principle from EUR 179.40/ha (for agricultural land which is part of a holding not owned by a “young farmer”, eligible only for the single area payment and the payment for agricultural practices beneficial for the environment and the climate) to EUR 1 038.43/ha (for tomato cultivation by a “young farmer”). The calculation of the maximum level of unit area-related support takes into account the redistributive payment. Given that the redistributive payment in the variant used in Poland never includes the entire area of the holding, it is not possible for the average amount of area-related support per unit of agricultural land area to reach this level in a specific holding.

RESULTS

The voivodeships under analysis are characterised by a similar average holding size. In 2018, the average size of an agricultural holding in the Łódzkie Voivodeship was 7.84 ha, in the Śląskie Voivodeship – 7.85 ha, and in the Lubelskie Voivodeship – 7.86 ha (Announcement..., 2018). Despite this similarity, these voivodeships display noticeable differences in the average amounts of payment per beneficiary (Figure 1). In 2018, the difference between the average amount of payment per beneficiary in the Lubelskie Voivodeship (with the highest value of this variable among the voivodeships under analysis) and the average amount of payment per beneficiary in the Śląskie Voivodeship (with the lowest value of this variable among the voivodeships under analysis) equalled EUR 234/holding, which corresponded to over 13% of the average level of support per farmer in the Śląskie Voivodeship.

This results from the fact that farmers operating in various voivodeships absorb, on average per hectare of agricultural area, varied amounts of payment. In consequence, despite the average holding area being almost identical in the
three voivodeships under analysis, they exhibit material differences in the average amounts of payment per beneficiary.

![Figure 1. The location of the voivodeships under analysis and the average level of support from the direct payment scheme [EUR/holding] in 2018](image)

Source: own study based on data from the Agency for Restructuring and Modernization of Agriculture.

The structure of funds absorbed by farmers from the direct payments scheme in the voivodeships under analysis is presented in Figure 2. The following factors had a pivotal impact on the differences in the average amounts of payment per beneficiary:

1. the share of coupled payments in the total amount of payment absorbed by farmers from a given voivodeship (as shown in Figure 2, among the compared voivodeships, the highest share is found in the Łódzkie Voivodeship – 14.6%),
2. the significance of the decoupled tobacco payment (as shown in Figure 2, among the compared voivodeships, this payment is the most important in the Lubelskie Voivodeship, where its share in the total amount of funds absorbed by farmers is 4%).
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The voivodeships under analysis are characterised by a similar average holding size. Generally speaking, the average amount of payment per beneficiary...
in a voivodeship represents the product of the average holding size in that voivodeship and the average amount of payment per hectare of agricultural area in that voivodeship. Therefore, the differences in the average levels of support per beneficiary, which are observed in the voivodeships under analysis, result primarily from differences in the average amounts of payment per hectare of agricultural area, which are absorbed by farmers operating in those voivodeships.

In 2018, the average amount of payment per hectare of agricultural area in the voivodeships under analysis was the highest in the Lubelskie Voivodeship (nearly EUR 248/ha), followed by the Łódzkie Voivodeship (approx. EUR 242/ha), while it was the lowest in the Śląskie Voivodeship (approx. EUR 223/ha). As has already been mentioned, these differences can be explained by the diversified shares of coupled support and tobacco payment in the structure of funds absorbed by farmers operating in those voivodeships. This share was the lowest in the Śląskie Voivodeship (10.9%), while in the Łódzkie Voivodeship it reached 14.6%, and in the Lubelskie Voivodeship, 17.1%. Generally speaking, for a given average holding size, the higher the share of coupled support or tobacco payment in the funds absorbed by farmers, the higher the average level of support per beneficiary.

**Conclusions**

While the Śląskie, Łódzkie and Lubelskie Voivodeships are characterised by a similar average holding size (slightly less than 8 ha), the difference between the highest and the lowest average amount of payment per beneficiary is as high as approx. EUR 234/holding.

Among the voivodeships under consideration, farmers from the Lubelskie Voivodeship absorb the highest amount of payments per hectare of agricultural area – nearly EUR 248/ha in average terms. These figures in the Łódzkie and Śląskie Voivodeships are lower by approx. EUR 6/ha and approx. EUR 25/ha, respectively. Given the comparable average areas of agricultural holdings in these three voivodeships, this discrepancy translates into differences in the average amounts of payment per beneficiary.

When comparing the structure of support granted to farmers from the three voivodeships, one can note the lowest share of coupled payments in the Śląskie Voivodeship, together with a negligible share of tobacco payment. These factors have a decisive impact on the level of support per beneficiary, which is the lowest in the Śląskie Voivodeship compared to the other two voivodeships under analysis. In contrast, the highest amount of payment per beneficiary was found in the Lubelskie Voivodeship where the total share of coupled payments and tobacco payment is higher than in the Śląskie and Łódzkie Voivodeships by 6.2 and 2.5 percentage points, respectively.
The hypothesis proposed in the introduction, that the dispersion of the average level of support per beneficiary among regions with only slight differences in the average holding size, follows from the differences in the structure of support absorbed by farmers from the respective regions, has been confirmed.

On the basis of the presented results, it can be concluded that an instrument with a particularly strong potential to influence the level of support in absolute terms (per holding) and in relative terms (per 1 ha of agricultural land in a holding) is the so-called voluntary coupled support. Since a member state has a relatively wide margin of discretion in establishing the conditions for granting this support and the level of its financing, and since there are relatively large differences between regions in terms of area structure of farms and agricultural production specialisation, member states may, by means of this instrument, significantly adjust the distribution of funds between regions by reducing the strength of the link between the amount of aid absorbed by each region and their agricultural land areas. Actions of this kind may be motivated by the desire to compensate for social inequalities or the desire to stimulate economic growth in peripheral areas.

It should be pointed out that coupled support, although it is not granted for the quantity of agricultural products (as the name would imply), but assumes the form of area payments (in the case of plant production sectors) or payments for the number of animals held (in the case of animal production sectors), is not neutral to the volume and structure of agricultural production and improves the profitability and competitiveness of a given group of agricultural holdings at the expense of other groups.

Support granted for the crop area of selected plants increases the profitability of managing crops covered by this support in comparison to other production areas, while remaining neutral to production intensity. The introduction of this type of support leads to the modification of crop structure involving the increase in the proportion of those crops which receive more support. Under conditions of incomplete use of the production potential, a sufficiently high amount of support will also increase production extensiveness by including land which was not previously used for production purposes (Sadłowski, 2016). The more a given plant requires special soil and climate conditions or the application of a specialised machinery stock to cultivate, the higher is the entry barrier to this production sector, and also the greater the advantages that introducing payments to the crop area of that plant could bring to the group of holdings operating in this sector. As a result, payments for the crop area of specific plants interfere with the competition conditions. They also make it difficult to introduce adjustments to the spatial distribution of agricultural production as initiated by market processes, and conducive to the rational use of the production potential (i.e. leading to the use of resources to produce those products for which there is effective demand).
Bibliography


Observation no 1/2018 of the President of the Agency for Restructuring and Modernization of Agriculture of 19 September 2018 on the size of the average area of agricultural land in a farm in individual provinces and the average area of agricultural land in a farm in the country in 2018.


**Summary**

The objective of this study was to measure the dispersion of the unit level of support, paid under the direct payment scheme, among voivodeships with a similar average agricultural holding size, and to identify the reasons for this dispersion. It begins with a description of the shape of the direct payments scheme in Poland. The paper further presents and analyses the results of the measurement of dispersion of support as part of the direct payment scheme between voivodeships with no significant differences in the sizes of agricultural holdings. It has been shown that this dispersion is a result of the differences in the structure of support absorbed by farmers in individual regions. The measurement of the support level is the average aid amount per unit of agricultural area and the average aid amount per one beneficiary. The source material used in this paper was the data from the Polish paying agency responsible for direct payments made to farmers, i.e. the Agency for Restructuring and Modernisation of Agriculture. The reference period of the study is 2018. As three voivodeships with the most similar average farm size were selected, the study covered Łódzkie, Śląskie and Lubelskie Voivodeships. The analysis was performed with the use of descriptive statistics methods. The data was visualised with the use of pie and bar charts, and a choropleth map.

It was found that the instrument with a particularly strong potential for the impact on support level in absolute terms (per one holding) and relative terms (per 1 hectare of agricultural land in a holding) is the so called voluntary coupled support. With this instrument, European Union Member States can adjust the distribution of funds between individual regions, reducing the strength of a relationship between the volume of support absorbed by individual regions and their abundance in agricultural land. The intention of such actions may be to compensate for social inequalities or to stimulate growth in peripheral areas.

**Keywords**: Common Agricultural Policy, direct payments, average level of support.
Regionalne zróżnicowanie wsparcia bezpośredniego dla rolników w Polsce na przykładzie wybranych województw

**Streszczenie**

Celem opracowania było rozpoznanie zróżnicowania jednostkowego poziomu wsparcia, wypłacanego w ramach systemu płatności bezpośrednich, między województwami o zbliżonej średniej wielkości gospodarstwa oraz identyfikacja przyczyn tego zróżnicowania. W pierwszej kolejności przybliżono kształt systemu wsparcia bezpośredniego w Polsce. Następnie przedstawiono i omówiono wyniki pomiaru dyspersji średniego poziomu wsparcia w ramach systemu płatności bezpośrednich, występującej między województwami nieróżniącymi się istotnie średnią wielkością gospodarstwa. Wykazano, że zróżnicowanie to jest następstwem różnic w strukturze pomocy zaabsorbowanej przez rolników z poszczególnych regionów. Za miernik poziomu wsparcia przyjęto średnią kwotę pomocy przypadającą na jednostkę powierzchni użytków rolnych oraz średnią kwotę pomocy przypadającą na beneficjenta. Jako materiał źródłowy wykorzystano dane polskiej agencji płatniczej odpowiedzialnej za wypłatę płatności bezpośrednich na rzecz rolników, którą jest Agencja Restrukturyzacji i Modernizacji Rolnictwa. Zakres czasowy badań to 2018 r. Jako, że do porównań wybrano trzy województwa o najbardziej zbliżonej średniej powierzchni gospodarstwa, zakres przestrzenny badań obejmuje województwo łódzkie, województwo śląskie i województwo lubelskie. Analizę przeprowadzono z wykorzystaniem metod opisu statystycznego. Do wizualizacji danych zastosowano wykresy udziałowe (kołowo-kolumnowe) i kartogram.

Stwierdzono, że instrumentem o szczególnie silnym potencjale oddziaływania na poziom wsparcia w ujęciu absolutnym (na gospodarstwo) i względnym (w przeliczeniu na 1 ha użytków rolnych gospodarstwa) jest tzw. dobrowolne wsparcie związane z produkcją. Za pomocą tego instrumnetu państwa członkowskie Unii Europejskiej mogą w znacznym stopniu korygować rozdział środków między poszczególne regiony, zmniejszając siłę związku wielkości pomocy absorbowanej przez poszczególne regiony z ich zasobnością w użytki rolne. Intencją takich działań może być kompensowanie nierówności społecznych czy stymulowanie wzrostu na obszarach peryferyjnych.

**Słowa kluczowe:** Wspólna Polityka Rolna, płatności bezpośrednie, średni poziom wsparcia.

**JEL:** Q18.