Social Entrepreneurship Review
2025, Vol. 2

10.15678/SER.2025.2.02

Income as a Selected Indicator of the Social Economy in Human Life

Barbara Chmielewska

Abstract: **Background:** Income constitutes a very important indicator in the social economy. The level and sources of income determine the level and quality of life of rural inhabitants.
Research objectives: The research aimed to examine the impact of Poland's accession to the European Union on changes in the income levels of households across basic socio-economic groups, as well as rural and urban residents, during the period 2004–2023.
Research design and methods: An examination was conducted of the results of the household budgets conducted on an annual basis by the Statistics Poland (GUS) between 2004 and 2023. The determination of changes and income relationships was achieved by employing the index of variation, the coefficient of variation (Vi), and Spearman's rank correlation.
Results: There was a decrease in income disparities between farming families and non-farming families, which indicates a process of income convergence. A negative annual dynamic of changes in income was observed only in the case of farmers' income. Farmers' incomes also displayed the highest variability among the studied groups.
Conclusions: Poland's integration with the European Union (2004–2023) was a period in which factors favorable to the growth of agricultural incomes prevailed. Despite this improvement, families associated with agriculture displayed lower income levels, worse living conditions, and a higher risk of poverty and social exclusion compared to other socio-economic groups.
Keywords: income inequalities, farmers' households, EU integration, social economy, Poland
JEL Codes: D; D1; D71; J24

Suggested citation:
Chmielewska, B. (2025). Income as a selected indicator of the social economy in human life, *Social Entrepreneurship Review*, *2*, 25–39. https://doi.org/10.15678/SER.2025.2.02

1. Introduction

Poland's accession to the European Union in 2004 positively influenced the standard and quality of life of rural residents. Their basic determinant was the change in the income level and its sources. Income is of great importance in shaping the standard and quality of life of every person. It influences their decisions regarding the fulfilment of needs, both basic for their existence, i.e., food, clothing, and housing conditions, and higher-order needs, important especially for the development of the whole family, such as access to social services, including health care and education for children, and modern communication technologies. Participation in culture and recreation, position on the labor market, and the state of the natural environment are also important.

The analysis concerned primarily changes in the level and structure of household income, as a basic factor important for the achievement of social economy goals. Income is a financial resource that one can use to purchase goods and services, which consequently impact

the ability to meet human needs and shape the conditions and quality of life. During Poland's integration with the EU, the impact of the social economy expanded. This came with a gradual improvement in the income situation of families. The greatest improvement concerned farming and rural families. The disparity in the level and quality of life between households living mainly from non-agricultural sources and those living mainly from farming was decreasing. We assessed the economic situation of households based on the results of research on the level and structure of income sources, trends in changes over time, and the comparison between socio-economic groups of households. The results of the research allowed for a general conclusion about the positive impact of Poland's membership in the EU on the agricultural sector and the standard of living in the countryside. This was indicated by the decrease in the income disparity between farmer households and other basic economic and social groups. However, the groups still display income differentiation.

2. Literature Review

The social economy is a sphere in which economic activity serves to achieve social goals. Social policy aims to secure the existence and basic material and non-material needs of individuals and families and to equalize the life chances of those groups of society that are economically inefficient and socially weaker. Social support is a complex network of interpersonal relationships that provides the individual with help, understanding, acceptance, and a sense of belonging. In practice, it manifests itself as emotional care, advice, material and physical assistance, and psychological support. Therefore, a very important area of activity encompasses obtaining funds for the implementation of social goals (Ministerstwo Rodziny, Pracy i Polityki Społecznej [Ministry of Family, Labor and Social Policy], 2025).

The resources acquired for the implementation of social goals can be immaterial and material. This article focuses on material issues, i.e., families' financial situation, because it determines the implementation of social economy tasks. The analysis covers the level and changes in household income, especially among farmers, during the period of Poland's integration with the European Union. The specification of the socio-economic group of farmers results from the specificity of this sector of the economy. Economists indicate that agriculture is a specific type of manufacturing activity, which in many segments is definitely different from industrial activity. Czyżewski and Poczta-Gajda (2011, p. 25) state that "agriculture, as a raw material branch, is distant from the final buyer in the chain of flows. It is not about spatial distance, but economic distance." Moreover, Woś (2000, p. 13) writes that "the competitive position of agriculture is 15–20% worse in relation to non-agricultural sectors of the national economy. This can also be interpreted as a measure of the disparity situation of agriculture or its competitive ability on the internal market." Czyżewski and Maruszczak (2005, p. 127) add that "the problem of depreciation of the agricultural sector by the market mechanism is manifested by the fact that agriculture does not realize the entire added value that it creates," and the market mechanism is not able to cope with the problems of agriculture, in particular the issue of peasant income. The negative effects of this state of affairs indicate that the agricultural sector itself, as a weaker partner compared to non-agricultural sectors in a market economy, needs various forms of support, particularly financial assistance. This applies to both farms and households (Czyżewski & Matuszczak, 2012; Chmielewska, 2004; Michna, 2002; Woś, 2003; Zegar, 2000).

Furthermore, the literature on the subject indicates that the agricultural support policy should also include the innovation process, because in the rapidly changing reality, it is neces-

sary to modernize production, which will help reduce costs toward the socially optimal level (Ruttan, Hayami, 1972).

Poland's integration with the EU impacted the economic, and social situation in Poland. Technical and social infrastructure in rural areas developed, which contributed to the creation of new jobs and improved the living standard of the rural population. This is a necessary and expected change. The situation of Poland's most numerous farms, i.e., small and medium-sized, improved significantly. As Chmielewska and Zegar (2004, p. 32) note, "these farms drew income from the cultivated land, from subsidies and from non-agricultural work on the rural labor market or in a nearby city. These may not have been fully satisfactory amounts, but they provided social security for many smaller, poorer farmers."

As Klepacki (2005) notes, the financial situation of farming families is correlated with the farms' structure. He predicted that

> In Polish agriculture alone, three groups of farms will develop. One is small farms located near non-agricultural workplaces, run by people who do not associate their future with agriculture, although they treat their farms as a place to live, with a certain sentiment, or as an investment of capital. The second group are intensive farms, with a growing area, investing, run by increasingly better educated farmers, open to knowledge, closely linked to the market or processing. The third group will be large-area farms, engaged in simplified large-scale production, easy to mechanize, requiring small labor inputs, e.g., production of cereals, oil plants, and legumes (technologically uniform) (Klepacki, 2005, p. 85).

According to Adamowicz (2005, p. 122), "in agriculture, we can expect a more distinct formation of the following three sectors: commercial agriculture, multifunctional agriculture and social agriculture." Twenty years of integration have confirmed that changes in the agrarian structure of Polish agriculture follow the predicted trends.

In Poland, a significant number of families with low income from the farm remain connected with semi-subsistence, unprofitable farms. Agricultural economists warned that, without securing adequate income for the agricultural population, each farmer would have to seek work outside their farm. Therefore, in connection with the agricultural sector, multi-activity has an important role to play as an additional source of income for families connected with agriculture (Błąd, 2011; Turowski, 1992). Wilkin (2009) even drew attention to the need to "take care" of the multifunctionality and multi-activity of the agricultural sector and rural areas.

In shaping the income situation of the population, shaping the non-agricultural labor market is important. This creates the possibility for rural residents to acquire new skills to perform various, often new professions. In the social economy, there will be an "increasing demand" for multi-skilling as a potential source of supplementing the modest family budget, as well as a factor that promotes social and professional reintegration, providing social services and counteracting social exclusion. The level of infrastructure in residents' local areas and immediate surroundings will be the primary determinant of their income and social integration (Chmielewska, 2024; Chmielewska & Zegar, 2024; Zegar, 2011).

Multifunctionality and multi-professionality constitute part of the process of adaptation of farming families to the changing environment and serve as an opportunity for them to achieve income and social sustainability. Farmers, especially those with small or medium-sized areas, should not be satisfied with the production of agricultural raw materials only. They should expand the scope of their activities not only to include services, but above all to actively participate in the subsequent stages of refining their production (Chmielewska, 2013).

3. Research Method and Material

The basic source of empirical data was the results of household budget studies. The annual household budget surveys (HBS) by Statistics Poland (GUS) serve as a source of information on the level and structure of income and expenditure of the surveyed households, food consumption, housing conditions, and subjective assessment of the financial situation. Based on the results, one may conduct various analyses on the living conditions of the population and identify factors influencing the differentiation of the financial situation of specific groups of households. The subjective scope of the HBS includes, among others, two groups of households largely related to agricultural activity. The first of them are households in which the dominant income comes from agriculture (the social and economic group – farmers). The second group is households that obtain any income from using a farm (the key condition is the fact that they use a farm, and not belonging to this socio-economic group distinguished on the basis of the criterion of the type of dominant income).

The category examined was disposable income (household's available income). It is intended for expenses and an increase in savings, so it is a basic indicator determining the level and quality of life. The structure of its sources was the basis for dividing households into socio-economic groups. The criterion was the exclusive or predominant (over 50%) source of income: for employees, it was hired work, for farmers, an individual farm, for the self-employed – self-employment outside agricultural activity, for retirees and pensioners – social benefits, mainly retirement or disability pensions (GUS, Household budgets, 2024).

Disposable income is the sum of current household income from individual sources reduced by income tax advances. Disposable income includes monetary and non-monetary income, including natural consumption (consumer goods and services taken for the needs of the household from an individual farm in agriculture or self-employed business activity) and goods and services received free of charge.

Income from an individual farm in agriculture is the difference between the sales value of agricultural production (including natural consumption) and subsidies related to the use of the farm, and the current expenditure on agricultural production and taxes related to running the farm.

We aimed to analyze changes in the level and sources of household income as one of the important factors of the social economy strategy. We conducted the study based on the results of household budgets conducted annually by the Statistics Poland. The budget study played an important role in the analysis of the standard of living of the population. It was the basic source of information on income, expenditure, quantitative consumption of food, and other aspects of the living conditions of specific population groups.

The household budget study uses a representative method, which allows for generalization, with a certain precision, of the obtained results to all households in Poland. The basic empirical sources are the cyclical results of household budget surveys, available in the publications of the Statistics Poland, primarily in: household budgets, income, and living conditions of the Polish population, EU-SILC survey report (European Union Statistics on Income and Living Conditions), rural areas in Poland and signal publications, as well as literature data, existing data (desk re-search), and generally available mass (public) statistics data of the Statistics Poland and Eurostat.

Household budget studies distinguish the following income sources:

1. Earned income
2. Unearned income
3. Being dependent.

Since 2005, household budget studies have classified households into five basic socio-economic groups of the country's population according to the primary (over 50%) source of income. These are:

- Employee households – hired work in the public or private sector. In this group, Statistics Poland additionally distinguishes two subgroups: (1) employees in blue-collar positions and (2) employees in non-blue-collar positions;
- Farmer households – using an individual farm in agriculture;
- Self-employed households – self-employed outside an individual farm in agriculture or performing a freelance profession;
- Retiree and pensioner households – retirement or disability pension; Within this group, the Statistics Poland distinguishes two additional subgroups: (1) retirees and (2) pensioners;
- Households living on unearned sources – unemployment benefits, other (apart from retirement and disability pensions), financial, and non-financial benefits. Due to the small number of households in this group and its large internal differentiation, data for households living on unearned sources were not published.

The number of members determines the size of a household. The published household budget data distinguishes single-person and multi-person households: 2-, 3-, 4-, 5-, and 6 or more people.

The results of the household budget survey serve, among others, for:

- Analyses of the level and differentiation of living conditions of the basic socio-economic groups of households and the reasons for this differentiation, and
- Analyses of the level and differentiation of living conditions of the basic groups of households in a dynamic approach.

The study on the assessment of changes and verification of the above-mentioned assumptions (hypotheses) concerned the period related to Poland's integration with the EU. Where necessary, the indication of the phenomenon and the availability of comparable empirical data refer to the years 2004–2023 (X1…X20). The study used the method of statistical and econometric analysis.

To prove the hypotheses, we calculated the following indices (measures) of changes in disposable (nominal) household income:

- Average dynamics in Poland and for six basic and two additional economic and social groups, namely: farmers, employees (including workers and non-workers), self-employed, retirees, and pensioners (including retirees and pensioners);
- Income parity in relation to the eight groups mentioned above;
- Changes in the income structure of farmers' households in the years;
- Relationships of income changes in selected economic and social groups using linear relationships;
- The characteristics of income changes were performed using annual dynamics, and the coefficient of variation (V) calculated from the formula:

$$V = s / \bar{x} * 100\,\%$$

in which:

s = standard deviation, and

$\bar{x}$ is the arithmetic mean

– Income relations examined using Spearman's rank correlation and linear regression, which allows for determining not only the strength of the relationship but also the direction of covariation.

Household budget surveys play an important role in analyzing the standard of living of the population. They serve as the basic source of information on income, expenditure, quantitative consumption of food, and other aspects of the living conditions of specific population groups. However, non-random errors affect the results, especially in income, which tends to be underestimated, and in specific expenditures, which tend to be overestimated. Due to differences in methodological solutions, there are discrepancies between the results of the household budget survey and macroeconomic data. Therefore, the results of the household budget survey mainly serve to analyze the relative differentiation and structure of income, expenditure, and consumption by households, depending on socio-demographic characteristics and other cross-sections used, such as by the class of place of residence.

4. Results and Discussion

The study focuses on characterizing changes in the level and structure of disposable household income and demonstrating statistical relations between the income of farmer households and other household groups. The research results apply to the policy of implementing the social economy in rural areas.

Level, structure, and income relations

In 2023, the nominal, average monthly disposable income in farmer households amounted to PLN 2,477 per person and was 352% higher compared to 2004 (PLN 541). In other socio-economic groups of households, the nominal increase in disposable income was lower and amounted to: in households on average in the country by 264%, employees on average by 240%, workers in blue-collar positions by 307%, employees in white-collar positions by 180%, the self-employed by 254%, pensioners and annuitants on average by 231%, pensioners by 201%, annuitants by 253% (Table 1 and Table 2).

Table 1. Average monthly disposable income per person in households in 2004–2023 (current prices, in PLN)

Year	Households								
	Grand total	of farmers	of employees			of the self-employed	of retirees and pensioners		
			total	in			total	of retirees	of pensioners
				manual labor positions	non manual labor positions				
	In PLN per person per month (current prices)								
2004	735	541	782	558	1.069	935	779	869	612
2010	1.193	1.025	1.199	896	1.592	1.468	1.181	1.245	926

Year	Households								
	Grand total	of farmers	of employees			of the self-employed	of retirees and pensioners		
			total	in			total	of retirees	of pensioners
				manual labor positions	non manual labor positions				
	In PLN per person per month (current prices)								
2015	1.386	1.046	1.387	1.081	1.761	1.739	1.438	1.510	1.438
2020	1.919	1.854	1.934	1.620	2.216	2.238	1.894	1.941	1.522
2021	2.062	2.008	2.048	1.736	2.302	2.487	2.051	2.096	1.638
2022	2.250	2.328	2.251	1.912	2.533	2.540	2.239	2.281	1.809
2023	2.678	2.447	2.662	2.270	2.992	3.313	2.580	2.616	2.162
Dynamics of changes in nominal income in percentage terms in the years 2004–2023 in percentage terms									
2023/2004	364.3	452.3	340.4	406.8	279.9	354.3	331.2	301.0	353.3

Note: own study based on the GUS Poland data (Household budgets).

Table 2. Dynamics of average, nominal, and monthly disposable income in socio-economic groups of households (current prices)

Year	Households						
	Grand total	of farmers	of employees		of the self-employed	of retirees	of pensioners
			manual labor positions	non manual labor positions			
	year 2004 = 100%						
2004	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2010	162.2	189.4	160.5	149.0	157.0	143.2	151.2
2015	188.5	193.4	193.6	164.8	186.0	173.7	234.8
2020	261.0	342.6	290.1	207.4	239.3	223.3	248.6
2021	280.4	371.2	310.9	215.4	265.9	241.2	267.5
2022	305.9	430.3	342.4	237.0	271.6	262.5	295.4
2023	364.3	452.3	406.8	279.9	354.3	301.0	353.0

Note: own study based on the GUS Poland data (Household budgets).

In the period after accession, there was a significant reduction in the income disparity of farmers compared to other groups of households. The nominal disposable income of farmer households in 2004 was 74% of the income of the average household in the country, and in 2023 – 91%. In the period after accession to the European Union, there was a downward trend in the income disparity of farmer households compared to the income of other socio-economic groups. However, the level of disposable income fluctuated in the period under review, which showed in changes regarding the disparity level (Table 3).

Table 3. Relationships between the level of average monthly disposable income per person of farmer households and the income of other household groups in the years 2004–2023 (current prices, income parity index*)

Year	Grand total	Employees			Self-employed	of retirees and pensioners		
		total	in			total	in	
			manual labor positions	non manual labor positions			retirees	pensioners
Parity index: farmers' income/income of individual other household groups (%)								
2002	100	97	132	70	82	96	84	122
2003	87	82	114	60	73	83	74	105
2004	74	69	97	51	58	69	62	88
2010	86	85	114	64	70	87	82	111
2015	75	75	97	59	60	73	69	73
2020	97	96	114	84	83	98	96	122
2021	97	98	116	87	81	98	96	123
2022	103	103	122	92	92	104	102	129
2023	91	92	108	82	74	95	93	113

Note: own study based on the GUS Poland data (Household budgets); * Income parity: the ratio of the average monthly (per person) disposable income of farmer households to the average monthly income (per person) in the household of individual socio-economic groups in %.

In the analyzed period, the greatest disparity in farmers' income occurred regarding employees in non-manual positions and the self-employed. On the other hand, compared to employees in manual positions and pensioners, in most years, farmers' incomes dominated. In 2023, farmers' nominal incomes were 7.8% higher than employees in manual positions and 13.2% higher than pensioners. However, they were lower in relation to the remaining groups, namely employees in non-manual positions (by 18.2%), the self-employed (outside an individual farm) (by 26.1%), and pensioners (by 6.4%) (Table 3).

Income sources

In the period after accession, the income structure changed. It primarily involved a decline in the share of agricultural income and a rise in income from other sources, as Figure 1 shows.

The share of income from agriculture amounted to 67.4% in 2005 (before integration, the value of the indicator was higher and amounted to 75.6% in 2002). In 2023, the percentage amounted to 66.3%. Notably, this period was characterized by fluctuations in the share of income from work on the farm. In the period after integration, the highest value of the indicator (above 70%) was for the years: 2007, 2010, 2013, and 2021. The lowest was in 2016 (62.2%).

In the income structure of a farming family, the share of income from hired work was 9.6% in 2005. The following years were characterized by an upward trend in the value of the indicator to 13.9% in 2015 (the highest value), followed by a decline to 12.0% in 2023. In the years 2005–2023, the share of income from self-employment decreased (from 1.3% to 1.1%), but it increased with regard to income from social benefits and insurance (from 18.8% to 19.9%).

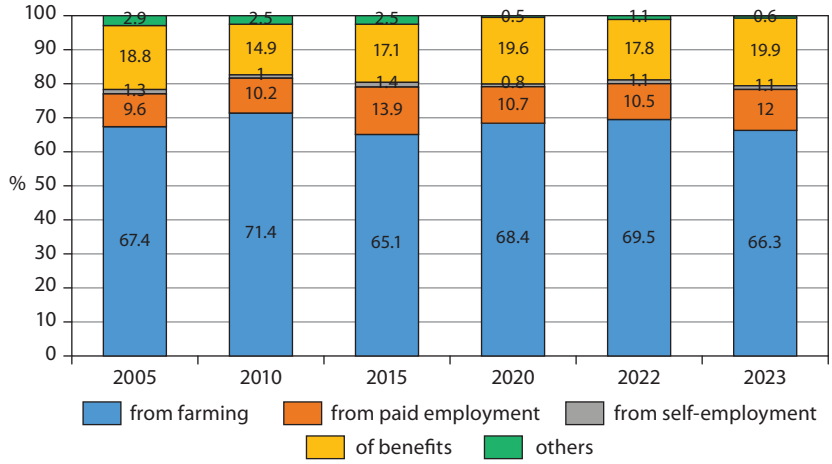

Figure 1. Changes in the structure of disposable income in farm households in 2005–2023

Note: own study based on the GUS Poland data (Household budgets).

We adopted the year 2005 due to the change in the division of household groups and the resulting lack of data comparability.

Compared to other groups of households, farmers' households obtained a lower or similar share of income from the main source of income. In 2023, in farmers' households, income from an individual farm in agriculture accounted for 66.3% of disposable income per person, while in employees' households, income from the main source of income, i.e., hired work, accounted for 82.6% of total disposable income, and in self-employed households, income from the main source of income, i.e., self-employment, accounted for 67.2%.

For farming families using farms with small areas of agricultural land, subsidies play a smaller role in shaping their disposable income. In the group of farm households, which constitutes the research sample of household budgets, the share of subsidies in agricultural income is at the level of several percent (e.g., 15.9% in 2015). This results from the fact that the research sample of budgets consists of farm households, of which about 2/3 use small farms with an area of agricultural land up to 20 hectares.

Relationships of changes in disposable household income

During the period under review, incomes in all professional groups increased. However, we also observed different characteristics of the annual relationship, which distinguish agricultural incomes. First, farmers' income is characterized by the strongest (both positive and negative) annual changes in income in the professional groups under review. Second, we noticed a negative annual dynamic of changes in the amount of income observed only in the case of farmers' incomes (in 2009, 2011, 2014, and 2015) (excluding 2005, when there was a slight decrease in incomes in the group of employees in general) (Figure 2).

Third, farmers' incomes also displayed the highest variability among the groups studied, and the coefficient of variation was 43.5%, which indicates high variability. We observed a similar, but noticeably lower value of the coefficient of variation in the group of workers (V = 40.8%). The lowest variability was characteristic of incomes in the group of employees in non-manual positions, and the value of the coefficient was relatively low. Table 4 presents the details.

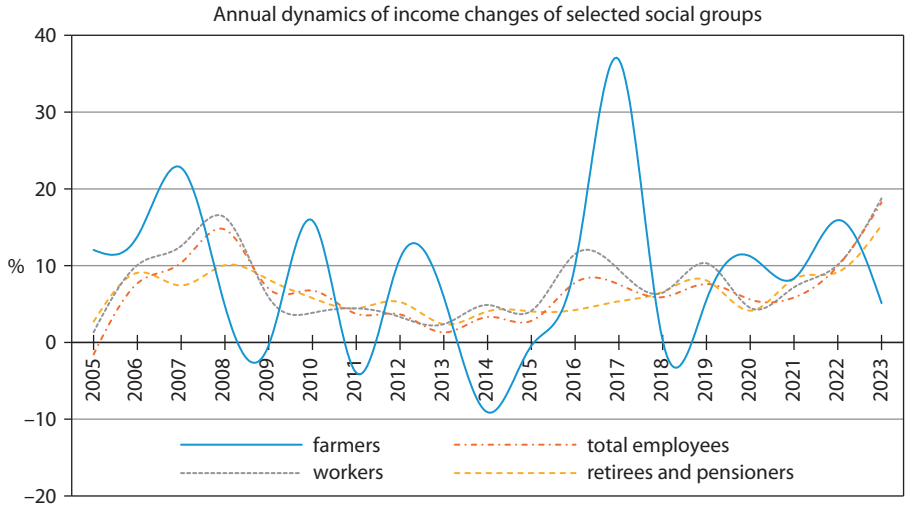

Figure 2. Dynamics of changes in nominal disposable incomes of selected groups of households

Note: own calculations based on the GUS Poland data (Household budgets).

Table 4. Variability indices of nominal disposable household income by economic and social groups in 2004–2023

Coefficient of variation (V) of disposable income in Poland in 2004-2023				
total	farmers	employees total	in:	
			manual labor positions	non-manual labor positions
36.0%	43.5%	35.3%	40.8%	28.3%
self-employment	retirees and pensioners	retirees	pensioners	×
33.7%	34.2%	31.9%	36.3%	×

Note: own calculations based on the GUS Poland data (Household budgets).

In the case of changes in the structure of farmers' income, we observed several regularities in the period under review relating to sources of work. Between 2004 and 2023, the importance of all categories of sources decreased, except for hired work, which increased. The share of income from work in agriculture decreased the most, by 7.0 percentage points, while the share of income from hired work increased by 11.9 percentage points during that time (Figure 3).

Changes in the structure of income of farmers' households showed moderately strong and significant correlation in the case of the categories "from work in agriculture" and "from hired work," whereby the correlation was negative, i.e., with a decrease in the share of income from agriculture, there was an increase in revenue from hired work. The model was well-fitted, explaining 46% of the changes. It allowed us to assume that, on average, with a decrease by 0.68 percentage points in the share of income from agriculture, there was an increase by 1.0 percentage points in the share of revenue from hired work (Figure 4).

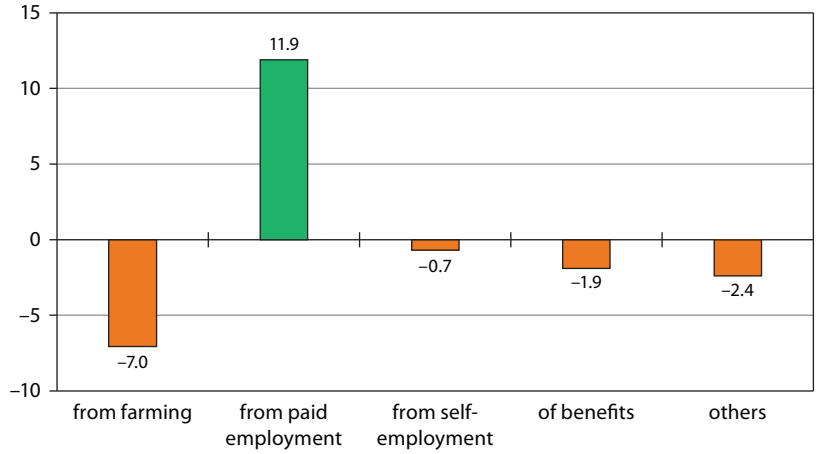

Figure 3. Change in the structure of disposable income of farmer households in percentage points in the years 2004–2023

Note: own calculations based on the GUS Poland data (Household budgets).

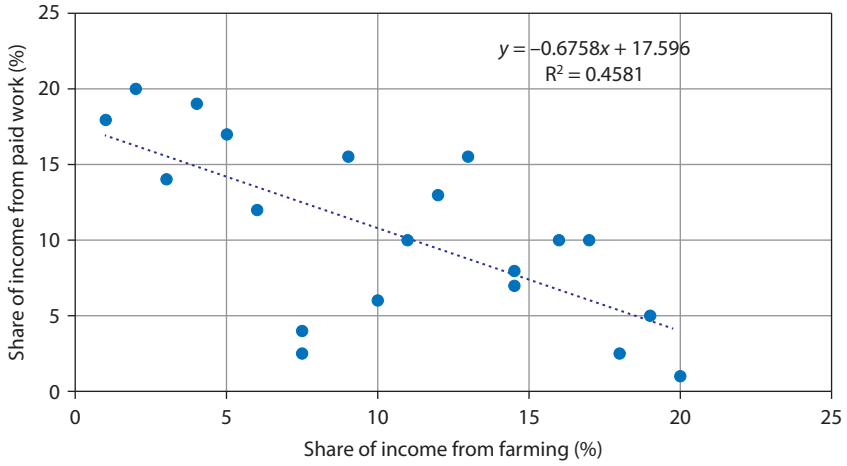

Figure 4. Relationships of changes in the structure of income of farmers' households in the years 2004–2023

Source: own calculations based on the GUS Poland data (Household budgets).

Table 5. Linear dependence of the structure of disposable income of farmer households

Matrix of linear dependence of farmers' income structure				
income from agriculture				
dependency	from employment	from self-employment	from benefits	other
correlation: R =	−0.68	−0.02	0.48	0.05
regression: R^2 =	0.46	0.00	0.23	0.00

Source: own calculations based on the GUS Poland data (Household budgets).

Poland's integration with the European Union (2004–2023) was a period in which factors favorable to the growth of agricultural incomes prevailed. This growth exhibited a higher rate of change than that observed in other socio-economic groups. Funds directed to the entire agri-food sector, farms and rural areas, mainly within the framework of the Common Agricultural Policy (CAP), positively influenced the income relations favorable to farmers. Poland became the leader in the EU in the implementation of the Rural Development Program.

In rural areas, significant economic and social progress occurred after accession. Despite this, many families operating on small areas of agricultural land still have difficulties in achieving an income that covers needs at a socially accepted level. National and EU rural development programs (RDP) provide significant support for these farms. For small farms, money directed to the development of rural areas is important, as it determines investments that develop the rural labor market. Non-agricultural jobs are being created, which makes it possible to supplement agricultural income from outside sources.

Despite the improvement in the period after Poland's accession to the European Union, families associated with agriculture showcased lower income levels, worse living conditions, and a higher risk of poverty and social exclusion compared to other socio-economic groups. Simultaneously, the importance of self-supply in agriculture is decreasing. The importance of monetary income and non-agricultural gainful activity is increasing.

In the context of European integration, agriculture deserves special attention. Although its importance in the economic structure of the country, villages, and households is decreasing, it remains ignored in social and cultural matters. It remains a factor in changes in the level and structure of household income, and therefore also in the level and quality of their life.

Poland's integration with the EU contributed to income convergence between socio-economic groups of households. This resulted primarily from the higher dynamics of income growth of rural residents than of urban residents and farmers compared to other groups of households.

5. Conclusions

Poland's membership in the EU has influenced the standard and quality of life of the Polish population, especially the inhabitants of rural areas. Income from non-agricultural sources plays an increasingly important role in shaping the income of a farming family, and this remains a permanent trend. During the integration period, agricultural populations experienced improvements in living standards, primarily through higher incomes. In 2004, the nominal disposable income of farm households was PLN 541 per person, and by 2023 it increased to PLN 2,447 per person, i.e., by 352%.

The growth dynamics of nominal disposable income in the remaining household groups was lower and the increase amounted to: the national average by 264%, employees by 240% on average, workers by 307%, white-collar workers by 180%, the self-employed by 254%, retirees and pensioners by 231% on average, retirees by 201%, pensioners by 253%. In the years 2004–2023, there was a decrease in income disparities between farming families and non-farming families, which indicates a process of income convergence. The change in income parity indices indicates this. In 2004, farmers' incomes accounted for 74% of the income of the average household in the country, and in 2023 – 91%. These are positive changes that apply to all other economic and social groups of households.

During the integration period, there were fluctuations in the income structure of farm households. The share of income from work on the farm ranged from 71.4% in 2010 (the highest level) to 65.1% (the lowest level). In 2023, it amounted to 66.3%. Simultaneously, the share of income from hired work in the farm family budget increased from 9.6% in 2005 to 10.5% in 2023. On the other hand, self-employment outside agriculture remained at a low level, from 1.3 to 1.1%. The financial situation of the farm family largely depended on social benefits; their share in total income increased from 18.8% in 2005 to 19.9% in 2023.

In the period under review, incomes in all professional groups increased, but we also observed different characteristics of changes in the annual relation, which distinguish agricultural incomes. Firstly, farmers' incomes displayed the strongest (both positive and negative) annual changes in incomes compared to other farm groups. We observed a negative annual dynamic of changes in income only in the case of farmers' income and only in some years.

Farmers' incomes also showed the highest variability among the studied groups, and the coefficient of variation was 43.5%, which indicates high variability. We observed a similar but noticeably lower value of the coefficient of variation in the group of workers (V = 40.8%). The lowest variability was characteristic of incomes in the group of employees in non-manual positions, and the value of the coefficient was relatively low.

In the case of changes in the structure of farmers' income, we observed several regularities in the period under review relating to sources of work. Between 2004 and 2023, the importance of all categories of sources decreased, except for hired work, which increased. The share of income from work in agriculture decreased the most by 7.0 percentage points, while the share of income from hired work increased by 11.9 percentage points during this time.

Changes in the structure of income of farmers' households showed a moderately strong and significant correlation in the case of the categories "from work in agriculture" and "from hired work," with the correlation being negative, i.e., with a decrease in the share of income from agriculture, there is an increase in income from hired work. The model was well-fitted, explaining 46% of the changes. The model allowed us to assume that, on average, with a decrease by 0.68 percentage points in the share of income from agriculture, there is an increase by 1.0 percentage points in the share of income from hired work.

In the case of income from agriculture and income from benefits, we observed a moderate and statistically insignificant correlation, while in other categories ("self-employment" and "other") we did not notice statistically significant covariation with income from agriculture, which suggests that other factors (e.g., external factors, such as "economic conditions") determine them.

References

Adamowicz, M. (2005). Zjawiska i procesy globalne a rozwój wsi i rolnictwa w Polsce. In W. J. Wilkin (Ed.), *Polska wieś 2025. Wizja rozwoju* (pp. 199–126). Fundusz Współpracy. https://doi.org/10.22630/RNR.2008.94.2.24

Błąd, M. (2011). *Wielozawodowość w rodzinach rolniczych. Przyczyny, uwarunkowania i tendencje rozwoju*. IRWiR PAN.

Chmielewska, B. (2004). *Źródła nierówności społecznych* (Studia i Monografie, No. 122). IERiGŻ-PIB.

Chmielewska, B. (2013). *Ekonomiczno-społeczna sytuacja gospodarstw domowych rolników po akcesji Polski do Unii Europejskiej* (Studia i Monografie, No. 158). IERiGŻ-PIB.

Chmielewska, B. (2024). Uwarunkowania procesu migracji kobiet ze wsi do miast. Zagadnienia Doradztwa Rolniczego, 1(115), 82–97.

Chmielewska, B., & Zegar, J. St. (2024). Źródła i rozdysponowanie dochodów mieszkańców wsi. In W. Poczta & A. Hałasiewicz (Eds.), *Polska wieś 2020. Raport o stanie wsi. 20 lat w Unii Europejskiej* (pp. 69–85). Fundacja na rzecz Rozwoju Polskiego Rolnictwa; Wydawnictwo Naukowe Scholar. https://doi.org/10.7366/9788367450843

Czyżewski, A. (2005). Rolnictwo w procesie reprodukcji. Różne wizje dostosowań rynkowych. In B. Klepacki (Ed.), *Kwestia agrarna w Polsce i na świecie* (pp. 23–28). SGGW.

Czyżewski, A., & Matuszczak, A. (2005). Interesy rolnictwa w świetle globalnych uwarunkowań polityki gospodarczej. *Polityka Gospodarcza*, *12*, 347–369.

Czyżewski, A., & Matuszczak, A. (2012). Dylematy kwestii agrarnej w panoramie dziejów – mechanizm krzywdy chłopskiej. In A. Czyżewski & A. Matuszczak (Eds.), *Ekonomia i jej społeczne otoczenie* (pp. 5–23). Wyd. KPSW. https://doi.org/10.22630/EIOGZ.2011.90.52

Czyżewski, A., & Poczta-Wajda, A. (2011). *Polityka rolna w warunkach globalizacji. Doświadczenia GATT/WTO*. PWE.

Główny Urząd Statystyczny (GUS, Statistics Poland). (2004–2023). *Budżety gospodarstw domowych*.

Klepacki, B. (2005). Tendencje zmian w ekonomicznej i społecznej strukturze wsi. In J. Wilkin (Ed.), *Polska wieś 2025. Wizja rozwoju* (pp. 85–89). IRWiR PAN.

Michna, W. (2002). *Źródła utrzymania ludności wiejskiej i wykorzystanie zasobów siły roboczej w różnych regionach* (Studia i Monografie, No. 108). IERiGŻ.

Ministerstwo Rodziny, Pracy i Polityki Społecznej (Ministry of Family, Labour and Social Policy, Poland). (2025, June 12). *Ekonomia społeczna i solidarna*. https://www.gov.pl/web/rodzina/ekonomia-spoleczna-i-solidarna-1

Ruttan, V. W., & Hayami, Y. (1972). Strategies for agricultural development. *Food Research Institute Studies*, *11*(2), 1–20. https://doi.org/10.22004/ag.econ.135054

Turowski, J. (1992). *Socjologia wsi i rolnictwa. Metody i wyniki badań*. Norbertinum.

Wilkin, J. (2009). Wielofunkcyjność rolnictwa – konceptualizacja i operacjonalizacja zjawiska. *Wieś i Rolnictwo*, *4*(145), 9–28. https://doi.org/10.53098/wir.2009.4.145/01

Woś, A. (2000). *Tworzenie i podział dochodów rolniczych. Dochody transferowe*. IERiGŻ.

Woś, A. (2003). *Konkurencyjność polskiego sektora żywnościowego. Synteza*. IERiGŻ.

Zegar, J. St. (2000). *Dochody ludności chłopskiej* (Monografia). IERiGŻ.

Zegar, J. St. (2011). Agriculture and the sustainable development of rural areas. In *Competitiveness of the agri-food sector and sustainable development of rural areas*. National University of Food Technologies; NRI Institute of Agricultural and Food Economics; Centre of Sociological Research.

About the Author

Barbara Chmielewska*, Ph.D., Assoc. Prof.
The Institute of Agricultural and Food Economics –
National Research Institute
ul. Świętokrzyska 20, 00-002 Warszawa, Poland
e-mail: barbara.chmielewska@ierigz.waw.pl
ORCID: 0000-0003-1609-4809
* Corresponding author.

Acknowledgements and Financial Disclosure

None reported.

Conflict of Interest

The author declares that the research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright and License

This article is published under the terms of the
Creative Commons Attribution (CC BY 4.0) License
http://creativecommons.org/licenses/by/4.0

Published by the Krakow University of Economics – Krakow, Poland