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Changes in household income distribution after the introduction of social policy programmes in Poland[2]

Introduction

Many social policy programmes have been introduced in recent years, starting from 2015, which are undoubtedly, or at least perceived so by the public, significant for improving the standard of living for society (general social well-being), and especially for those social groups which used to experience various difficulties in their functioning in the socioeconomic space of modern Poland. Since the programmes are addressed either to a wide range of society or to specific social groups, they substantially no longer fall strictly within the welfare policy but form a part of the social policy, as they are designed to change the current socioeconomic system. The "Family 500+" programme is a good example as its objectives, as we can read on the website of the Polish Ministry of Family, Labour and Social Policy (MRPiPS, 2019a), were to: increase the number of births, limit poverty, and support family. At least two of those objectives (increase the number of births and family support) have distant time horizons and they considerably help organise the socioeconomic order and secure a fair system of relations in society (Danecki, 1984, p. 193).

Although the "Family 500+" programme has been functioning for a relatively short time, the relevant Polish literature already includes papers addressing its impact on Poland's socioeconomic situation. Information about its significance for the income situation of households can be found in (Hanusik, Łangowska-Szczęśniak, 2018; Gasz, 2018; Brzeziński, Najsztub, 2017; Chrzanowska, Landmasser, 2017)

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and indirectly in (GUS, 2018a). The impact of the programme on the economic activity of people, the state budget and the number of children in families has been addressed by (Franielczyk, 2018; Politaj, 2018; Radzik, 2018; Krawczyk, 2019).

Social policy understood as taking actions can be defined as an instrumental use of power in a state in order to adjust the market mechanisms to secure well-being for all citizens by addressing the socioeconomic inequalities among various social groups and inequalities in terms of power (Szarfenberg, 2007, p. 34).

Social well-being in a general sense is an outcome of two factors: standard of living and the inequalities of its distribution among the citizens[3]. It increases when the standard of living of the members of a particular society or social group improves and/or the inequalities in its distribution decrease. Therefore, the state should pursue both economic and social goals, the former to build wealth, in a broad sense of the term, and the latter to alleviate the excessive inequalities in its distribution among the citizens and to empower the weakest groups.

The purpose of the paper is to analyse the changes in income distribution of Polish households during the introduction and functioning of social policy programmes, and in particular "Family 500+". The results of the analysis make it possible to monitor the socioeconomic effects of the said programmes in terms of how they shape the income of the population, with the size and diversification of the income determining the level of social well-being – a general objective of social policy. Special attention is paid to those social groups that used to be in a difficult financial situation, as presented in studies by GUS (Polish Central Statistical Office). These include households with many children, people with disabilities or households in the countryside and small towns (GUS, 2017, pp. 25–27). The benchmarking of income distributions is based on data from the 2015 and 2018 Household Budget Survey. When compared to the results presented in the aforementioned papers, this study has the added value that consists in a more in-depth benchmarking analysis of income distribution and distance, from the cross-sectional and time-series perspectives, based on individual data from the Household Budget Survey for two periods – before the introduction of the programmes in question and after they were fully in operation.

Social policy programmes implemented in Poland after 2015

Studies regarding the policy addressing social problems attempt to differentiate between social policy and social welfare policy. The subject undertaken in this chapter is difficult and it has been discussed in the literature without explicit

[3] In a narrower (simplified) sense, the level of social well-being is determined based on the average wages in society and the inequalities in the distribution of those wages. This is synthetically captured by abbreviated welfare function (Kot, 2000, pp. 141–142).

conceptualisation of those terms. This results from the complexity of social issues or processes, their considerable uncertainty and the cultural diversity of the causes underlying those processes, in both space and time. The social policy lexicon confirms this by providing different definitions of that policy[4] (Rysz-Kowalczyk, 2001, pp. 119–120). Those definitions suggest that social policy applies more to the organisation of social life and social relations in order to preserve and shape social progress and social order by preventing social problems and changing the social structure for the benefit of society as a whole. In contrast, social welfare policy is oriented towards issues connected with improving the financial conditions of life (and in particular increasing the income of households) based on *ad hoc* intervention (distribution of welfare benefits), especially in respect of weaker social groups (Rysz-Kowalczyk, 2001, p. 118). There is no doubt that social policy and social welfare policy are intertwined, as expressed by Frątczak-Müller (2014, p. 37), who claims that the welfare-related activity of the state is considered as its response to the expectation of social justice and as cooperation to compensate the outcomes of specific situations or fortuitous events in accordance with the principles of equity. Therefore, the state performs a welfare function when it guarantees the satisfaction of the basic needs for all of its citizens, ensures financial security, acts in support of social development through proper services and has institutionalised social rights as an important part of civic rights.

At this point of discussing social policy and welfare policy, I must reiterate that the purpose of this paper is not to address the definition-related issues regarding the terms connected with social policy in a broad sense, but merely to outline the problem of the impact of specific actions of the state on the standard of living and quality of life of society. The definition-related issues of social policy are discussed in more detail by (Skinder, 2009, pp. 33–45).

Below I briefly present the social policy programmes in Poland in 2018. It should be remembered that population income studies also take into account the non-financial goods and services provided to households which increase the total income of the household. Despite that, the overview focuses only on those programmes that result in an actual flow of income to families, people and their households and which apply nationwide[5].

The first flagship social policy programme of recent years is "Family 500+", which is a system-based long-term support for Polish families. It was introduced on 1 April 2016. The purpose of the programme is to: increase the number of births in Poland due to their dramatically low level in 2015; limit poverty which substantially affected large families; and support the family as the fundamental and

[4] The author of the term "Social policy definitions" included in the social policy lexicon decided against providing one definition for the term "social policy", instead presenting the 7 definitions used in the relevant literature.

[5] All the information about the described social policy programmes comes from the website of the Polish Ministry of Family, Labour and Social Policy (MRPiPS, 2019b).

most important social unit. The programme involves cash transfers of PLN 500 for every child up to the age of 18 in a family, starting from 1 July 2019. Before that date, the benefit was paid for the second and every subsequent child, and in the case of poor families also for the first child.

The "Good Start" programme provides a one-off support of PLN 300 to all pupils starting school. The objective is to invest in the education of Polish children regardless of the income of the pupil's family.

Another benefit to support families is the supplementary parental benefit, "Mama 4+". It is intended for those who have raised at least four children and for that purpose they were unable to start a job or had to give up their jobs. To be eligible, they must be additionally experiencing a difficult financial situation – living on the verge of poverty without a right to even minimum benefits. As such, the parental supplementary benefit is a tool to at least partially reward mothers for the work done to raise children if they are unable to earn an adequate salary because of that.

Another programme with material impact on the income of households is a one-off cash transfer for retirement and disability pensioners, "Pension+". It involves a single payment of PLN 1,100 before tax to every pensioner. As the programme was launched in 2019, its effects are not included in the present analysis.

In addition to the government's financial social policy programmes, there are also programmes to support specific social groups through the financing of services delivered to the concerned parties either directly or via local governments[6]. They may also influence the income and expenses of households if they are recognised as income resulting from goods and services received for free.

In developed countries, social spending constitutes a considerable share of the GDP. According to data of the OECD (OECD, 2020), Poland spent 21.133% of the GDP for those purposes in 2019, which was about 0.9 percentage points more than in 2015 and almost 1.1 percentage points more than the mean value for OECD countries. Total expenditure on Polish families in Poland in 2015 reached 1.78% of the GDP versus 3.11% in 2017 (MRPiPS, 2020). The brief overview of social policy programmes presented above and the considerable increase in expenditure for that purpose, especially for family support, shows that Poland has considerably increased social support, especially in relation to financially weaker social groups.

STATISTICAL DATA AND RESEARCH METHOD

The benchmarking of the income across the Polish population is based on data obtained by GUS (Polish Central Statistical Office) through the Household Budget Survey (HBS). The main purpose of the HBS was to provide relevant data for an analysis regarding the standard of living of the population and for an

[6] Examples of such programmes include: "Government Food Support", "Care 75+", "Meal at School and at Home".

analysis of the level and sources of income. The statistical unit is a household, which is classified according to about a dozen criteria, but only two are important from the perspective of this study: socioeconomic group and household biological type. The first criterion includes but is not limited to: employment households, retired pensioners or households supporting themselves from sources other than employment. The second one encompasses households of childless marriages, marriages with dependent children and, for example, single parents (GUS, 2018b).

The most common income category used in benchmarking studies is disposable income per capita. This income is defined as "total current household income from various sources, less personal income tax withholdings (deducted from wages and from certain social security benefits and other benefits), less ownership taxes, taxes paid for self-employment, for instance by representatives of free professions and individual farmers, and less social security and healthcare insurance premiums" (GUS, 2018b, p. 26). Disposable income includes both cash and non-cash income as well as goods and services received for free. It is significant for a study of the impact of social programmes on income, and by extension on the standard of living, that disposable income also includes goods and services acquired for free. After all, social support may be provided largely as non-financial social benefits.

Ultimately, the study examines household income per capita and per equivalent unit, i.e. equivalent income, but the income in both cases is weighted by the number of people in the household. As a result, an individual (household member) rather than a whole household is treated as the statistical unit.

Equivalent units are obtained based on equivalence scales. Their application makes it possible to compare households of various demographic structures according to the cost of maintaining a specific standard of living (well-being) equal for those households. The relevant literature offers broad discussions about the problem of determining those scales (Dudek, 2011; Kot et al., 2004, pp. 171–175). Since there is no single method for estimating equivalence scales, this paper uses a modified OECD scale[7], which involves assigning weights to particular household members depending on their age (Hagenaars et al.,1994).

There are two ways of examining income distribution: as empirical distribution or using income distribution models. Both methods have their advantages and disadvantages. In the case of empirical distribution, problems may include the calculation of certain characteristics of the distribution and their vulnerability to extreme observations, while in the case of theoretical distributions, we face the problem of selecting an appropriate function to model the actual income distribution and the issue of estimating the parameters of that model.

The present paper adopts an intermediate approach, one which involves using a decile distribution with closing of extreme income classes[8]. The approach makes

[7] As it is impossible to expressly define the equivalence scales, the literature often uses the OECD scale. This approach makes it possible to compare the results obtained by various researchers.

[8] The issue has been addressed in more detail in (Ulman, 2015, pp. 80–82).

it possible to avoid multiple estimation of income distribution models (for various household groups) and also to significantly limit the impact of any diverging income.

Statistical description of income distribution is based on common descriptive measures – mean value, median, mode, coefficient of variation, relative average deviation, Gini coefficient and asymmetry coefficient[9].

Differences between income distributions in the years under study are explored using a measure of distance between the distributions which is based on comparison of quantile orders (in the cumulative distribution function). They can be presented with the following formula:

$$O = 1 - \sum_{i=1}^{k}(G(p_i) + G(p_{i-1}))w_i, \tag{1}$$

where: $w_i = p_i - p_{i-1}$, $G(p_i)$ is the studied cumulative distribution function value for baseline distribution quantiles. The measure takes values in the range [-1,1]. A negative *O* value means divergence of the studied distribution from the baseline distribution towards the lower values of income, while a positive *O* value means that the studied distribution is shifted against the baseline distribution towards the higher values of income (Ulman, 2018, p. 48).

A slightly simpler way to measure the differences in income is to compare its mean values using the income gap index. This involves calculating the difference between mean values of income for two comparable distributions and dividing that difference by the mean value from the baseline distribution.

Abbreviated welfare functions serve as simple measures of social well-being (of population groups). They make it possible to compare well-being without measuring the utility function, taking into account only two income distribution parameters: its mean value and the level of income inequalities. One of the most popular welfare functions of this type is the Sen index, proposed by A. Sen, a 1973 and 1998 Nobel Prize winner (Sen, 1973, p. 33).

The Sen index may be presented with the following formula:

$$I_s = \mu(1 - G) \tag{2}$$

where: μ means average income, and *G* – Gini coefficient value.

STUDY RESULTS

The results of the analysis presented below were obtained based on individual and anonymised data from the Household Budget Survey for two year periods: 2015 and 2018. The first of those years directly preceded the introduction of many significant social policy programmes, while the other one was chosen for data

[9] Appropriate formulae can be found in (Ulman, 2015, pp. 87–99).

availability reasons – they were the most recent data sets available as the paper was being prepared and they already included information about increased income from various social programmes implemented after 2015.

First, the results of estimations of the basic characteristics of income distribution per capita and equivalent income were presented in Table 1 for 2015 and 2018. To achieve income comparability, the income from 2015 was converted according to the inflation rate to bring it in line with 2018 prices.

All measures of central tendency (mean value, median, mode) point to a substantially higher income in 2018 than in 2015 for both income per capita and equivalent income. Notably, all the three measures of variability (inequality) of income (coefficient of variation, relative average deviation – RAD, Gini coefficient) show that inequalities were lower in 2018. If the purpose of social programmes involving transfer of money primarily to the financially weaker members of society is to increase their income and limit the diversification, the results presented in Table 1 confirm this effect. Even if we assume that we give the same amount of money to every member of society, this is enough for the inequalities in income distribution to drop. This arises from an axiom of the measures of inequalities, which states that adding the same income to every individual reduces the inequalities in income distribution. In social policy programmes, money is usually provided to those who need it the most, which of course allows such programmes to reduce income inequalities even more. The growing average income and the decreasing inequalities are reflected in the increasing value of the Sen index, which reflects the level of social well-being in a simplified way. Besides, it is noteworthy that equivalent income is much higher than income per capita. This is of course justified because there are fewer equivalent units in a household than there are household members (unless it is a single-member household). Equivalent income is assumed to be a measure of well-being as it carries information about income comparable due to the costs that households should incur to achieve a specific well-being level[10]. The asymmetry of income distribution must also be mentioned – it was right-sided, which was an expected outcome. This result derives from the differentiation between measures of central tendency – the income mean value being higher than the modal value.

This special characteristic of income distribution is illustrated in Figures 1 and 2, where the right distribution tail runs more towards higher values than the left one towards lower values. There is also a visible shift of income distributions towards higher values in 2018 versus in 2015, which is confirmed by the applied measures of distance between the distributions, showing that the 2018 distribution substantially, for such a short period, differs from the income distribution in 2015, both for income per capita and for equivalent income.

[10] The equivalence scale answers the question of what income should be available to a household with specific characteristics (usually the number of people) to achieve the same level of well-being as the reference household with a specific income and characteristics.

Table 1. Distribution characteristics for income per capita and for equivalent income (in PLN) in 2015 and 2018 (prices from 2018)

Distribution characteristic	Income per capita		Equivalent income	
	2015	2018	2015	2018
Mean value	1427.88	1693.46	2199.75	2652.95
Median	1228.91	1477.18	1922.85	2351.17
Mode	946.09	1118.08	1748.14	2055.26
Coefficient of variation	63.31%	58.10%	59.34%	54.90%
RAD	23.81%	21.55%	21.91%	20.14%
Gini coefficient	0.334	0.304	0.310	0.287
Asymmetry	0.533	0.585	0.346	0.410
Sen index	951.40	1178.31	1517.17	1891.29
Index of distance	x	0.2029	x	0.2354
Income gap	x	0.1860	x	0.2060

Source: own study based on (GUS, 2018b).

Table 2 presents income distribution characteristics for selected socioeconomic groups of households in the two periods under study. It includes households living off paid employment, retirement pension, disability pension and certain non-employment sources. These types of household should be the primary beneficiaries of the recently introduced social programmes.

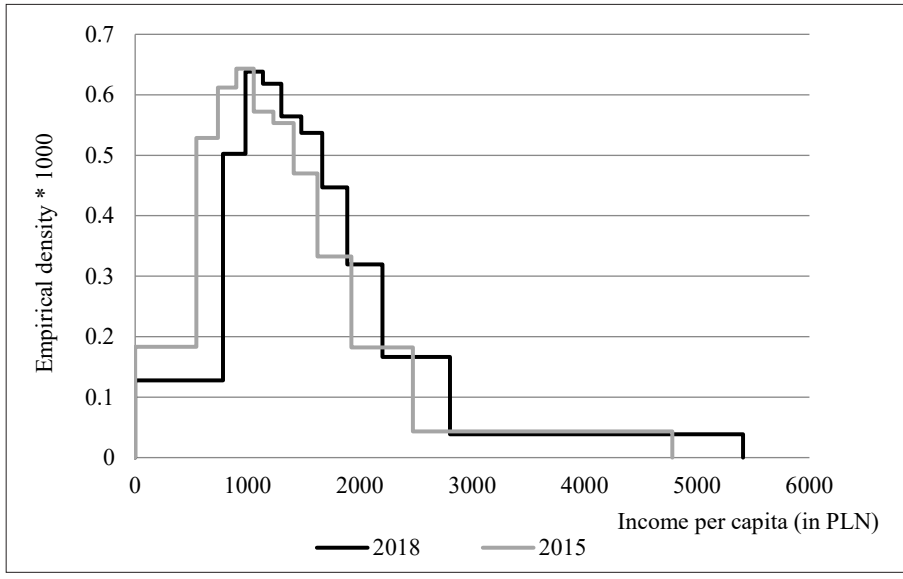

Figure 1. Distribution of income per capita in 2015 and 2018 (prices from 2018)

Source: own study based on (GUS, 2018b).

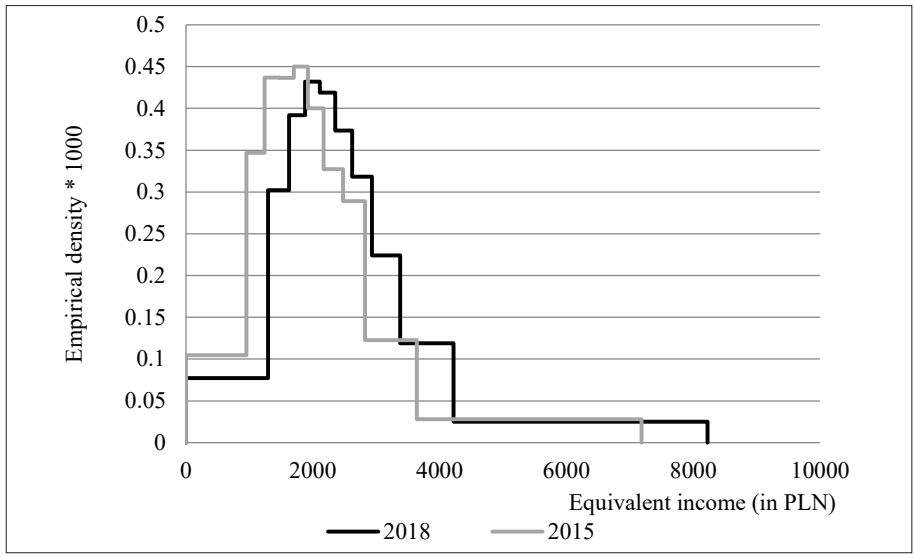

Figure 2. Distribution of equivalent income in 2015 and 2018 (prices from 2018)

Source: own study based on (GUS, 2018b).

Table 2. Distribution characteristics of income per capita (in PLN) by socioeconomic group in 2015 (prices from 2018)

Distribution characteristic	Households living off:					
	paid employment		retirement pension or disability pension		non-employment sources	
	2015	2018	2015	2018	2015	2018
Mean value	1428.61	1702.65	1481.33	1683.35	897.49	1057.94
Median	1208.65	1466.67	1389.67	1590.00	661.84	887.33
Mode	919.48	1141.32	1386.10	1613.06	505.06	911.09
Coefficient of variation	63.37%	57.69%	51.58%	47.02%	77.40%	65.26%
RAD	23.65%	21.28%	19.63%	17.68%	28.26%	22.83%
Gini coefficient	0.331	0.300	0.281	0.255	0.385	0.323
Asymmetry	0.562	0.572	0.125	0.089	0.565	0.213
Sen index	956.31	1192.54	1064.78	1253.76	551.78	716.33
Index of distance	x	0.2242	x	0.1769	x	0.2463
Income gap	x	0.1918	x	0.1364	x	0.1778

Source: own study based on (GUS, 2018b).

Just like before, the average household income in 2018 was in all cases significantly higher, while inequalities where lower than in 2015. This diversification between distributions is confirmed by measures of distance. The higher the value of

the index of distance and the income gap, the more apart the compared distributions. Notably, the index of distance was the highest in the case of distributions for households living off non-employment sources, while the income gap was the highest for employment sources. Yet it seems that the index of distance used in the analysis is a more precise measure for income distribution diversification. This is because, unlike in the case of the income gap, it takes into account more information about the distribution than just the mean value. So the greatest beneficiaries of the income distribution changes in the period under study are households living off non-employment sources, followed by employment households.

Tables 3 and 4 include results analogical to those described above but they focus on households by biological type. They consider households of childless marriages (no dependent children), households of marriages with dependent children and households of single mothers with at least one dependent child. The intended primary beneficiaries of the social programmes changing the income distributions were households with underage children.

Table 3. Distribution characteristics of income per capita (in PLN) by biological type of household in 2015 (prices from 2018)

Distribution characteristic	Marriage					Mother with children
	without children	with 1 child	with 2 children	with 3 children	with 4 or more children	
Mean value	2000.40	1638.01	1304.76	959.69	684.87	1110.80
Median	1751.17	1442.14	1107.36	824.08	577.20	905.97
Mode	1504.19	1310.32	995.02	836.38	529.88	653.06
Coefficient of variation	55.47%	56.97%	62.41%	59.31%	57.19%	64.85%
RAD	20.40%	21.21%	22.65%	22.10%	21.40%	24.31%
Gini coefficient	0.290	0.301	0.321	0.310	0.299	0.337
Asymmetry	0.447	0.351	0.380	0.217	0.396	0.635
Sen index	1421.28	1145.62	886.32	662.09	479.89	736.79

Source: own calculations based on (GUS, 2018b).

The income of particular social groups clearly grew in all cases. The level of inequalities dropped significantly, which, in total, resulted in a substantial increase of the Sen index value. At the bottom of Table 4 are measures of distance for the studied distributions on a time-series basis. It can be noticed how the values of those measures rise as the number of children in the marriage increases. For marriages with 4 or more children, income distribution from 2018 is no longer the same as in 2015 (to the advantage of the 2018 situation). If the index of distance were 1, the two distributions would have nothing in common (all the

2018 income would be at least equal to the highest income from 2015). Therefore, the greatest beneficiaries of the social programmes in recent years are households with dependent children. This reveals the difficult income situation in which those households were before 2016. If they had had sufficient income at their disposal, then even a child benefit of PLN 500 multiplied by the number of children would not have caused such significant changes in income distribution. In other words, the reference baseline (2015 income) was low.

Table 4. Distribution characteristics of income per capita (in PLN) by biological type of household for 2018

Distribution characteristic	Marriage					Mother with children
	without children	with 1 child	with 2 children	with 3 children	with 4 or more children	
Mean value	2195.07	1903.01	1596.84	1326.09	1085.82	1367.26
Median	1950.00	1700.00	1408.25	1140.00	984.83	1155.67
Mode	1685.72	1615.26	1109.47	1087.68	1010.50	1152.85
Coefficient of variation	53.14%	55.29%	55.43%	53.54%	54.10%	57.49%
RAD	19.57%	19.96%	20.15%	19.28%	18.69%	20.61%
Gini coefficient	0.279	0.287	0.287	0.275	0.273	0.291
Asymmetry	0.437	0.274	0.551	0.336	0.128	0.273
Sen index	1583.52	1357.42	1138.07	961.28	789.39	969.52
Index of distance	0.1303	0.1934	0.2705	0.4032	0.5318	0.2844
Income gap	0.0973	0.1618	0.2239	0.3818	0.5854	0.2309

Source: own calculations based on (GUS, 2018b).

Tables 5 and 6 include income gap calculation results for the already mentioned household groups by the socioeconomic class and biological type. The calculations were made separately for 2015 and 2018. The comparison is designed to show whether the introduced social programmes change the diversification between social groups, for example.

In the case of household division by the socioeconomic group, we do not observe clear changes in the relations between particular income distributions over time. Employment households had "better" income distribution than households living off non-employment sources. A slight change took place between employment households and households living off a retirement pension or disability pension. In 2015, the former were in a worse situation than the latter, but in 2018 the situation reversed. Still, the income gap differences for those two periods were not substantial.

Table 5. Income gap for households by selected socioeconomic groups for 2015 and 2018

Baseline distribution / household	Studied distribution		
	employment	retirement pension or disability pension	non-employment sources
2015			
employment	0.0000	0.0369	-0.3718
retirement pension or disability pension	-0.0356	0.0000	-0.3941
non-employment sources	0.5918	0.6505	0.0000
2018			
employment	0.0000	-0.0113	-0.3787
retirement pension or disability pension	0.0115	0.0000	-0.3715
non-employment sources	0.6094	0.5912	0.0000

Source: own study based on (GUS, 2018b).

Table 6. Income gap for households by biological type of household for 2015 and 2018

Baseline distribution / household	Studied distribution					
	marriage without children	marriage with 1 child	marriage with 2 children	marriage with 3 children	marriage with 4 or more children	mother with children
2015						
marriage without children	0.0000	-0.1812	-0.3478	-0.5203	-0.6576	-0.4447
marriage with 1 child	0.2212	0.0000	-0.2034	-0.4141	-0.5819	-0.3219
marriage with 2 children	0.5332	0.2554	0.0000	-0.2645	-0.4751	-0.1487
marriage with 3 children	1.0844	0.7068	0.3596	0.0000	-0.2864	0.1575
marriage with 4 or more children	1.9208	1.3917	0.9051	0.4013	0.0000	0.6219
mother with children	0.8009	0.4746	0.1746	-0.1360	-0.3834	0.0000
2018						
marriage without children	0.0000	-0.1331	-0.2725	-0.3959	-0.5053	-0.3771
marriage with 1 child	0.1535	0.0000	-0.1609	-0.3032	-0.4294	-0.2815
marriage with 2 children	0.3746	0.1917	0.0000	-0.1696	-0.3200	-0.1438
marriage with 3 children	0.6553	0.4351	0.2042	0.0000	-0.1812	0.0310
marriage with 4 or more children	1.0216	0.7526	0.4706	0.2213	0.0000	0.2592
mother with children	0.6055	0.3918	0.1679	-0.0301	-0.2058	0.0000

Source: own study based on (GUS, 2018b).

The situation is different if we divide households by the biological type. Let us take a look at the most drastic difference, i.e. households of marriages with 4 or more dependent children. Their average income in 2015 was almost half that (1.9208) of the average income of marriages without children, and households of single mothers with children had an income higher by over 62%. In 2018, those relations remained unchanged but the scale of income diversification for the mentioned household groups dropped. The average income was "only" 102% higher for childless marriages and about 26% higher for single mothers than the average income of marriages with many children.

The results in the tables show that not only did the income situation of particular groups improve but also the inequalities between the groups decreased. The main beneficiaries of the social programmes were those population groups who were in the most difficult income situation before 2016. This is confirmed by the simple estimation of the money transferred under the "Family 500+" programme in 2018 by quartile income class. The calculations based on the HBS database show that 51.92% of the total funds were transferred to households with the lowest income; 26.24% to households from the second quartile class (income between the first quartile and the median); 12.73% to households from the third quartile class; and, finally, 9.11% to households characterised by the best income situation.

Conclusions

The social programmes introduced in recent years were intended to ensure a fairer distribution of the benefits derived from Poland's economic growth. As the study results regarding poverty show, poverty affected large families and households with the disabled the most. Philosophical and ethical issues aside, the introduction of cash transfers to support families, primarily in raising children, seems a justified activity of the state. After all, such families carry out work that is socially useful and important for shaping the pro-developmental structure of society (which is one of the objectives of social policy). So why should they not be rewarded for that by the state (society) in the spirit of social solidarity and justice.

The analysis results presented in the paper show that not only did the average income of all social groups grow but also income distribution inequalities within and between groups dropped, the greatest beneficiaries of the social programmes in the period under study being marriages with dependent children and households living off non-employment sources. All those changes may be, with a certain caution, attributed to the social programmes introduced in recent years and to the policy of raising the minimum wages (by PLN 350, from PLN 1750 in 2015 to PLN 2100 in 2018, i.e. by 20%). In addition to those two factors, the economic condition in the period under study was good, which led to pay increases in general, decreased the

share of employees receiving minimum wages[11] and increased employment, and this, in turn, resulted in higher income of the population. Nevertheless, it must be noted that such significant income distribution changes in the population groups identified in the paper (primarily marriages with dependent children) cannot be explained away only by an improving economy.

The growth of the average income and the decrease of income inequalities directly improves social well-being, with income growth being more significant in this case than the reduction in inequalities[12]. This shows that from a formal view, the focal point should be to increase the income of the population rather than limit income inequalities which can no longer be considered as high after the introduction of the social programmes.

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[11] At the end of 2018, the number of people employed in the national economy whose gross pay did not exceed the minimum wages dropped by 3.7% versus the analogical period in the year before (GUS, 2019).

[12] Analysis of the flexibility of the Sen index versus appropriate income changes and inequalities shows that with a Gini coefficient below 0.5, a 1% income growth has more impact (well-being growth) than a 1% drop in the said coefficient.

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Summary

The aim of the paper is to analyse changes in the distribution of income of Polish households during the implementation and functioning of social policy programmes in Poland. Attention is paid to social groups that experienced a difficult economic situation, in particular marriages with dependent children. The added value of the research lies in the in-depth comparative analysis of the distribution of income and its distance in cross-section and time, based on individual data from the Household Budget Survey for two periods – before the implementation of the programmes and during their full operation.

In order to compare the income distributions, statistical analysis methods were applied to the empirical income distributions. In addition to the commonly known and basic numerical characteristics of the distributions, a distribution distance measure and an income gap ratio were used. All calculations were based on individual data from the Household Budget Survey carried out in 2015 and 2018.

As a result of the calculations, it was shown that in the analysed period there were significant changes in the distribution of income among the Polish population in terms of average income and income inequality. The former increased substantially, while the latter decreased, including between social groups. The results show that the social policy programmes implemented in Poland after 2015 contributed significantly to raising the level of income of most members of society and reducing economic inequalities.

Keywords: social policy, income, economic inequalities.

Zmiany w rozkładzie dochodów gospodarstw domowych po wprowadzeniu programów polityki społecznej w Polsce

Streszczenie

Celem artykułu jest analiza zmian w rozkładzie dochodów polskich gospodarstw domowych w czasie wprowadzania i funkcjonowania programów polityki społecznej w Polsce. Uwaga poświęcona została tym grupom społecznym, które doświadczały trudnej sytuacji ekonomicznej, w szczególności małżeństwom z dziećmi na utrzymaniu. Wartością dodaną badań – w stosunku do prezentowanych dotychczas w literaturze przedmiotu – jest dogłębna analiza porównawcza rozkładu dochodów i ich oddalenia (odległości) w ujęciu przekrojowym, jak i czasowym, oparta o indywidualne dane z Badania Budżetów Gospodarstw Domowych z dwóch okresów – przed wprowadzeniem w życie omawianych programów i w trakcie ich pełnego funkcjonowania.

W celu porównania rozkładów dochodów wykorzystano metody statystycznej analizy empirycznych rozkładów dochodów. Oprócz powszechnie znanych podstawowych charakterystyk liczbowych rozkładów zastosowano miernik odległości rozkładów oraz miernik luki dochodowej. Wszystkie obliczenia przeprowadzono na podstawie indywidualnych danych z Badania Budżetów Gospodarstw Domowych zrealizowanych w latach 2015 i 2018.

W wyniku przeprowadzonych obliczeń pokazano, że w badanym okresie nastąpiły zasadnicze zmiany rozkładów dochodów ludności polskiej zarówno w zakresie przeciętnych dochodów, jak również nierówności dochodowych. Pierwsze istotnie wzrosły, natomiast drugie spadły. Spadły również nierówności między porównywanymi grupami społecznymi. Wyniki te dają podstawę do stwierdzenia, że programy polityki społecznej wprowadzone w życie w Polsce po 2015 r. zasadniczo przyczyniły się do podniesienia poziomu dochodów większości członków społeczeństwa i ograniczenia nierówności ekonomicznych.

Słowa kluczowe: polityka społeczna, dochody, nierówności ekonomiczne.

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