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# FARMERS' AND RURAL HOUSEHOLDS' INCOME, SYMPTOMS OF MATERIAL DEPRIVATION IN POLAND'S COUNTRYSIDE

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**Abstract.** The main goal of the article is to assess level and changes of income in the urban and rural as well as farmers and other socio-economic groups households in the context of material deprivation phenomenon. The second aim, the identification of convergence process between variables describing the income situation of the surveyed groups of households. Additionally, the identification of income inequality problems in different types of household as well as multidimensionality of the deprivation concept were also mentioned. All data including average monthly disposable income and the Gini index were provided by Central Statistical Office of Poland. The convergence process was evaluated using an sigma-convergence index. The results showed that in real terms farmers and rural household income has increased, however, one may not observe the sigma-convergence process between farmers and other socio-economic groups households, as well as rural and urban households. It is possible to observe a significant level of income inequality among farmers and rural households, which was increasing further in the analyzed period.

**Keywords:** material deprivation, disposable income, income disparity, sigma-convergence, income inequality

## INTRODUCTION

An ambiguous term, material deprivation is measured and defined in multiple ways in the relevant literature as well as in the national and EU legislation. As defined in

the Polish language dictionary, it means “circumstances resulting from the inability to satisfy an important need or desire” (PWN, 2016). Thus, an individual who cannot fully participate in political life is affected by political deprivation while a person unable to address his/her basic economic needs is affected by material (economic) deprivation. According to some researchers (e.g. Golinowska et al., 2005), the main reason behind the rural population's restricted access to various commodities (including social and cultural goods) is economic poverty resulting from low incomes. However, the ability to address one's economic needs partially depends on the availability of goods and services. For instance, due to infrastructure constraints, rural dwellers have more difficulty in gaining access to broadband Internet, even if they can afford paying for it on a regular basis.

Therefore, the assessment of the level and evolution of income of farmers and other rural dwellers does not exhaustively describe the material deprivation of countryside. However, it identifies a major component thereof, i.e. relatively low incomes. According to data published by the Central Statistical Office, the disposable income per capita in farmer's households is lower than in households headed by employed or self-employed persons (cf. Central Statistical Office 2004–2014). Also, the income per capita in rural households is lower than in urban households (Central Statistical Office 2006–2014). Moreover, the income from purely

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farming activities is known to demonstrate high fluctuations over the years (Czyżewski and Kryszak, 2015).

The main purpose of this paper is to assess the level and evolution of the households' income compared between urban and rural areas and between farmers and other socio-economic groups, and specifically to identify the convergence process, if exists, between the variables that describe the income situation of the groups surveyed. Also emphasized was the issue of income inequalities in various types of households. These analyses are an attempt to approach the topic of material deprivation of countryside. However, material deprivation itself and the related terms need to be defined first.

## METHODOLOGY NOTES

The timeframes for this study are the period from 2004 to 2014. The subject matter of this analysis are the households' monthly disposable incomes per capita. Farmer households are "households whose exclusive or main (prevalent) means of subsistence is income from the operation of a farm" (GUS, 2011, p. 41). Thus, the income of such households is not equivalent to agricultural income. In practice, in 2014, an approximate average of 65.9% of income earned by farmer households resulted from their agricultural activities (GUS, 2004–2014). The remaining part may originate from employment, pensions etc. The incomes of rural and urban households are subject to separate analyses. While most of the farmers live in the countryside, the income of a large part of rural dwellers (90.3% in 2014, according to Zegar and Chmielewska, 2016) comes mainly from non-agricultural activities. It therefore seems reasonable to consider the income of the farmer's households separately from that of rural households.

Convergence was tested with a sigma index. The presence of sigma-convergence suggests that inequality tends to reduce over time in the examined area. Therefore, sigma-divergence would indicate that the inequalities tend to grow over time (Kusideł, 2013). There are multiple possible measures of sigma-convergence. However, the standard deviation of logarithms (Majchrzak and Smędzik-Ambroży, 2014) is commonly used as per the formula below:

$$\sigma_t = \sqrt{\frac{\sum_{i=1}^N (\ln y_{it} - \ln \bar{y}_t)^2}{N-1}} \quad (1)$$

with:

$i$  = index of the entity concerned (in this case, a socio-economic group)

$y_{it}$  = measure level for entity  $i$  in year  $t$  (in this case, the real monthly disposable income per capita)

$y_t$  = average level of the measure concerned in the examined group in year.

## THE MEANING AND MEASUREMENT METHODS OF MATERIAL DEPRIVATION

The very concept of deprivation originates from psychology and may be defined as the inability to satisfy certain needs. In turn, Dudek (2013) defines deprivation as a circumstance resulting from the failure to satisfy such needs. In the economic and statistical context, deprivation may be discussed within a narrower or broader scope. In a narrow perspective, deprivation is considered only as one of many methods for analyzing the level of poverty. Seen in a wider context, it may include e.g. the problem of income earned and the issue of income parity between specific groups. In that case, it should rather be interpreted as relative deprivation.

As mentioned earlier in this paper, there are multiple methods for studying the level of poverty. One of the available classifications uses poverty measures based on monetary and non-monetary values. Both indicator groups may include poverty measurement methods based on the expenditure approach or the output approach. This results in identifying 4 groups of poverty indicators (Boarini and d'Ercole, 2006). For instance, monetary methods based on the expenditure approach focus on determining the income necessary to consume a basket of goods found to be essential in order to ensure a minimum standard of living. Material deprivation measures (in the narrow perspective) fall in the category of non-monetary output-based indicators. When developing such measures, a basket of goods and needs is defined which has to be addressed in order to ensure a decent living. If the individual concerned is unable to address a specific number of needs included in the basket, he/she may be found to be affected by material deprivation. An example is the Eurostat indicator<sup>1</sup>. The

<sup>1</sup> It is based on a basket of goods and services. From the perspective of this measure, persons affected by material deprivation are those who cannot afford addressing four of the following nine needs: paying the rent and utility bills; enough heat to warm

use of such measures is problematic because of the arbitrary definition of the group of needs that should be addressed (as the consumption patterns are evolving). Sometimes, it is difficult to tell to what extent the lack of car or TV set results from actual deprivation, or from the individual's lifestyle or consumption pattern. Also, the lack of car may be assumed to pose a smaller problem in a city with public transport than in the countryside etc. In summary, it is too simplistic to assess the material deprivation solely from the perspective of the above measure.

Another widely adopted classification method is to distinguish between objective and subjective approaches to the poverty issue. Note also that the objective approach may include absolute and relative measures. In order to use the objective approach, the income level that guarantees the minimum acceptable standard of living needs to be specified. In political and statistical practice, several income levels are defined. Usually, these are the social minimum level, the subsistence level, the reference poverty level and the relative poverty measure<sup>2</sup>. In the absolute objective approach, poor people are those whose income is not enough to consume the goods from the basket used as a basis for calculating the subsistence level or the social minimum level, or those whose income is below the limit of eligibility for social assistance. Meanwhile, in the objective relative approach, the poverty threshold depends on the average income (or consumer spending) in the population concerned. And therefore, this approach is actually a measure of income inequalities.<sup>3</sup>

In the case of subjective poverty, whether an individual belongs to the poor population depends on his/her own opinion (Panek, 2007). Today, the research on subjective poverty becomes increasingly popular. Models are developed (usually, logit and probit models) as an attempt to explain the determinants of satisfaction with

one's own financial situation (cf. Dudek, 2013). Such studies are also conducted in the farmer population (cf. Parlińska and Pietrych, 2014). The subjective satisfaction with one's own financial situation does not have to be strongly correlated to the actual standard of living. As demonstrated by the relative standards model, the assessment of one's own financial situation depends not only on actual income levels but also on individual aspirations, history and comparison to the surrounding population (Gąsiorowska, 2010). According to this model, an objectively wealthy individual living in a wealthy environment may be less satisfied with his/her situation than could be reasonably expected. According to a research made by Dudek (2013), determinants of satisfaction from one's financial situation include relative deprivation, an aspect resulting from the comparison of the individual's income to that of other individuals surveyed. Recently, that topic has attracted considerable attention (e.g. Stark et al., 2015). However, research based on subjective measures has a limited scope of application. First of all, the absence of a specific point of reference makes it impossible to materially assess the social policy in place based on a subjective criterion (Panek, 2011). On the other hand, in the prosperous societies whose basic needs are met to a great extent (absolute deprivation is present to a limited extent), relative deprivation may be an important indication explaining the orientations of state policy (e.g. the rationale behind CAP being focused on income in highly developed countries).

Currently, as manifested for instance by the EU policy, social exclusion (which, in addition to economic poverty, includes restricted access to social, cultural or political life) is being addressed. As mentioned in the introduction, these restrictions are caused, at least partially, by low income levels. However, rural areas are known to offer limited access to many services regardless of the population's prosperity. Leaving aside the availability of services offered by public and private operators, the authors believe that, in the long term, the income of the farmers' and rural households is the very factor that determines the living standard and consumption levels in the countryside. Consequently, this affects the demographic processes and the ability to provide public goods in these areas, because it is difficult to make efforts towards preserving the landscape, popular tradition etc. as the basic material needs are not fully satisfied.

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the house; meeting unexpected expenditure; a meal with meat or fish (or vegetarian equivalent) every second day; one week's annual holiday away from home; having a household equipped with a washing machine, TV set, car and phone (Eurostat Quality Profile, 2015).

<sup>2</sup> This can correspond, e.g., to a half of the households' average equivalent spending (a rate of 40% or 60% could also be adopted).

<sup>3</sup> An individual may be classified as poor even if his/her real income grows, if the income of the remaining population grows at a higher rate.

## DISPARITY OF INCOMES BETWEEN FARMER HOUSEHOLDS AND THE TOTAL POPULATION OF HOUSEHOLDS

Some highly developed countries managed to solve the issue of income disparity between agricultural activities and other industries. Sometimes, agricultural incomes became even higher than those earned from other forms of economic activity (Czyżewski and Kułyk, 2010). Nevertheless, in many countries, especially including those with a relatively poor performance of the agricultural sector, agricultural incomes are relatively low. This affects the level of income of farmer households, as it is the case in Poland and elsewhere (Table 1).

Throughout the survey period, the disposable income of farmer households remained lower than that of the total population of households. The greatest disparity of incomes was recorded in 2004, just before EU accession. At that time, the disposable income of farmer households was barely 73.6% of that of the total population of households. Afterwards, the disparity kept reducing until the economic downturn struck in 2008. In 2009, the ratio between the incomes fell below 80% once again, and remained highly unstable in the following years. 2007 and 2009 were years of particular significance: in 2007, Poland demonstrated high growth dynamics (GDP grew by 7% on a YoY basis),

and recorded an important decline in 2009 (with a GDP growth rate of 2.8%). It may be concluded that while the disparity between farmer households and the total population of households is decreasing to some extent, the process follows an inconsistent trend. This suggests that the incomes of farmer households are strongly affected by market fluctuations, as may also be seen in lines corresponding to yearly evolution of income. In the total population of households, a decrease in real income happened only twice (to a small extent: by 1.4% and 0.2% in 2011 and 2012, respectively). Meanwhile, as regards farmer households, the incomes grow dynamically during some periods (e.g. by 19.8% in 2007) only to strongly decrease during other ones (e.g. by 9.1% in 2014). The above conclusions are confirmed by looking at how the sigma-convergence index evolves over time. Figure 1 shows the values of this index calculated for specific periods.

The estimated slope of the trend function is negative which means the values of standard deviations of logarithms of disposable incomes follow a downward trend. However, as the function is poorly fitted (low R<sup>2</sup> value), it cannot be definitely concluded whether the convergence process between incomes in the two socio-economic groups actually occurs. Although it has been a decade since the Polish agricultural sector was covered by the common agricultural policy mechanisms

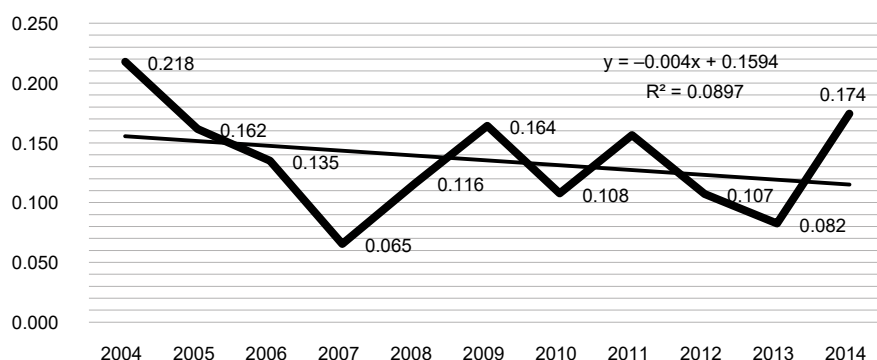
**Table 1.** Monthly disposable income in PLN per person by household type in 2004–2013 (constant 2004 prices)

**Tabela 1.** Miesięczny dochód rozporządzalny w gospodarstwach domowych w Polsce w zł na osobę, z podziałem na typ gospodarstwa domowego, w latach 2004–2013 (ceny stałe z 2004 roku)

Specification Wyszczególnienie	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total Ogółem	735.4	745.8	809.4	878.8	949.3	977.7	1 019.9	1 005.9	1 004.2	1 017.7	1 053
Change y/y (%) Zmiana r/r (%)	x	1.4	8.5	8.6	8.0	3.0	4.3	–1.4	–0.2	1.3	3.5
Farmers Rolnicy	541	593.7	668.9	801.1	805.7	775.5	876	806.6	862.9	905.8	823.3
Change y/y (%) Zmiana r/r (%)	x	9.7	12.7	19.8	0.6	–3.8	13.0	–7.9	7.0	5.0	–9.1
Farmers/total (%) Rolników/ogółem (%)	73.6	79.6	82.6	91.2	84.9	79.3	85.9	80.2	85.9	89.0	78.2

Source: own elaboration based on GUS, 2004–2014.

Źródło: opracowanie własne na podstawie danych GUS, 2004–2014.



**Fig. 1.** Sigma convergence values of disposable income in farmers and total households  
Source: own elaboration based on GUS, 2004–2014.

**Rys. 1.** Wartości wskaźników sigma – konwergencji dochodów rozporządzalnych gospodarstw domowych rolników i gosp. domowych ogółem  
Źródło: opracowanie własne na podstawie danych GUS, 2004–2014.

(including without limitation direct payments), farmer households earn definitely less income. Also, while the equalization process of incomes earned by agricultural and other households is in place, it is not effective enough.

## DISPARITY OF INCOME BETWEEN THE RURAL AND URBAN POPULATION

Material deprivation should also be seen in the urban/rural dimension because, as mentioned earlier, a large part of the rural population earn a major part of their income outside the agricultural sector. It seems that preserving the “vitality of rural areas” should involve an increase of the rural population’s income, also in relative terms. In that case, young people would have less incentive to move from rural to urban areas. Data on disposable incomes of rural and urban households are presented in Table 2.

In the 2006–2014 period (except for 2011), the incomes of both urban and rural households followed a growth trend. In urban areas, the real disposable income per capita grew from PLN 943.9 to PLN 1,224.8 in 2014 (a 30% increase) while the per capita income in an average rural household grew from PLN 659.3 to PLN 862.4 (a 31% increase). Thus, incomes of rural dwellers increased at a slightly higher rate compared to the total urban population. However, the situation strongly varied from one city to another as the income

grew at the relatively fastest pace in medium-large cities (with a population from 100,000 to 199,000).

From the perspective of the purpose of this paper, the difference between the incomes of rural and urban households is the key data. It should first be noted that the disparity between these incomes is higher than the income disparity between farmer households and the total population of households<sup>4</sup>. Throughout the study period, the disposable income of rural dwellers was, on average, 71% of incomes of the urban population (70.4% in 2014). In other words, the rural households’ income gap is 29.6%. As shown by the sigma-convergence indicator, there is no question of income convergence between rural and urban households, whether considered globally (Figure 2) or split by city size (Figure 3).

In both cases, R2 values are too low for there to be any talk of convergence or divergence between the disposable incomes of rural and urban households. Having

<sup>4</sup> One of the reasons for this is the fact that the rural population (compared to the urban population) includes a relatively large number of retirees, pensioners and unemployed people. Households where such incomes are the main source of subsistence are the poorest ones and reduce the average figures. Also, the remunerations of urban employees and entrepreneurs are higher compared to their counterparts living in rural areas. In the period considered, rural households achieved a higher real income per capita than farmer households only three times (in 2009, 2011 and 2014). Usually, this was related to a downturn in the agriculture sector.

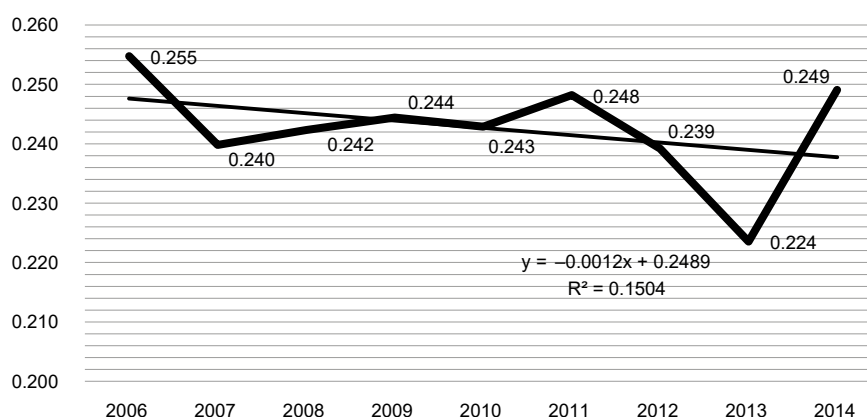
**Table 2.** Monthly disposable income in PLN per person by place of residence in 2006–2014 (constant 2006 prices)

**Tabela 2.** Miesięczny dochód rozporządzalny w zł na osobę według klasy miejscowości zamieszkania w latach 2006–2014 (ceny stałe z 2006 roku)

Specification Wyszczególnienie	2006	2007	2008	2009	2010	2011	2012	2013	2014
Urban areas Miasta	943.9	1 018.2	1 101.2	1 135.1	1 183.3	1 169.6	1 173.5	1 173.7	1 224.8
up to 20 thous. do 20 tys.	770.0	819.7	919.2	932.8	967.8	978.8	977.9	966.8	996.3
20–99 thous. 20–99 tys.	845.2	909.1	977.7	1 023.9	1 063.6	1 037.5	1 037.6	1 058.3	1 114.8
100–199 thous. 100–199 tys	863.2	950.7	1 060.7	1 094.1	1 106.9	1 104.4	1 076.4	1 116.5	1 166.7
200–499 thous. 200–499 tys.	1 026.8	1 097.0	1 141.2	1 150.5	1 224.6	1 202.0	1 220.5	1 282.1	1 279.0
500 thous.and more 500 tys. i więcej	1 276.1	1 385.1	1 491.3	1 569.4	1 657.8	1 622.7	1 639.9	1 731.8	1 653.0
Rural areas Wsie	659.3	726.2	782.6	804.4	840.3	824.5	837.7	856.4	862.4
Rural/urban (%) Wsie/miasta (%)	69.8	71.3	71.1	70.9	71.0	70.5	71.4	73.0	70.4

Source: own study based on GUS, 2004–2014.

Źródło: opracowanie własne na podstawie danych GUS, 2004–2014.

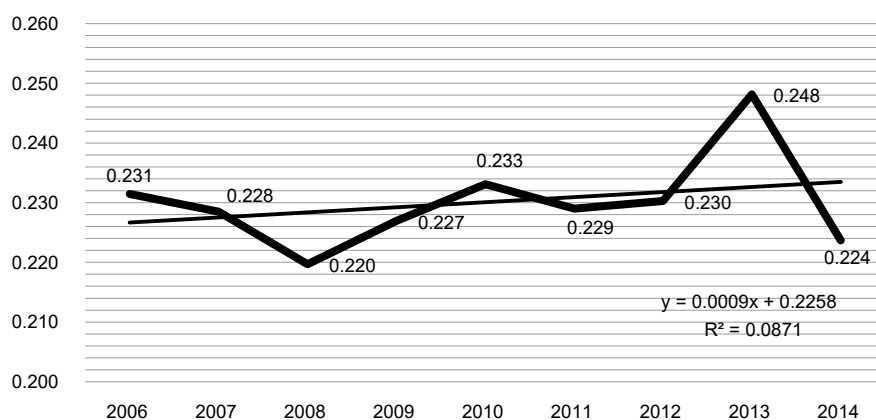


**Fig. 2.** Sigma convergence values of disposable income in urban and rural households

Source: own elaboration based on GUS, 2004–2014.

**Rys. 2.** Wartości wskaźników sigma-konwergencji dochodów rozporządzalnych gospodarstw domowych w miastach ogółem i na wsi

Źródło: opracowanie własne na podstawie danych GUS, 2004–2014.



**Fig. 3.** Sigma convergence values of disposable income in urban (including city size) and rural households

Source: own elaboration based on GUS, 2004–2014.

**Rys. 3.** Wartości wskaźników sigma-konwergencji dochodów rozporządzalnych gospodarstw domowych w miastach (z podziałem ze względu na wielkość) i na wsi

Źródło: opracowanie własne na podstawie danych GUS, 2004–2014.

in mind that an increasingly smaller share of urban dwellers work in the agriculture sector, the increase in the rural population's incomes must be related not only to agricultural aid but also to the fact that rural areas are becoming better positioned to attract additional domestic and international investments. According to the above data, despite significant resources dedicated to the development of rural areas (including the upgrade of the local basic and ICT infrastructure), the incomes of the rural population continue to be lower compared to urban dwellers, especially those living in the largest cities. While rural and urban incomes grow at a similar rate, convergence does not take place. Furthermore, due to base effects, the difference between these incomes (expressed in PLN) tends to increase.

## INCOME INEQUALITIES BETWEEN RURAL AND FARMER HOUSEHOLDS

The description of income earned by rural households and farmer households needs to be supplemented with inequalities. Farms that provide a major source of income for farmer households differ in terms of size and predominant production orientations which has an effect on their profitability. In Poland, in addition to large effective farms, there is a large number of small holdings.

“Rural areas” are heterogeneous (Kalinka, 2014) as they include tourist destinations, post-state farm environments and other rural areas as well as suburban towns which actually are housing estates populated by relatively wealthy residents. Tables 3 and 4 show income inequality data between specific groups of household, as measured with the Gini coefficient.

Income inequalities largely differ from one social group to another. With a Gini coefficient of no more than 0.3, retirees and pensioners demonstrate a relatively even level of incomes. However, these groups (especially the pensioners) are known to earn relatively low incomes. Farmers are the socio-economic group with the clearly highest level of income inequalities. In the period under consideration, the Gini coefficient was 0.538. Moreover, as that value tends to grow, it could suggest that such inequalities perpetuate the division into developing and inefficient farms. Note also the reduction of inequalities between households headed by employees and those headed by self-employed persons.

Throughout the 2005–2014 period, income inequalities were higher in rural areas than in cities. While urban income inequalities have decreased, an opposite process could be observed in rural areas, at least by 2013. As a consequence, the difference in equality levels between urban and rural areas has increased. This could



**Table 3.** Gini index for disposable income by household type in 2004–2014

**Tabela 3.** Wartość wskaźnika Giniego dla dochodów rozporządzalnych z podziałem na typ gospodarstwa domowego według głównego źródła utrzymania w latach 2004–2014

Households Gospodarstwa	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Employees Pracowników	0.371	0.371	0.358	0.352	0.340	0.343	0.347	0.346	0.343	0.341	0.334
Farmers Rolników	0.491	0.497	0.496	0.548	0.572	0.536	0.533	0.539	0.559	0.599	0.544
Self-employed Pracujących na własny rachunek	0.403	0.397	0.415	0.413	0.387	0.378	0.375	0.373	0.382	0.374	0.378
Retirees Emerytów	0.243	0.241	0.245	0.236	0.242	0.241	0.249	0.244	0.242	0.239	0.236
Pensioners Rencistów	0.290	0.281	0.283	0.289	0.294	0.287	0.291	0.292	0.279	0.280	0.276

Source: own elaboration based on GUS, 2004–2014.

Źródło: opracowanie własne na podstawie GUS, 2004–2014.

**Table 4.** Gini index for household disposable income by place of residence in 2004–2014

**Tabela 4.** Wartość wskaźnika Giniego dla dochodów rozporządzalnych gospodarstw domowych według klasy miejscowości zamieszkania w latach 2004–2014

Specification Wyszczególnienie	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Urban areas Miasta	0.331	0.333	0.329	0.325	0.315	0.312	0.323	0.317	0.317	0.312	0.306
Rural areas Wsie	0.330	0.336	0.331	0.341	0.343	0.338	0.339	0.337	0.343	0.352	0.329

Source: own elaboration based on GUS, 2004–2014.

Źródło: opracowanie własne na podstawie GUS, 2004–2014.

suggest the presence of the diversification process of functions fulfilled by rural areas, as mentioned earlier in this paper. The deepening inequalities may contribute towards further impoverishment and depopulation of rural areas located away from cities and dominated by small-scale agriculture.

## SUMMARY

The incomes of farmer households continue to be lower compared to households who earn most of their funds from employment or self-employment. Similarly, the

incomes of rural dwellers are lower than those of the urban population. Since 2004, the real disposable income has increased in all household categories. This suggests an improvement in the average financial situation of the Polish population and, thus, a reduction of the absolute material deprivation in specific socio-economic groups. However, the incomes of farmer households are unstable, and there are no observable sigma-convergence processes between them and the incomes earned by the total population of households. Convergence was not found between the incomes of rural and urban households either. It may be therefore concluded that relative

deprivation is a persistent process with an increasing importance in explaining the orientations of state policy.

The relatively strong differentiation of income within the farmer population and the rural population poses an additional problem. Unlike in other groups, these inequalities tend to grow, and therefore may threaten the “vitality of rural areas” due to, for instance, migratory pressures towards places where higher incomes may be achieved. Farmers may improve their financial situation by implementing structural changes in their holdings and by engaging in additional employment, or by discontinuing their agricultural activities and moving to other professional sectors. The latter option may involve migrations from rural to urban areas. However, the improvements to infrastructure connecting rural and urban areas, and efforts aimed at making rural areas more attractive places to invest may contribute to reducing the income disparities between the rural and urban population without the need for people to relocate from rural areas to cities on a permanent basis.

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## DOCHODY GOSPODARSTW DOMOWYCH ROLNIKÓW ORAZ WIEJSKICH GOSPODARSTW DOMOWYCH JAKO PRZEJAW DEPRYWACJI EKONOMICZNEJ WSI W POLSCE

**Streszczenie.** Celem opracowania była ocena poziomu i zmian dochodów gospodarstw domowych w układzie miasto–wieś oraz rolnicy–pozostałe grupy społeczno-ekonomiczne w kontekście zjawiska deprywacji materialnej oraz identyfikacja ewentualnego procesu konwergencji między zmiennymi opisującymi sytuację dochodową badanych grup podmiotów. Dodatkowo wskazano na problem nierówności dochodowych w poszczególnych typach gospodarstw oraz przedstawiono wielowymiarowość pojęcia deprywacji. Wykorzystano dane GUS w zakresie przeciętnych miesięcznych dochodów rozporządzalnych oraz wskaźnika nierówności Giniego. Proces konwergencji oceniano za pomocą wskaźnika sigma-konwergencji. Wyniki badań wskazują, że w ujęciu realnym wzrastały dochody rolniczych i wiejskich gospodarstw domowych, jednak nie obserwuje się procesu sigma-konwergencji między dochodami gospodarstw domowych rolników i innych grup społeczno-ekonomicznych, jak również gospodarstw domowych na wsi i w miastach. Na obszarach wiejskich i wśród gospodarstw domowych rolników obserwuje się znaczne zróżnicowanie poziomu nierówności dochodowych, które w badanym okresie wykazywało tendencję wzrostową.

**Słowa kluczowe:** deprywacja materialna, dochody rozporządzalne, dysparytet dochodowy, sigma-konwergencja, nierówności dochodowe

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