e-ISSN 2392-3458

Problems of Agricultural Economics
Zagadnienia Ekonomiki Rolnej

www.zer.waw.pl

2(359) 2019, 3-27

DOI: 10.30858/zer/109926

Articles

METHODICAL AND PRACTICAL ASPECTS OF THE PARITY INCOME IN THE POLISH AGRICULTURE

ADAM WĄS
PIOTR SULEWSKI
EDWARD MAJEWSKI

Abstract

The topic of farmers' income is one of the most frequently discussed issues in agricultural economics literature. Particular interest is focused on the problem of the so-called parity income. The study attempts to assess the amount of farmers' income from own labour in the context of average wages in the national economy.

The analysis covered individual farms within the field of the Polish FADN observation. The study used farm net income (SE420) and the income from farmers' own labour. The results of the study based on the FADN sample were compared with the average net wages according to the Statistics Poland. The analysis covered the period between 2006 and 2017.

Dr Adam Wąs, Szkoła Główna Gospodarstwa Wiejskiego w Warszawie, Wydział Nauk Ekonomicznych, Katedra Ekonomiki i Organizacji Przedsiębiorstw, Zakład Organizacji i Zarządzania; ul. Nowoursynowska 166, bl. VII. pok. 106, 02-787 Warszawa (adam_was@ sggw.pl.).
ORCID iD: 0000-0001-8643-5985.
Dr hab. Piotr Sulewski, Szkoła Główna Gospodarstwa Wiejskiego w Warszawie, Wydział Nauk Ekonomicznych, Katedra Ekonomiki i Organizacji Przedsiębiorstw, Zakład Organizacji i Zarządzania; ul. Nowoursynowska 166, bl. VII. pok. 106, 02-787 Warszawa (piotr_sulewski@sggw.pl).
ORCID iD: 0000-0002-7983-4651.
Prof. Edward Majewski, Szkoła Główna Gospodarstwa Wiejskiego w Warszawie, Wydział Nauk Ekonomicznych, Katedra Ekonomiki i Organizacji Przedsiębiorstw, Zakład Organizacji i Zarządzania; ul. Nowoursynowska 166, bl. VII. pok. 106, 02-787 Warszawa (edward_majewski@sggw.pl).
ORCID iD: 0000-0003-0886-6645.

The analyses showed the existence of a clear difference between the average income from work on the farm (calculated after taking into account the alternative costs of land and capital) and the average net wage in the national economy. At the same time, significant differences were observed between agricultural income per unit of own labour depending on the economic size of the farm. Only medium-large, large and very large farms provided wages higher than average in the economy.

The existing differences in the level of income correspond to the level of labour productivity, which suggests that one of the ways to limit the income problem in the Polish agriculture are structural changes leading to an increase in the average economic size of farms.

Keywords: farm income, income parity, remuneration of the labour factor, economic size of farms, labor productivity.

JEL codes: Q12, Q14, Q19.

Introduction

Issues related to agricultural income are one of key problems raised for the discussion on the situation and the future of agriculture (Vrolijk and Poppe, 2008; Majewski and Wąs, 2015). Since the establishment of the fundamental principles of the Treaty of Rome of 1957 "to ensure (...) a fair standard of living for the agricultural community, in particular by increasing the individual earnings of persons engaged in agriculture" has become a formal purpose of the countries forming the European Economic Community (the Treaty of Rome: Article 39). This generally formulated the objective of impact on agricultural income, not very precise in Hill's opinion (2013), was present in successive reforms of the Common Agricultural Policy (Majewski, Sulewski and Wąs, 2018), but in the Agenda 2000 it was clarified by identifying the need to increase the income stability and support the alternative sources of providing for agricultural families (Hill, 2015; Commission, 1997).

The interest in issues related to agricultural income is determined by, e.g. specific conditions of the agricultural sector which cause that there are less opportunities for generating satisfying financial results in agriculture than in other sectors (Zegar, 2008; Grzelak, 2016; Czyżewski B., 2017). The specificity of the agricultural sector is inextricably linked to the characteristics of the land factor which is the source of numerous limitations, insignificant in other economic activities and leads to the problem of the so-called agrarian issue (Czyżewski A., 2016). Many authors emphasize that the worsening of the problem related to low income in agriculture is one of the results of structural changes in the national economy (e.g. Czyżewski A., 2016; Runowski, 2016; Podstawka, 2016). The continuing lower level of income in agriculture in comparison to the income in other sectors leads to the increase in the

relative deprivation in the community of farmers[1] (Poczta-Wajda, 2017; Czyżewski, 2017). Dissatisfaction with the income achieved in agriculture is commonly regarded as objectively justified, which is often used for political purposes. Main factors underlying the specificity of the income situation in agriculture include (Hill, 2015; Zawalińska, Majewski and Wąs, 2015; Czyżewski A., 2007; Baer-Nawrocka, 2013; Czyżewski B., 2017):

- Rapid technological progress, as a result of which the production in agriculture grows faster than the demand for food, which is the source of the so-called technological treadmill (Cochrane, 1958) or in other words agricultural treadmill (Ward, 1993), in the long-term perspective leading to the relative drop in prices of agricultural products and reduction in the bargaining power of farmers lagging behind the progress.
- Short-term instability of income arising from climate conditions and weather patterns, seasonal nature of the production and the impact of institutional factors.
- Internal differentiation of agriculture – farms are different both in terms of size, direction of production, conditions for agricultural production, accessibility of production factors, labour productivity, etc.[2]
- Unfavourable, fragmented structure of farms resulting in relatively low average effectiveness of using production factors.

In the discussion concerning the income problem in agriculture, many phenomena are being considered, including (Hill, 2013): *risk of poverty* (low income in certain groups of farms or regions leads to the marginalisation of a part of agricultural community which poses both an economic and social problem); *income volatility* (experienced at the level of particular farms implies the necessity of assessing the income situation through the prism of multi-annual trends and not only one year results); *farm wealth differentiation* (due to the financial support agricultural income is capitalised in land prices which leads to the increase in the wealth of farmers who are land owners, placing producers relying on leased lands at a disadvantage); *comparability of remuneration* of farmers with remuneration in other sectors of the economy (the parity income). The need of comparisons with other sectors of the economy is also pointed out by analysts from DG Agriculture and Rural Development (2016), emphasizing that comparing the income of farmers to the average level of remuneration in the economy makes it possible to assess the opportunity costs of the farmer's own work.

[1] Relative deprivation is defined (Sztompka, 2012) as experienced, unfair and wrong disparity between actual achievements and aspiration in the field of life standard, earnings, power or prestige.

[2] In practice, this complicates a clear assessment of the income situation in agriculture (which, however, is frequently expected by the general public and policymakers). In the context of the observed differentiation of income the following phenomena are identified (Commission..., 1985): income disparities between groups of farms (e.g. groups by production type or by economic size), *income dispersion* within the group resulting from the differentiation of features of farms (e.g. labour productivity, production conditions, a farmer's skills) and *income distribution* referring to the existence of groups of farms with various levels of income (sectoral approach)

Kleinhanss (2015) stresses the importance of income providing the payment of the opportunity costs in the assessment of competitiveness of farms – in accordance with his analyses, in Germany about 40-50% of farms are able to pay the opportunity costs and finance their development. DG Agri (DG Agriculture and Rural Development, 2016) estimates that on average in the EU the relation of the management-related income (i.e. the income after deducting the opportunity costs) calculated per FWU (*Family Work Unit*) to the average remuneration in the economy in recent years is at the level of forty or so per cent. Poland is one of the countries with the lowest value of this indicator (after Slovenia, Romania, Lithuania, Croatia and Latvia).

Among the listed problems in the national literature and the public debate, the issue of comparability of farmers' income with the income of other professional groups is often raised (Ziętara and Zieliński, 2012; Wysokiński and Klepacki, 2013; Baer-Nawrocka, 2013; Grzelak, 2016; Gołasa, Litwiniuk, Chlebicka and Podstawka, 2017; Kisielińska, 2018), which is expressed in the concept of the so-called parity income. The issue related to the parity is an area of particular interest to policymakers (Strategia..., 2017) and it was already discussed in the national literature at the time of the centrally-planned economy (Wiatrak, 1981; Wilkin, 1986; Baer-Nawrocka, 2013).

The ongoing discussion often highlights the normative approach indicating the need for achievement of the parity income in agriculture, understood as a harmonisation of the level of farmers' income with the income of other professional groups. Although such a view is very common, in our opinion it has a poor objective justification. The constant competition of economic entities participating in the market play is typical for the market economy. The majority of income obtained from their operation is generated by the entities which, generally speaking, are better managed and better adjusted to the market situation. Taking this into consideration, special treatment of selected groups of producers or even sectors, as in the case of agriculture, raises serious doubts and for sure it would require special justification. It should be emphasized that there are many groups of small businesses, the income of which no one cares about. They are in a difficult financial situation, paying the income tax, higher social security contributions and higher VAT rates.

Undertaking a seemingly simple attempt to determine a relative level of farmers' income, we encounter numerous methodological problems inhibiting a responsible answer to the question about the relations of the income inside and outside agriculture. These barriers for simple comparisons include, for instance, a large differentiation of the economic situation both in agriculture and outside it, specific categories of expenses in farmers' households related to the dual function of the farm, different social security systems of farmers and those working outside agriculture or using non-agricultural sources of income by farmers (Baer-Nawrocka, 2013). Furthermore, Runowski (2016) draws attention to the problem of differences in labour productivity inside and outside agriculture (what is often ignored in interpretations of agricultural income level). In the opinion of the cited author, expecting that remuneration in the agricultural sector at the level average for the country is equal

to average remuneration in the economy, when the share of persons employed in agriculture is about four times higher than the share of agriculture in GDP, is unjustified. This approach is consistent with the results of analyses concerning relations of labour productivity and remuneration at the level of sectors, conducted by Rembisz (2016), according to which on average (in comparison to other sectors of the economy) the remuneration of the labour factor in agriculture is even overestimated in terms of its efficiency. Expecting the parity income is justified, only in the case of those farmers who achieve similar indicators of labour productivity as outside agriculture (Runowski, 2016). However, even such a presentation of the problem of parity may be called into question. Prices in the market economy are shaped as a result of the functioning of the market mechanisms, which concerns not only prices of products but also prices of production factors, including labour. Thus, the actual income of farmers is the resultant of the relation between the number of persons employed in agriculture and a real demand for the work of farmers, which shapes the unfavourable relation of the share of individuals employed in agriculture to the share of agriculture in creating gross domestic product indicated by Runowski.

The key problem in considerations concerning the parity income embraces methodological difficulties related to the comparability of categories of agricultural income and remuneration outside agriculture, which is pointed out, *inter alia*, by Runowski (2016). As it is emphasized by many authors (e.g. Hill, 2015; Wysokiński and Klepacki, 2013), the income on the family farms corresponds to the entrepreneur's income (the entrepreneur's profit) and is a type of hybrid constituting the remuneration for the unpaid work of the farmer and his family, land and capital resources involved in the production as well as the remuneration for the risk taken and exercised managerial functions. Thus, an indirect comparison of the agricultural income to the income of hired employees seems to be unjustified, because farmers, similarly to other entrepreneurs, may expect the remuneration for the involved production factors as well as managerial skills and entrepreneurship (risk). Cost calculation should include this in the form of opportunity costs reflecting the value of unselected alternative (Skarżyńska, 2011; Goraj and Mańko, 2010). Seen from this angle, opportunity costs constitute an element of full production costs referred to as economic costs (Goraj and Mańko 2010) and inform about a final result of management expressed in the category of the management-related income (Skarżyńska, 2011). The management-related income is reduced in relation to the income from the family farm by costs of own labour force, opportunity cost of own land and capital (Ziętara, 2014). In the light of the above definitions, it seems that neither the agricultural income from the farm nor the management-related income are adequate to be compared with the remuneration in the form of salary for hired employees working in other sectors of the national economy.

Thus, B. Czyżewski's suggestion (2017) that the measurement comparable to the work-related income is the agricultural entrepreneur's income after paying all production factors apart from own work (which, according to the cited author, is the residual income) seems to be justified. Nevertheless, it must be noted that for this perspective the level of income obtained by farmers from work may depend on:

– Allocations of resources which they have (land and capital) which, due to decisions taken, may bring profits different than opportunity costs attributed to them,
– General level of support for the sector (subsidies, social securities, taxes).

The issue related to the income of farms is raised in the foreign literature, however, the considerations often concern the issue related to determining the level of income establishing the limits of economic viability of the farm. For this purpose, various approaches may be used, which is indicated by O'Donoghue et al. (2016). For example, Hennessey, Shresthra and Farrell (2008) defined economically viable farms as those which have a capacity to remunerate the unpaid work of the farmer and his family at the level of an average wage of employees working in agriculture but with the simultaneous rate of return on capital invested in the land at the level of at least 5%. The similar approach was earlier proposed in Ireland by Frawley and Commins (1996). Vrolijk, De Bont, Blokland and Soboh (2010) perceive the category of economic viability in a more comprehensive manner, defining its various levels. For example, the first and the highest category means positive income at the level exceeding the opportunity costs, while the last one, the worst category refers to negative financial results.

Savickienė, Miceikienė and Jurgelaitienė (2015) adopted the ability of the farm to survive, operate and develop with the use of available resources as the economic viability threshold. Adelaja, Lake and Pennington (2004) regard farms as viable when they generate revenues making it possible to pay fixed and variable costs of the activity as well as expenses for supporting the family and costs related to renewal of fixed assets.

Thinking in terms of the parity income has been incorporated in the approach presented by Aggelopoulos, Samathrakis and Theocharopoulos (2007). They assumed that the viable farm in Greek conditions is such a holding which is able to generate the income counted per family human labour unit (HLU) at the level of the reference income determined by the Greek ministry of agriculture at the level of 80% of income outside agriculture.

According to the presented review of the literature, the level and stability of agricultural income is constantly a source of interest of the Common Agricultural Policy but also the subject of many scientific reflections. In part they refer to comparisons to the income from work outside agriculture. In this context, the main purpose of this article is to adapt the critical assessment of the concept related to using the concept of the parity income in agriculture which is popular in Poland, at the same time indicating conditions of the Polish agriculture as well as methodological aspects of comparing the income of farmers to the income obtained in other segments of the economy.

Methodology

Assessment of the farmers' income presented in the literature often refers to the comparison of the income from the farm or the management-related income to the average level of remuneration in the economy, which is described as the parity

degree (income disparity). In the light of literature studies it seems that only the category of agricultural income reflecting remuneration of the labour factor is the category suitable for comparing to the net remuneration outside the agricultural sector. Neither "the income from the family farm" (constituting the remuneration of all production factors (i.e. land, labour and capital) nor "the management-related income" which is the category cleared from costs of all production factors is the appropriate category.

In order to provide comparability of the income from work on the farm and remuneration outside agriculture the category determined as "farmers' income from work" was applied as the assessment of the income situation which was calculated as follows:

Income from the family farm
minus
opportunity cost of equity capital
opportunity cost of own land
= Farmers' income from work

It constitutes the remuneration for work on the farm and it seems to be the category which is the closest to the net remuneration from hired labour. It must be emphasized that this category includes costs which are not expenses (such as depreciation and opportunity costs of land and capital factor) and do not occur in the case of remuneration of hired labourer. Thus, the adopted category does not point to the so-called disposable income, but only to the relative "attractiveness" of work on one's own farm to the alternative of taking up a job outside it (e.g. assuming the average remuneration in the national economy).

Studies were carried out with the use of the production and financial data collected in the database of the Polish FADN. This data comes from the sample of about[3] 12 thousand farms and is representative in terms of the economic size, production type and location for the population of 730 thousand Polish farms with a standard production above EUR 4 thousand, manufacturing over 90% of value of the standard outputs (FADN, 2018).

Every farm in the FADN sample represents a specified number of farms in the general population. The weightings assigned to every farm in the FADN sample (the SYS02 variable) arising from the manner of the FADN sample selection were used to transfer the results of calculations to the population of farms represented by this sample. Due to the scope of the studies concerning the issues of farmers' income understood as natural persons engaged in a self-employed capacity, only individual farms were analysed, excluding farms of legal persons (companies, cooperatives).

The opportunity costs of land and capital were estimated by determining the value of the interest arising from the interest on the equity capital less the value

[3]A sample size shows small variability in particular years

of land at the level of the NBP discount rate[4] and the average prices of leased agricultural lands on the private market (*Rynek Ziemi...*, 2007-2018). To present the remuneration of the unpaid own work on farms of various scale, the Family Work Unit (FWU) was adopted as a base. According to the FADN methodology, it corresponds to 2120 hours of labour input on the farm. The labour productivity in total was also presented in calculation per labour unit in general (AWU – Annual Work Unit) with the same number of hours (2120 hours), but including total labour input in the farm.

The reference point ~~for~~ assessments of the income situation in agriculture was an average net remuneration in the national economy estimated on the basis of official data concerning gross remuneration (GUS, 2006-2017), converted to the net amount with the use of the salary calculator from the INFOR website.

As far as the assessment of the income situation in agriculture is concerned, it was divided into group of farms with various economic size, using the classification applied in the FADN system (Table 1).

Table 1

Grouping of farms by economic size ES6 and agricultural types TF8

Class of economic size ES6		The scope of the SO standard production (EUR thousand)	Agricultural types TF8	
1	Very small	2-8	1	Field crops
2	Small	8-25	2	Horticultural crops
3	Medium small	25-50	3	Vineyards[a]
4	Medium large	50-100	4	Permanent crops
5	Large	100-500	5	Dairy cows
6	Very large	>500	6	Herbivorous animals
			7	Granivores
			8	Mixed

[a] not present in Poland

Source: FADN (2018).

[4] Discount rate – determines the price at which the central bank buys bills of exchange from commercial banks https://www.nbp.pl/home.aspx?f=/dzienne/stopy_archiwum.htm. The adoption of the discount rate results from the assumption that the placement of funds owned on the bank market characterised by a relatively low level of risk (in comparison to other forms of investing capital in financial markets) is an alternative for the investments in fixed assets of the farm. However, in fact, a hypothetical decision of the farmer to select the alternative (in relation to running the farm) form of investing capital would be determined by a range of behavioural factors related to, *inter alia*, his perception and risk aversion. In this situation it is difficult to indicate a fully universal reference point. Due to this fact, in the calculations carried out the decision was made to valuate equity capital at the level of NBP discount rate. The discount rate is historically the longest used interest rate by NBP. As a rule, it is at the level higher than the NBP deposit and reference rate but lower than the lombard rate. According to some studies (Przekota, 2010) it represents market changes of deposit rates.

The ES6 classification was used in order to determine the economic size of farms for the purposes of conducted studies. However, due to the small number of very large farms two last groups of economic size (large and very large) were combined into one group. The typology of farms in terms of the direction of production was developed on the basis of the TF8 classification, combining particular types with similar directions of production (Table 1).

Results

Table 2 presents the basic characteristics covered by the studies of the population according to the data of 2017.

Table 2

The basic elements forming the characteristics of population of farms under the observation of the Polish FADN in 2017

	Groups of farms	% in the FADN population	Average UAA (ha)	Economic size (EUR thousand)	Labour inputs in total (AWU)	One's own labour inputs (FWU)	Value of production (PLN thousand/farm)	Share in the production of the population under the FADN observation (%)	Income from the family farm (PLN thousand/farm)	Farmers' income from work (PLN thousand/farm)
by economic size	very small	37.6	8.3	6.4	1.2	1.2	31.2	10.3	9.5	-0.6
	small	42.2	15.4	16.0	1.6	1.5	77.0	28.6	31.1	14.0
	medium small	13.1	26.8	36.0	1.9	1.7	184.1	21.2	80.2	51.4
	medium large	4.9	44.1	68.7	2.2	1.9	370.9	16.0	151.2	107.3
	large and very large	2.2	81.6	206.6	3.8	1.9	1248.9	23.9	345.8	267.6
by production type	field crops	24.3	21.0	16.9	1.5	1.3	93.0	19.9	38.8	18.5
	horticultural	8.4	8.2	29.7	2.1	1.4	149.4	11.0	45.8	33.6
	bovine animals	18.8	20.2	25.6	1.7	1.6	129.1	21.3	63.8	41.1
	pigs and poultry	3.9	20.4	82.0	2.0	1.6	531.8	18.2	123.8	96.5
	mixed	44.6	14.9	15.9	1.5	1.5	75.0	29.6	26.9	10.5
IN TOTAL/ FADN population on average		728 097	17.0	21.7	1.6	1.5	113.6	100.0	42.1	23.5

Source: own elaboration based on the FADN data.

In terms of the economic size in the population of farms under the FADN observation, very small (EUR 4[5]-8 thousand SO[6]) and small (EUR 8-25 thousand SO) entities with a standard output at the level of EUR 6.4 thousand and EUR 16 thousand, respectively dominate. Small and very small farms in total constitute almost 80% of the whole represented population, although, at the same time, their share in the value of production does not exceed 40% in total. The share of large and very large entities in the general number of farms was at the level of about 2.2%, although, at the same time, their contribution to the production of the sector was over nine times higher and reached almost 24%. Differences in the level of workloads correspond to the economic size of farms, but labour inputs in subsequent classes of the economic size increase much slower than the value of production.

As for the type of production criterion what dominated in the surveyed population were mixed farms constituting almost 45% of all entities. However, this group generated less than 30% of production value and was on average characterised by smaller area than the average for the whole population. Entities with the type field crops constituted almost 25% of all represented farms. The share of bovine farms was below 19%, horticultural farms – a little below 8%. There was the lowest number of farms specialised in breeding of granivores (4%). In the case of the abovementioned groups one can observe significantly smaller discrepancies between the share in the number of farms and the share in the total production compared to the mixed farms. In the surveyed population the average income from the family farm (SE 420) was at the level of PLN 42.1 thousand. However, very large differences in this regard between the distinguished groups must be emphasized. Special attention should be paid to discrepancies in the size of income between extreme groups of economic size – on very small farms the income from the family farm was at the level of less than PLN 10 thousand/farm, while for large and very large farms it was PLN 345 thousand/farm.

More detailed analysis of results points to the asymmetric distribution of the average income in the surveyed population (Fig. 1 and 2).

[5] According to FADN, in the ES6 classification the class "very small" includes farms from the SO value at the level of EUR 2 thousand. However, in Poland the decision was made to incorporate farms with the SO value at the level of at least EUR 4 thousand into the FADN population.

[6] SO – Standard Output – is defined as the average farming value of a particular agricultural activity (plant or animal) obtained over 5 years from a hectare of land or a head of livestock during a year in the farming conditions average for a given region (FADN, 2018).

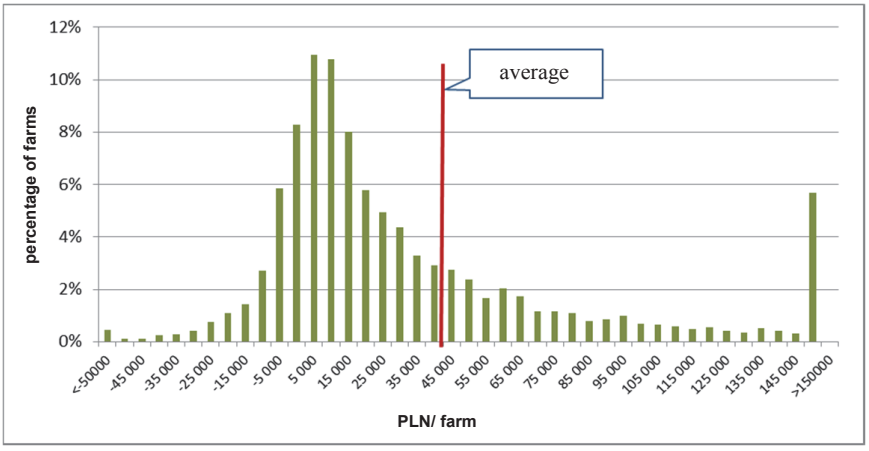

Fig. 1. Distribution of the value of income from the farm.
Source: own elaboration based on the FADN data.

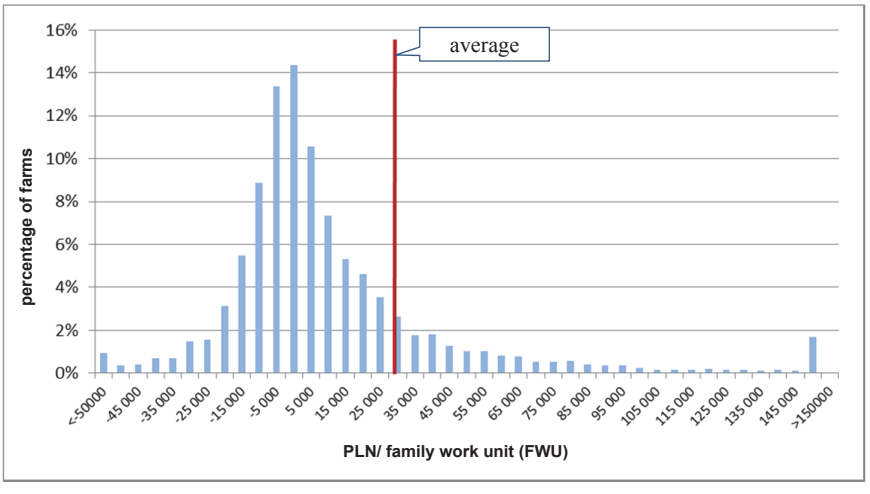

Fig. 2. Distribution of the value of farmers' income from work per farm (2017).
Source: own elaboration based on the FADN data.

Both in terms of the income from the farm and the farmers' income from work, entities with income which is significantly lower than the average values, dominate. The asymmetric distribution of analysed values results from the area structure of farms and its polarisation. As Niezgoda (2009) emphasizes, the problem of the income differentiation in agriculture has both economic and social consequences. From the social point of view the high differentiation of the income in agriculture (in particular very low income of farmers) is a negative phenomenon, but in economic terms it should become a factor stimulating structural changes. Taking into consideration the instability of production conditions for agriculture, the level of income was further assessed, including multi-annual observations (Table 3).

Table 3

Farmers' income from work in relation to the income from the family farm (SE 420)

The relation of farmers' income from work to the income from the family farm	Groups of economic size	year											
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	very small	0.49	0.49	[a]n.i.	0.22	0.44	0.33	0.04	0.13	n.i.	n.i.	n.i.	n.i.
	small	0.59	0.51	0.13	0.35	0.56	0.52	0.36	0.41	0.28	0.39	0.38	0.45
	medium small	0.65	0.58	0.26	0.42	0.66	0.63	0.52	0.57	0.50	0.57	0.58	0.64
	medium large	0.72	0.67	0.42	0.55	0.71	0.68	0.61	0.65	0.62	0.62	0.64	0.71
	large and very large	0.77	0.77	0.53	0.67	0.77	0.74	0.68	0.76	0.73	0.75	0.76	0.77
	on average	0.65	0.60	0.26	0.44	0.60	0.56	0.42	0.53	0.44	0.49	0.51	0.56

[*] n.i. – negative income

Source: own elaboration based on the data from the FADN sample and GUS data.

The income from work in relation to the income from the family farm represented on average around 55% with the range of variation from about 26% to 65%. In this case one can observe that the smaller is the difference, the higher is the absolute value of income.

Table 4 presents the relation of the income from the family farm and the farmers' income from work in reference to the average remuneration outside agriculture.

Table 4

Relation of the income from the family farm (SE 420) and the farmers' income from work counted per family work unit (FWU) to the average net remuneration in the national economy

Categories of income	year											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
The income from the family farm (SE 420) per family work unit (FWU) in relation to the average net remuneration	1.04	1.02	0.65	0.63	0.86	0.88	0.86	0.84	0.72	0.69	0.69	0.79
Farmers' income from work per family work unit (FWU) in relation to the average net remuneration	0.67	0.61	0.17	0.28	0.52	0.49	0.36	0.44	0.32	0.34	0.35	0.44

Source: own elaboration based on the data from the FADN sample and GUS data.

For the whole period of observation the established farmers' income from work was on average at the significantly lower level than the average remuneration in the national economy. Moreover, one can observe that although in the analysed period the average remuneration in the national economy rose by about 5.7% on average per annum, in the case of the farmers' income from work calculated per family work unit (FWU) the annual average increase amounted to only about 1.2%, with a high variability between particular years (Fig. 3). At the same time, it is worth pointing out that the average labour productivity on farms calculated per FWU and AWU rose by 13% on average per annum. This indicates that farmers participated only in part in the division of revenues generated from the increase in their labour productivity.

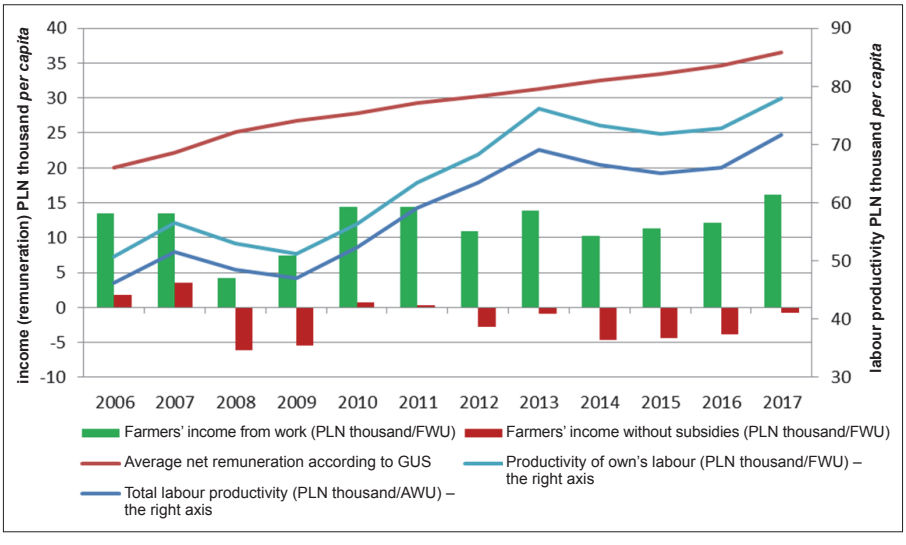

Fig. 3. The average farmers' income from work and labour productivity on individual farms compared to the productivity and average remuneration in the economy.

Source: own elaboration based on the data from the FADN sample.

Taking into consideration the observed trends, the attention should be paid to the persistent and even deepening differences between particular groups of farms (Fig. 4).

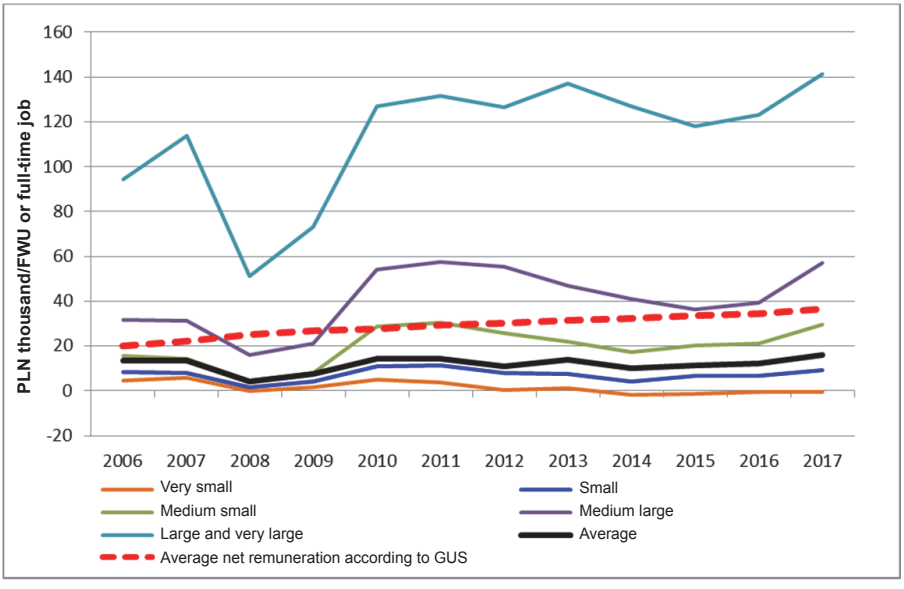

Fig. 4. Farmers' income from work calculated per family work unit (FWU) by groups of economic size compared to the average remuneration in the national economy.
Source: own elaboration based on the FADN data.

Quite clear upwards trend of agricultural income per work unit can be observed on average only in the group of large, very large and medium large farms. Moreover, farms from these groups reach higher income than the average remuneration in the national economy calculated per unpaid work unit, and the pace of increase in the farmers' income from work on these farms is higher than the increase in the average net remuneration. Although these farms manufacture over 40% of value of agricultural production, they constitute only 7.1% in the total number of individual farms under the FADN observation. In the case of larger farms the breakdown in income in 2008-2009 was significantly stronger, which may be linked to the economic crisis. On farms, which are smaller and less connected with the market, such sizeable fluctuations in economic results in that period were not observed.

Figure 5 illustrates the existence of strong connection of the income from work with the level of labour productivity.

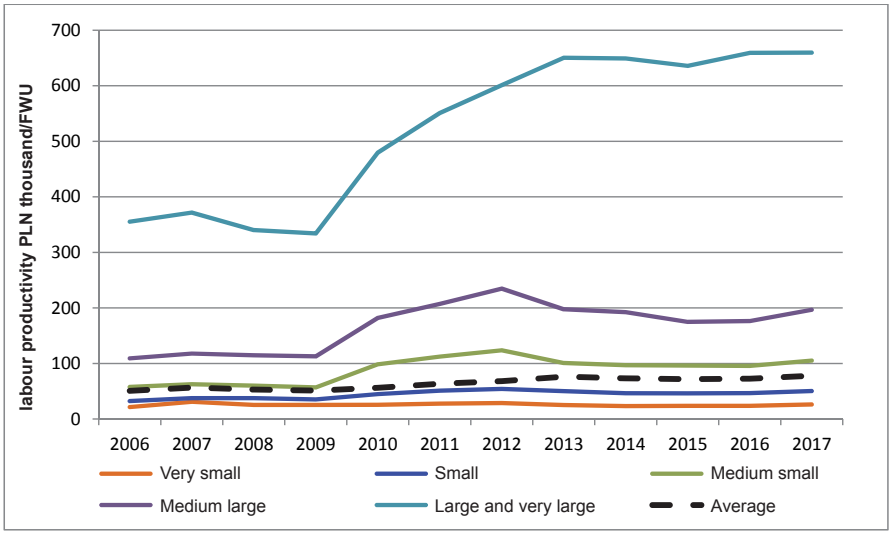

Fig. 5. Labour productivity calculated per family work unit (FWU) by groups of economic size of farms.

Source: own elaboration based on the FADN data.

In comparison to the remaining groups of farms, large and very large farms stand out due to the level and the growth of labour productivity. Furthermore, medium large and medium small farms are characterised by labour productivity above the average for the entire population of farms in Poland. On other farms, over the whole analysed period labour productivity was stagnating and was below the average, pointing to the key problem of the scale and use of the labour factor in this group of farms, from the perspective of the discussion concerning the parity income.

Much less unequivocal trends of changes in the farmers' income from work may be observed in the case of division by types of production (Fig. 5). The range of fluctuations of the average income from work per family human labour unit was significantly visible in all types of production. The most stable income situation was observed in the most numerous group of mixed farms, although, at the same time, the average value of income was the lowest in this case. A little higher income was observed in the type bovine and horticultural farms. Since 2012 (after a few years of significant improvement) there has been a breakdown in the income generated by farms of the field crops type. Practically, since 2012 the farmers' income from work calculated *per capita* (FWU) in all types of production, apart from granivores, has been lower than the average remuneration in the national economy.

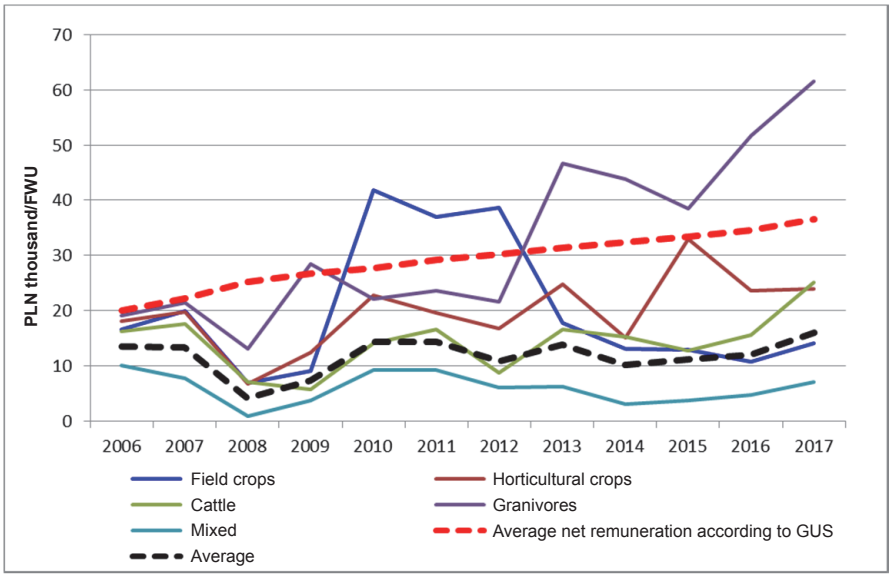

Fig. 6. Farmers' income from work calculated per family work unit (FWU) by types of production compared to the average remuneration in the national economy.

Source: own elaboration based on the FADN data.

Comparing the income obtained by farms from groups of economic size and types of production it is worth emphasizing the differences in the average labour productivity estimated as the value of production per family human labour unit.

According to the data presented in Fig. 6, the total labour productivity (both calculated per unit of one's own work as well as FWU and AWU total work) is clearly related to the size of an farm. In the group of the smallest farms it is many times lower than in medium large or large farms. It is worth noting that in the group of large and very large farms family human labour productivity is almost two times higher than the total labour productivity, which results from the significant share of hired labour force.

Taking into consideration the division by production types (Fig. 8) one can state that the group of farms with granivores (pigs and poultry) is characterised by the highest productivity, while on mixed farms it is the smallest.

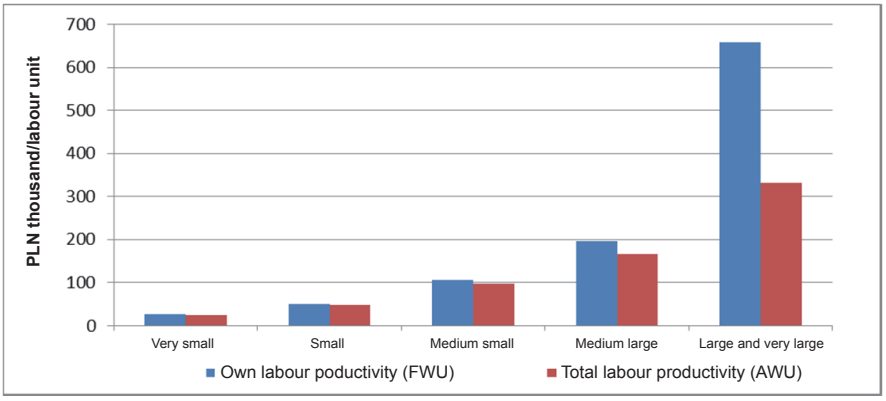

Fig. 7. Average labour productivity by groups of economic size (2017).
Source: own elaboration based on the FADN data.

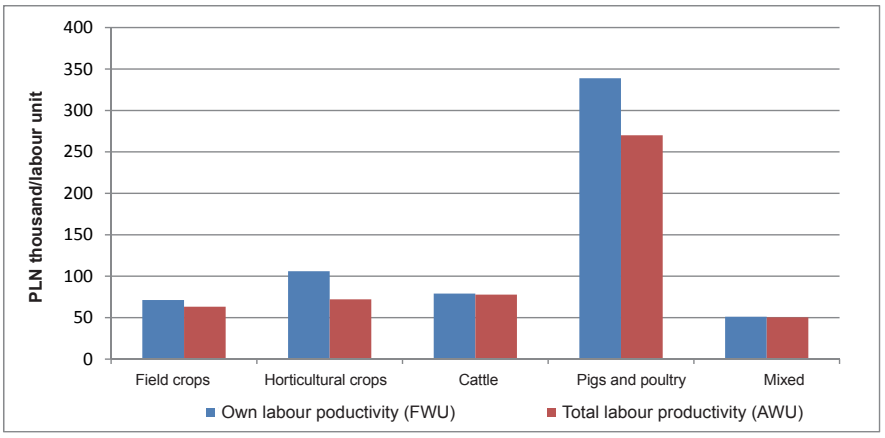

Fig. 8. Average labour productivity by groups of production type (2017).
Source: own elaboration based on the FADN data.

Analysing the problem of agricultural income one should pay attention to the importance of financial support as part of CAP. As it was mentioned earlier, the paradigm of multifunctional agriculture currently dominant in the Common Agricultural Policy assumes that farmers are remunerated from public funds for socially desired activities (providing public goods, e.g. nature preservation). This is why subsidies in current conditions should be treated as an integral part of their income. The results of simulation (Fig. 8 and 9) for the "without subsides" variant indicate the scale of dependence of agricultural income on external transfers. The reduction in income (while preserving other factors at the same level) by the value of subsidies would cause that in the majority of surveyed years the farmers' income from work calculated per FWU was on average at the level below zero. Only large and medium large farms and in some years medium-small ones would note a positive

farmers' income from work (Fig. 8). Applying the division by types of production (Fig. 9) one can observe that most often the lack of subsidies would translate into the negative income on average in mixed, bovine and cereal farms.

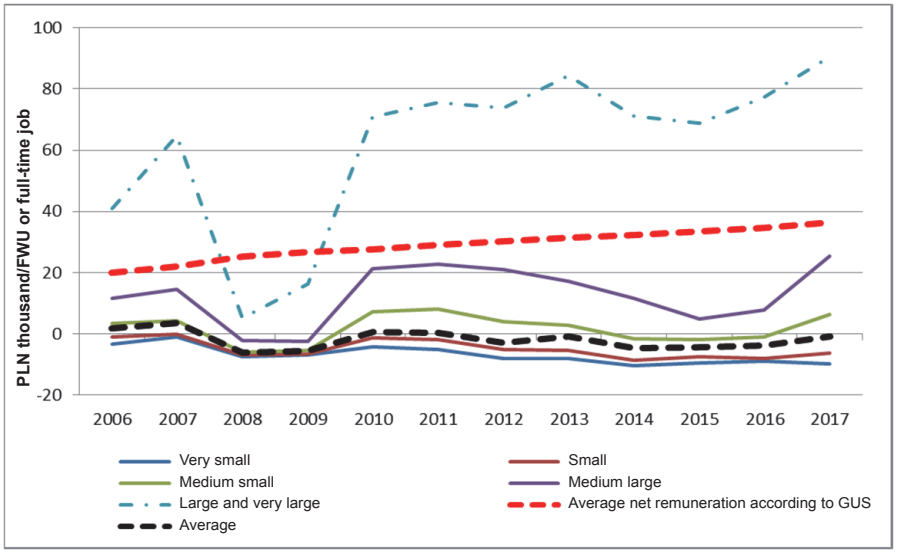

Fig. 9. Average farmers' income from work in the "without subsidies" variant by groups of economic size.

Source: own elaboration based on the FADN data.

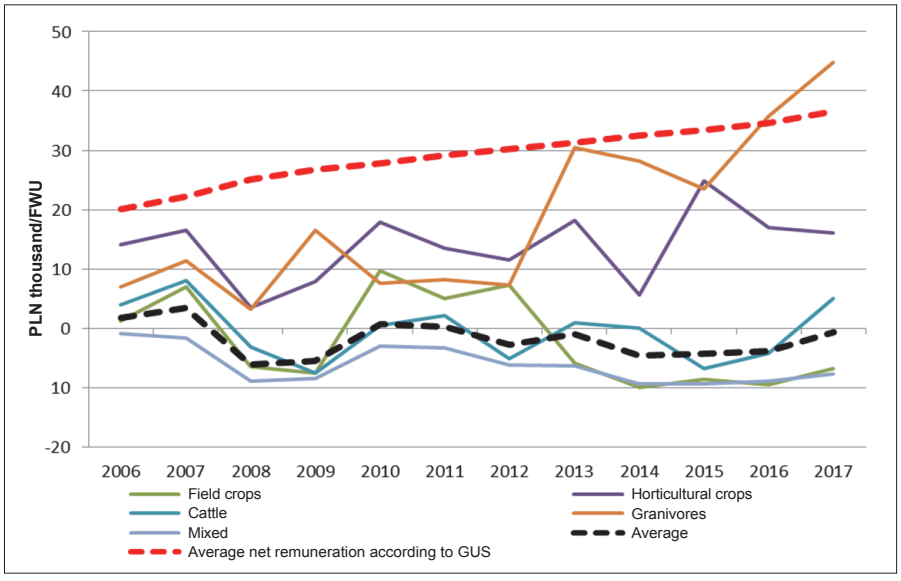

Fig. 10. Average farmers' income from work in the "without subsidies" variant by types of production.

Source: own elaboration based on the FADN data.

The comparison in the "without subsidies" variant does not change the identified dependencies. It only emphasizes the scale and importance of the financial support for agriculture from public funds. Generally speaking, one can state that the average growth of labour productivity in agriculture follows the increase in remuneration in the economy, but it is not accompanied by the proportional increase in the payment for the farmer's work.

Summary and conclusions

Agriculture is an economic activity characterised by specific conditions related to the biological nature of production processes, dependence on the land factor and the weather. Often negative impact of these factors results, *inter alia*, in fluctuations in the size of agricultural production and strong income volatility. Due to the fact that agriculture plays a strategic role in providing food security, the agricultural policy in most countries around the world offers financial support for providing the viability of this sector.

In the European Union until the 1990s the paradigm of the "dependent" agriculture dominated in the agricultural policy, which by assumption was unable to preserve economic viability without the public support. Due to the need of providing food security, this was a strong argument for supporting the income through various forms of market intervention (Zawojska, 2006; Coleman, Grant and Josling, 2004; Majewski et al., 2018). The processes of international agricultural trade liberalisation commenced in the 1980s – and the awareness of problems related to the environmental impact of agriculture raising from the 1990s – caused that in the discussion concerning the support of agricultural income the importance of non-production functions of agriculture was more and more emphasized, in particular in generating public goods. This justifies the remuneration of farmers for their engagement in work for the natural environment (e.g. activities funded as part of agri-environmental programmes) and the more and more important fight against climate change (Józwiak, Zieliński and Ziętara, 2016).

This direction of changes in the financial support for the sector of agriculture is in line with the view that the responsible assessment of the income problem in the contemporary agriculture requires looking at the issue related to the agricultural income through the prism of Sustainable Growth paradigm, providing for the integration of economic, environmental and social purposes (Sadok et al., 2008; United Nations, 2015; Bardy, Rubens and Massaro, 2015; O'Donoghue et al., 2016). Adopting a perspective which is wider than only a financial one, lets us notice that farms are an essential element of rural areas because they produce food (providing food security) and implement environmental functions which are socially desired (Małażewska and Wąs, 2015). However, the unsolved problem related to important handicaps of some agricultural policy instruments, such as for example the structure of support preferring the largest farms and unfavourable enough to solve social and economic problems in rural areas (Lovec, 2016; Wąs and Kobus, 2018). It can also raise the question related to the correctness of the valuation of public goods generated by farmers and adequacy of benefits

for pro-environmental and pro-social activities. In connection with the rational spending rule applicable in the EU, farmers are offered the lowest possible remuneration for which they will undertake to supply the level of public goods desired by the society. As a result, such support may lead mainly to covering costs of additional environmental activities taken by farmers and influencing the increase in their income only to a small extent, in particular when calculated per family human labour inputs.

In the perspective of changes in the Common Agricultural Policy of the European Union the increasing support for manufacturing of public goods in the sector of agriculture does not mean the simultaneous increase in the amount of financial support, due to the declining share of benefits related to agricultural activity. However, in considerations concerning the farmers' income one cannot ignore the fact that for the majority of farmers the agricultural production is not the only possible source of income. This means that for many farmers the decline in agricultural income does not have to make the economic situation of the household worse (Zawalińska et al., 2015; Hill, 2015). Similarly, both the agricultural income from the farm and the management-related income do not reflect the disposable income of farmers' households, which is emphasized by DG Agriculture and Rural Development (2016). In the Polish agriculture realities, this issue is particularly important due to the existing fragmented area structure of farms and, despite of the significant financial support from public funds, dissatisfaction with the level of income gained by the majority of the agricultural community maintains.

In this context, the expectations concerning the level of farmers' income compared to the income of other professional groups appear. Usually such an assessment deals with the comparison of agricultural income from the farm to the average remuneration of hired employees in the economy, which is to indicate the level of income disparity. However, such an approach does not take into consideration the opportunity costs of land and capital, due to which in the conducted analyses the farmers' income from work was adopted for comparisons. It was estimated by reducing the income from the family farm by the opportunity cost of the land used and equity capital. In the dimension of cash flows, this category is not identical with the net remuneration of those working outside agriculture. The net salary corresponds to actual cash receipts, while the farmers' income from work is cleared from costs which are not expenses, thus cash at the farmer's disposal will be relatively higher than cash at the hired employee's disposal with the same level of remuneration for work. However, this account should include the fact that the disposable income on the farm is to meet not only the current needs of the farmer's family but also it conditions the possibility of at least the replacement of productive assets of the farm in a long period. The adoption of appropriate income categories constitutes one of the main methodological problems in the parity income analysis, similarly to the establishment of the group of individuals employed outside agriculture which is the most appropriate for comparisons. One can draw a conclusion concerning the need of looking for a more perfect methodology of studies in this area.

The results of analyses in this paper indicates that in the economic terms the average farmers' income from work is at a clearly lower level in Poland than the average net remuneration in the economy. Moreover, in the surveyed period remuneration in other sectors of economy was rising faster than gains in the agricultural income, despite of the fact that on average the increase in labour productivity on farms was higher and close to the increase in remuneration in the national economy.

The use of the average values with respect to the sector of agriculture with such fragmented structure of farms as it takes place in Poland blurs differences in shaping the economic phenomena on farms of various types of production and sizes. The low level of the parity income refers mainly to small and medium-small farms, while the income on medium large, large and very large farms exceeded the average level of the net remuneration in the national economy. At the same time, very large differences in the average labour productivity between the groups of economic size must be emphasized. In the light of these observations, it seems justified to state that the original source of the income problem in the Polish agriculture is not large enough scale of production which in the majority of farms leads to use simple, labour-intensive manufacturing techniques, and thus to the inefficient use of the labour factor. Large farms achieve satisfying economic results. Although they fluctuate year-on-year, this should be treated as a natural feature of the agricultural business. Small farms must obtain a part of income outside agriculture in order to provide the agricultural family with satisfying level of life. It must be treated as a fact that due to the fast technical progress and ongoing concentration processes, these farms, with the traditional directions of production, do not have an opportunity to achieve the income corresponding to the average remuneration in the economy and the expectation of achieving the so-called parity income is unjustified (it is a simple consequence of differences in labour productivity). The possible support of small farms should be conditioned by social factors and oriented towards obtaining additional revenues outside agriculture. Structural changes in the sector which should result in a significant increase in the economic growth of an average farm are the alternative for dual career. The existing discrepancies between the agricultural income and remuneration outside agriculture create a space for structural changes in agriculture constituting a natural and rational form of solving the problem of income inequalities. This simultaneously means that there is no fully objective justification for the concept of the parity income understood as striving for equalising the average income in agriculture with the income obtained outside this sector.

Financing

The study was prepared as part of the research project entitled "Measurement and assessment of economic efficiency of agricultural farms diversified with the level of compliance with the paradigm of Sustainable Development with the use of the modified DEA (Data Envelopment Analysis) method" funded by the National Science Center No. 2015/19/B/HS4/0227.

References

Adelaja, S., Lake, M.B., Pennington, S. (2004): *Agricultural Viability in the State of Michigan*. Presentation at Michigan Land Use Summit, Michigan State University, February 2004.

Aggelopoulos, S., Samathrakis, V., Theocharopoulos, A. (2007). Modelling the Determinants of the Financial Viability of Farms. *Journal of Agriculture and Biological Sciences, 3*(6), pp. 896-901.

Baer-Nawrocka, A. (2013). *Kwestia parytetu dochodów rolniczych a polityka rolna Unii Europejskiej*. IX Kongres Ekonomistów Polskich.

Bardy, R., Rubens, A., Massaro, M. (2015). The Systemic Dimension of Sustainable Development in Developing Countries. *Journal of Organisational Transformation & Social Change, 12*(1), pp. 22-41.

Cochrane, W. (1958). *Farm Prices: Myth and Reality*. St. Paul: University of Minnesota Press.

Coleman, W.D., Grant, W., Josling, T.E. (2004). *Agriculture in the New Global Economy*. Cheltenham: Edward Elgar.

Commission of the European Communities (1985). Income Disparities in Agriculture in the Community. Green Europe 208. The Commission, Brussels.

Commission of The European Communities (1997). Agenda 2000. For a Stronger and Wider Union. Brussels, 15.07.1997. COM(97) 2000 final.

Czyżewski, A. (2007). *Uniwersalia polityki rolnej w gospodarce rynkowej: ujęcie makro- i mikroekonomiczne*. Poznań: Wydawnictwo Akademii Ekonomicznej w Poznaniu.

Czyżewski, A. (2016). Kwestia agrarna we współzesnej ekonomii – problemy i wyzwania. In: P. Litwiniuk (ed.), *Kwestia agrarna. Zagadnienia prawne i ekonomiczne* (pp. 441-460). Warszawa: Wydawnictwo FAPA.

Czyżewski, B. (2017). *Kierat rynkowy w europejskim rolnictwie*. Warszawa: PWN.

DG Agriculture and Rural Development (2016). Agricultural and farm income. Retrieved from: https://ec.europa.eu/agriculture/sites/agriculture/files/statistics/facts-figures/agricultural--farm-income.pdf

Ecorys (2017). Modernising and Simplifying The Common Agricultural Policy. Summary of the results of the Public Consultation. Komisja Europejska, DG for Agriculture and Rural Development.

FADN (2018). Wyniki standardowe uzyskane przez gospodarstwa rolne uczestniczące w Polskim FADN.

Frawley, J.P., Commins, P. (1996): The Changing Structure of Irish Farming: Trends and Prospects. *Rural Economy Research*, 1. Dublin: Teagasc.

Gołasa, P., Litwiniuk, P., Chlebicka, A., Podstawka, M. (2017). *Dochody gospodarstw rolnych*. Warszawa: Wydawnictwo SGGW.

Goraj, L. Mańko, S. (2011). Model szacowania pełnych kosztów działalności gospodarstw rolnych. *Zagadnienia Ekonomiki Rolnej, No. 3*(328), pp. 28-58.

Grzelak, M.M. (2016). Dochody rozporządzalne gospodarstw rolnych na tle dochodów innych grup społeczno-ekonomicznych w Polsce w latach 2003-2014. *Annales Universitatis Mariae Curie-Skłodowska*, sectio H Oekonomia, Vol. 50, No. 4, pp. 139-149.

GUS (2006-2017). Komunikaty Prezesa Głównego Urzędu Statystycznego w sprawie przeciętnego wynagrodzenia w gospodarce narodowej. Warszawa: GUS.

Hennessy, T., Shresthra, S., Farrell, M. (2008): Quantifying the viability of farming in Ireland: can decoupling address the regional imbalances. *Irish Geography, 41*(1), 29-47.

Hill, B. (2013). *Farm Incomes, Wealth and Agricultural Policy: Filling the CAP's Core Information Gap*. CABI, Berkeley Hill 2012.

Hill, B. (2015). Comparison of Farmers' Incomes in the EU Member States. European Parliament's Committee on Agriculture and Rural Development. Brussels.

Józwiak, W., Zieliński, M., Ziętara, W. (2016). Susze a sytuacja polskich gospodarstw rolnych osób fizycznych. *Zagadnienia Ekonomiki Rolnej, No. 1*(346), pp. 42-56.

Józwiak, W. (2016). Zagrożenia przyrodniczo-klimatyczne dla gospodarstw rolnych osób fizycznych na tle ich sytuacji dochodowej. *Zagadnienia Ekonomiki Rolnej, No. 3*(348), pp. 24-40. Retrieved from: https://doi.org/10.5604/00441600.1218188.

Kisielińska, J. (2018). Dochody z gospodarstwa rolnego a wynagrodzenia z pracy najemnej w krajach UE. *Problemy Rolnictwa Światowego, Vol. 18*(XXXIII), Issue 2, pp. 130-139.

Kleinhanss, W. (2015). Konkurencyjność głównych typów gospodarstw rolniczych w Niemczech. *Zagadnienia Ekonomiki Rolnej, No. 1*(342), pp. 25-41.

Komisja Europejska (2017): CAP post-2013: Key graphs & figures. Share of direct payments and total subsidies in agricultural factor income.

Lovec, M. (2016). *The European Union's Common Agricultural Policy Reforms. Towards a Critical Realist Approach*. Palgrave, Macmillan.

Majewski, E., Sulewski, P., Wąs, A. (2018). *Ewolucja Wspólnej Polityki Rolnej w kontekście wyzwań Trwałego Rozwoju.* Warszawa: Wydawnictwo SGGW.

Majewski, E., Wąs, A. (2015). Wyniki ekonomiczne gospodarstw rodzinnych w Polsce po 2004 roku. In: A. Chlebicka (ed.), *Ekonomiczne mechanizmy wspierania i ochrony rolnictwa rodzinnego w Polsce i innych państwach Unii Europejskiej* (pp. 193-210). Warszawa: MRiRW, FAPA.

Małażewska, S., Wąs, A. (2015). Determinanty wartości krajobrazu rolniczego jako dobra publicznego. *Roczniki Naukowe Ekonomii Rolnictwa i Rozwoju Obszarów Wiejskich*, Vol. 102, issue 4, pp. 26-40.

Niezgoda, D. (2009). Zróżnicowanie dochodu w gospodarstwach rolnych oraz jego przyczyny. *Zagadnienia Ekonomiki Rolnej, No. 1*(318), pp. 24-37.

O'Donoghue, C., Devisme, S., Ryan, M., Conneely, R., Gillespie, P., Vrolijk, H. (2016). Farm economic sustainability in the European Union: A pilot study. *Studies in Agricultural Economics, 118*(2016), pp. 163-171.

Poczta-Wajda, A. (2017). *Polityka wspierania rolnictwa a problem deprywacji dochodowej rolników*. Warszawa: PWN.

Podstawka, M. (2016). Kwestia agrarna – niektóre jej przejawy i przyczyny. In: P. Litwiniuk (ed.), *Kwestia agrarna. Zagadnienia prawne i ekonomiczne* (pp. 477-494). Warszawa: Wydawnictwo FAPA.

Przekota, G. (2010). Reakcja rynkowych stóp procentowych na zmiany stopy redyskonta weksli. *Zeszyty Naukowe Wydziału Nauk Ekonomicznych Politechniki Koszalińskiej*, No. 14, pp. 93-105.

Rembisz, W. (2016). Relacje wynagrodzenia i wydajności czynnika pracy w rolnictwie na tle gospodarki narodowej i jej sektorów w Polsce w okresie 2005-2012. *Wieś i Rolnictwo*, *No. 2*(171), pp. 41-58.

Runowski, H. (2016). Dochody rolnicze – źródło społeczno-ekonomicznych kontrowersji. In: P. Litwiniuk (ed.), *Kwestia agrarna. Zagadnienia prawne i ekonomiczne* (pp. 461-476). Warszawa: Wydawnictwo FAPA.

Rynek ziemi rolniczej. Stan i perspektywy (2007-2018). Analizy Rynkowe. Warszawa: IERiGŻ-PIB, ARR, MRiR.

Sadok, W., Angevin, F., Bergez, J., Bockstaller, Ch., Colomb, B., Guichard, L., Reau, R., Dore, T. (2008). Ex ante assessment of the sustainability of alternative cropping systems: implications for using multi-criteria decision-aid methods. *A review. Agron. Sustain. Dev.* 28, pp. 163-174.

Savickienė, J., Miceikienė, A., Jurgelaitienė, L. (2015). *Assessment of economic viability in agriculture*. Proceedings of the Strategica International Academic Conference 'Local versus Global', Bucuresti, Romania, 29-30 October 2015, 411.

Sielska, A., Rembisz, W. (2015). Wydajność pracy a dochody producentów rolnych. *Studia ekonomiczne*, No. 235, pp. 208-221.

Skarżyńska, A. (2011). Koszty ekonomiczne produkcji mleka – metodyczne ujęcie rachunku oraz wyniki badań. *Zagadnienia Ekonomiki Rolnej, No. 3*(328), pp. 143-161.

Strategia na rzecz odpowiedzialnego rozwoju do roku 2020 (2017). (Z perspektywą do 2030).

Sztompka, P. (2012). *Socjologia. Analiza społeczeństwa*. Kraków: ZNAK.

Traktaty rzymskie – Traktat ustanawiający Europejską Wspólnotę Gospodarczą. 25.03.1957 r.

United Nations (2015). Integrating the three dimensions of sustainable development: A framework and tools. Greening of Economic Growth Series.

Vrolijk, H.C.J., De Bont, C.J.A.M., Blokland, P.W., Soboh, R.A.M.E. (2010). *Farm Viability in the European Union: Assessment of the Impact of changes in farm payments.* Report 2010-011. Den Haag: LEI-Wageningen UR.

Vrolijk, H.C.J., Poppe, K.J. (2008). Income volatility and income crises in the European Union. In: M.P.M. Meuwissen, M.A.P.M. van Asseldonk, R.B.M. Huirne (ed.), *Income Stabilisation in European agriculture. Design and economic impact of risk managment tools*. Wageningen: Wageningen Academic Publishers.

Ward, N. (1993).The agricultural treadmill and the rural environment in the post-productivist era. *Sociologia Ruraalis*, vol. 33, Issue 3-4, pp. 348-364.

Wąs, A., Kobus, P. (2018). Implikacje mechanizmu degresywności płatności bezpośrednich w WPR 2020+ w Polsce. In: M. Soliwoda (ed.), *Subsydia a ekonomika, finanse i dochody gospodarstw rolniczych (4)* (pp. 58-88). Monografie Programu Wieloletniego 2015-2019, No. 77. Warszawa: IERiGŻ-IB.

Wiatrak, A.P. (1981). Dochody ludności rolniczej (tworzenie, podział, funkcje). *Ruch Prawniczy, Ekonomiczny i Socjologiczny,* XLIII, issue 1, pp. 195-206.

Wilkin, J. (1986). *Współczesna kwestia agrarna*. Warszawa: PWN.

Wysokiński, M., Klepacki, B. (2013). Poziom i parytet dochodów gospodarstw mlecznych o różnym stopniu koncentracji produkcji. *Zagadnienia Ekonomiki Rolnej, No. 4*(337), pp. 60-73.

Zawalińska, K., Majewski, E., Wąs, A. (2015). Długookresowe zmiany w dochodach z polskiego rolnictwa na tle krajów UE. *Roczniki Naukowe SERiA*, Vol. 27, issue 6, pp. 346-354.

Zawojska, A. (2006). Paradygmaty dla współczesnego rolnictwa – protekcjonizm kontra liberalizm. *Roczniki Nauk Rolniczych*, Seria G: Ekonomia Rolnictwa, Vol. 92, No. 2, pp. 62-72.

Zegar, J.S. (2008). *Dochody w rolnictwie w okresie transformacji i integracji europejskiej*. Warszawa: IERiGŻ-PIB.

Ziętara W., Zieliński, M. (2012). Efektywność i konkurencyjność polskich gospodarstw rolniczych nastawionych na produkcję roślinną. *Zagadnienia Ekonomiki Rolnej, No. 1*(330), pp. 40-61.

Ziętara, W. (2014). Konkurencyjność Polskich Gospodarstw Rolniczych. *Roczniki Naukowe SERiA*, Vol. 16, issue 1, pp. 257-262.

METODYCZNE I PRAKTYCZNE ASPEKTY RACHUNKU DOCHODU PARYTETOWEGO W POLSKIM ROLNICTWIE

Abstrakt

Problematyka dochodów rolników stanowi jedno z częściej dyskutowanych zagadnień ekonomiki rolnictwa. Szczególne zainteresowanie koncentruje się na problemie tzw. dochodu parytetowego. W opracowaniu dokonano oceny wysokości dochodu rolników z pracy na tle przeciętnego wynagrodzenia w gospodarce narodowej w Polsce. Analizą objęto gospodarstwa indywidualne znajdujące się w polu obserwacji Polskiego FADN. Wykorzystano kategorie dochodu z rodzinnego gospodarstwa rolnego oraz oszacowany dochód z pracy własnej. Dochody rolników z próby FADN zestawiono z przeciętnym wynagrodzeniem netto według GUS. Analiza, obejmująca lata 2006-2017, wykazała istnienie wyraźnej i pogłębiającej się różnicy pomiędzy przeciętnym dochodem z pracy w gospodarstwie (obliczonym po uwzględnieniu alternatywnych kosztów ziemi i kapitału) a przeciętnym wynagrodzeniem w gospodarce narodowej. Jednocześnie zaobserwowano znaczące różnice w poziomie dochodu rolniczego w przeliczeniu na jednostkę pracy własnej w zależności od wielkości ekonomicznej gospodarstwa. Jedynie gospodarstwa duże, średnio duże i bardzo duże zapewniały wynagrodzenie pracy na poziomie wyższym niż przeciętnie w gospodarce. Istniejące różnice w poziomie dochodu korespondują z poziomem wydajności pracy, co sugeruje, że jednym ze sposobów ograniczenia problemu dochodowego w polskim rolnictwie są zmiany strukturalne prowadzące do wzrostu przeciętnej wielkości ekonomicznej gospodarstw.

Słowa kluczowe: dochody rolnicze, parytet dochodowy, wynagrodzenie czynnika pracy, wielkość ekonomiczna gospodarstw, wydajność pracy.

Accepted for print: 10.06.2019.