ORIGINAL PAPER

DIFFERENCES IN THE LEVEL AND STRUCTURE OF CONSUMPTION OF POLISH HOUSEHOLDS FROM 2010-2019

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A b s t r a c t

This article aims to assess the level and structure of household consumption and its social differentiation in the years 2010–2019 in terms of disposable income and consumption expenditure. The data on household budgets were sourced from Statistics Poland. The analysis revealed clear differences in the level and structure of household consumption observed over a ten year period. The share of expenditure on food, healthcare, as well as transport and communications is growing, while the share of expenditure on housing, clothing and shoes is decreasing. Meanwhile, the level of these changes varies across groups of households. The decreasing propensity of households to consume and the increasing level of income accumulation are evidence of an increase in their economic welfare. However, the deepening process of social polarization of income clearly perpetuates inequality in the level and structure of household consumption.

RÓŻNICE W POZIOMIE I STRUKTURZE KONSUMPCJI POLSKICH GOSPODARSTW DOMOWYCH W LATACH 2010-2019

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A b s t r a k t

Celem artykułu była ocena kształtowania się poziomu i struktury konsumpcji gospodarstw domowych oraz jej społecznego zróżnicowania w latach 2010-2019 w świetle dochodów rozporządzalnych i wydatków konsumpcyjnych. Podjętą problematykę zrealizowano na podstawie analizy danych GUS dotyczących budżetów gospodarstw domowych. Jak wynika z badań na przestrzeni dziesięciu lat zaobserwowano wyraźne różnice w poziomie i strukturze konsumpcji gospodarstw domowych. Wzrósł udział wydatków na żywność, ochronę zdrowia oraz transport i łączność, zmalał natomiast udział wydatków na mieszkanie oraz odzież i obuwie, przy czym poziom tych zmian jest zróżnicowany w poszczególnych grupach gospodarstw domowych. Malejąca skłonność gospodarstw domowych do konsumpcji i coraz wyższy stopień akumulacji dochodów świadczą o wzroście ich dobrobytu ekonomicznego. Pogłębiający się proces społecznej polaryzacji dochodów wyraźnie jednak utrwala różnice w poziomie i strukturze konsumpcji gospodarstw domowych.

Introduction

Consumption among Polish households is constantly changing, which results in changes in their economic welfare. In consumption research, economic welfare is defined as the material and financial base of consumption, i.e. the stock of consumption items and financial resources, which are at the disposal of household members and/or society (Bywalec, 2010). In detailed economic analyses, it is assumed that the most important categories of economic welfare, allowing for an objective assessment of the financial situation of households, are disposable income and consumption expenditure (Kasprzyk & Leszczyńska, 2012, p. 263).

Disposable income includes all monetary and non-monetary household receipts less taxes (on income from employment, other income, and property paid by self-employed persons) and personal tax advances paid by a taxpayer on behalf of the taxpayer, as well as healthcare and social security contributions. It is distributed as deemed appropriate for consumption, savings and other expenses. Consumption expenditures constitute a strictly separated group of consumer goods and services and include goods purchased for cash with a debit or credit card, as well as on credit, the value of goods received free

of charge and natural consumption[1]. Savings, i.e. income accumulated in the past, contribute to the current consumption of households. Other expenses include amounts transferred to other households and non-profit institutions, certain taxes (including from inheritance and donations, property income, or rental and sale of real estate) and monetary losses (*Budżety gospodarstw domowych…*, 2019). Disposable income and consumption expenditures allow an assessment to be made of the material situation within households, and this analysis is an important indicator for assessing the level and structure of household consumption.

The aim of the article is to assess the level and structure of consumption within Polish households and its social variation in the years 2010-2019 in the light of the most important categories of economic welfare, i.e. income and expenditure of households.

Research methodology

The analysis of disposable income and consumption expenditure (per person in a household) was carried out according to the subject structure of consumption (Żelazna *et al.*, 2002), in accordance with the previously specified criterion. In the literature on the subject, the most common criterion differentiating the financial situation of households is disposable income (Janoś-Kresło, 2006). Disposable income (DI) consists of two components, i.e. discretionary income, which is spent on consumption and savings, and other expenses.

With reference to the previously defined criterion, four groups of households have been distinguished, depending on the source of their income, i.e.:
– employees,
– farmers,
– self-employed workers,
– retirees and disability pensioners.

The analysis of the level and structure of household consumption in the light of disposable incomes and consumption expenditure consisted of:
– the level and structure of average monthly income in groups of households, including a comparison of income levels and a calculation of income dynamics and structure;
– level and structure of average monthly consumption expenditure[2], including a calculation of expenditure dynamics and structure;
– assessment of the social differentiation of the household financial situation in light of Keynes' hypothesis (Bywalec, 2012), i.e. the share of consumer spending in disposable income.

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[1] Natural consumption includes consumer goods and services provided for a household from the individual household itself or from self-employed economic activity.

[2] The following groups of consumer goods and services were included in the analysis: food and non-alcoholic beverages, clothing and footwear, housing and energy, transport and communications, and healthcare.

The research period spanned the years 2010-2019, which made it possible to assess the financial situation of households against the background of a changing economic reality (including the effects of the global financial crisis of 2007-2009) and to observe the contemporary tendencies of the Polish market. The research used information derived from sources published by Statistics Poland, mainly household budget surveys, as well as selected internet data from the website stat.gov.pl.

The number of surveyed households was determined based on information derived from household budget surveys (Tab. 1).

Table 1

The number of investigated households from 2010-2019

Years	Households				Total
	employees	farmers	self-employed	retirees and disability pensioners	
2010	18,441	1,909	2,657	12,937	37,412
2011	18,511	1,863	2,584	12,914	37,375
2012	18,261	1,841	2,589	13,141	37,427
2013	17,962	1,842	2,531	13,108	37,181
2014	18,146	1,689	2,488	13,167	37,215
2015	18,336	1,681	2,457	13,118	37,148
2016	17,877	1,689	2,500	13,323	36,886
2017	17,708	1,658	2,508	13,282	36,655
2018	17,217	1,555	2,467	13,657	36,166
2019	16,797	1,464	2,602	13,797	35,923

Source: own study based on: *Budżety gospodarstw domowych…* (2011-2020).

The household budget survey was conducted using the representative method. A sample is drawn from among all households, which allows for the generalization of the survey results. According to this method, a different randomly selected household participates in the annual survey each month..

Household income and expenditure

In 2010-2019, the level of disposable income per person in a household was diversified in individual groups of households (Tab. 2). The highest level of income was characteristic for households of the self-employed and the lowest income level was for farmers.

Table 2

Average monthly disposable income of households (in PLN/person) in 2010-2019

Years	Households				Extreme Income Difference
	employees	farmers	self-employed	retirees and disability pensioners	
2010	1,199.22	1,024.53	1,468.38	1,180.82	443.85
2011	1,243.84	983.88	1,497.43	1,233.08	513.55
2012	1,289.16	1,091.55	1,536.68	1,297.90	445.13
2013	1,305.88	1,156.13	1,581.05	1,328.65	424.92
2014	1,349.12	1,050.85	1,631.64	1,382.32	580.79
2015	1,386.87	1,046.17	1,739.48	1,438.04	693.31
2016	1,494.79	1,151.28	1,792.33	1,498.78	641.05
2017	1,607.77	1,575.57	1,918.94	1,579.03	343.37
2018	1,702.64	1,579.00	2,011.71	1,683.35	432.71
2019	1,832.14	1,666.55	2,173.63	1,819.27	507.08

Source: own calculations based on: *Budżety gospodarstw domowych…* (2011-2020).

In 2019, as compared to 2010, disposable income in all groups of households increased. In three out of four groups of households, i.e. employees, the self-employed, and retirees and disability pensioners, there was an increase in income year-to-year, which proves a systematic improvement in their economic welfare. On the other hand, in farming households, there was a decrease in incomes in 2010-2011 and 2013-2015. In the next four years, the income of farming households increased, while the material situation of this group of households apparently improved in 2017, which resulted from a significant increase in budget transfers to the agricultural sector[3], mainly redistributive expenses, as well as an increase in the productivity of the sector (Kata, 2019, p. 31-34). Thus, the smallest difference between the incomes of the richest and the poorest groups of households was recorded in 2017 (PLN 343.37), but the process of social polarization of household incomes deepened again over the next two years.

The analysis of the change in average monthly disposable income showed a differentiated rate of income growth in individual groups of households (Tab. 3).

In 2019, the highest increase in income as compared to 2010 was recorded in households of farmers (62.7%) and the lowest in households of the self-employed (48%). In the entire analysed period, there was an upward trend in disposable income in the households of employees, the self-employed and retirees and pensioners. In farming households, disposable income showed a downward trend

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[3] Redistributive expenses are intended to support agricultural income directly and in the short term, taking the form of direct payments, agri-environmental payments, insurance system subsidies, relief subsidies for agricultural fuel and agricultural social insurance, among others (Czyżewski *et al.*, 2016, p. 45-72).

The dynamics of the average monthly household disposable income per person in 2010-2019

Households	2010 = 100% (PLN)	Years								
		2011	2012	2013	2014	2015	2016	2017	2018	2019
		%								
Employees	1,199.22	103.7	107.5	108.9	112.5	115.6	124.6	134.1	142.0	152.8
Farmers	1,024.53	96.0	106.5	112.8	102.6	102.1	112.4	153.8	154.1	162.7
Self-employed	1,468.38	101.9	104.6	107.7	111.1	118.5	122.1	130.7	137.0	148.0
Retirees and disability pensioners	1,180.82	104.4	109.9	112.51	117.1	121.8	126.9	133.7	142.6	154.1

Source: own calculations based on: *Budżety gospodarstw domowych…* (2011-2020).

only in 2010-2011 and 2013-2015. In the last four years analysed, a significant increase in income was influenced by the government program Family 500+ introduced on 1 April 2016 (*Family...*, 2020), as well as an improvement in the labour market, i.e. a decrease in unemployment and an increase in wages (*Situation...*, 2018, p. 14, *Labour Market...*, 2020, p. 1).

Analysing the structure of the distribution of average monthly disposable income (DI) in particular groups of households, the structure indicators were compiled assuming two components of disposable income: discretionary income (DCI) and other expenses (OE), i.e. amounts transferred to other households and/or non-profit institutions (Tab. 4).

In 2010-2019, no significant differentiation was observed in the structure of disposable income of individual groups of households (Tab. 4). In 2019 as compared to 2010, farming households had the highest percentage of discretionary income (98.0%), while households of retirees and disability pensioners had the lowest (96.0%). Among all household groups, retirees and disability pensioners were also characterized as having the highest percentage of income transferred to other households and/or non-profit institutions (4.0% in 2019).

Since the level of disposable income directly determines the level and structure of household consumption expenditures, the next step was to analyse the level and dynamics of consumption expenditures (Tab. 5 and 6) and their structure (Tab. 7).

In the years 2010-2019, the level of expenditure per person varied in individual households (Tab. 5). The highest consumption expenditure per person was recorded in self-employed households, which was associated with the highest level of disposable income in this group of households, while the lowest level of expenditure was recorded in farming households. In 2019, the consumption expenditure of farming households (PLN 888.00) accounted for 62.4% of the expenditure of self-employed households. In the households of employees, retirees and pensioners, the level of consumption expenditure (per capita)

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in the analysed period was similar, which was mainly due to the number of people in individual groups of households. The households of employees usually include 3- to 4-persons, while pensioners usually consist of 1- to 2-person households (*Budżety gospodarstw domowych…*, 2019).

The analysis of the dynamics of household consumption expenditures showed that the highest increase in expenditures in 2019 compared to 2010 occurred in households of employees (22.3%) and it was similar to the dynamics of expenditures of retirees and disability pensioners (22.2%). Meanwhile, the lowest increase occurred in farming households (16.2%) (Tab. 6).

Table 6

Dynamics of average monthly household consumption expenditure per capita in 2010-2019

Households	2000 = 100% (PLN)	Years								
		2011	2012	2013	2014	2015	2016	2017	2018	2019
		%								
Employees	975.05	103.2	102.5	103.7	104.8	106.1	110.8	115.3	115.7	122.3
Farming	757.25	97.2	99.1	100.2	101.6	99.1	103.8	110.5	111.1	116.2
Self-employed	1,206.91	101.2	101.3	102.6	103.2	103.6	104.7	108.9	111.8	116.9
Retirees and disability pensioners	1,041.46	103.7	100.9	103.9	104.7	106.5	110.7	115.2	115.3	122.2

Source: own calculations based on*: Budżety gospodarstw domowych…* (2011-2020).

To analyse the differentiation of the consumption structure among individual groups of households, structural indicators were compiled based on five groups of consumer goods and services, i.e. food and non-alcoholic beverages, clothing and footwear, housing and energy, transport and healthcare (Tab. 7).

Table 7

Changes in the structure of household consumption expenditure in 2010-2019
(total expenditure = 100)

Years	Households			
	employees	farmers	self-employed	retirees and disability pensioners
1	2	3	4	5
Food and non-alcoholic beverages				
2010	23.5	31.5	21.0	28.1
2011	23.7	33.1	21.2	27.9
2012	23.8	31.1	21.5	28.0
2013	23.7	31.5	21.2	27.5
2014	23.2	31.0	20.9	27.2

1	2	3	4	5
2015	22.9	31.3	20.5	26.6
2016	23.0	31.5	20.9	26.7
2017	23.2	31.0	20.9	26.9
2018	23.6	30.8	20.9	28.0
2019	23.9	31.7	21.1	28.4
Clothing and footwear				
2010	5.9	5.2	6.8	3.1
2011	5.8	5.2	6.1	3.2
2012	5.6	5.1	6.3	2.9
2013	5.7	5.6	6.6	3.0
2014	5.9	5.9	7.0	3.4
2015	6.1	5.6	6.6	3.5
2016	6.2	6.0	7.0	3.6
2017	5.9	6.1	6.7	3.2
2018	5.5	5.4	6.0	3.0
2019	5.4	5.5	5.9	3.0
Housing				
2010	18.8	18.5	17.3	24.3
2011	19.2	18.0	18.6	24.9
2012	18.8	17.7	18.4	24.4
2013	19.4	18.7	18.3	24.4
2014	18.8	17.4	17.9	23.6
2015	19.0	17.2	17.9	23.5
2016	18.3	16.7	18.0	23.0
2017	18.4	16.9	17.0	23.1
2018	17.3	14.1	16.1	21.7
2019	17.0	13.9	15.9	21.3
Transport and communications				
2010	15.2	15.8	16.2	10.1
2011	15.0	14.9	16.3	10.0
2012	15.2	15.3	16.1	10.0
2013	16.3	15.0	16.9	11.0
2014	15.8	15.6	15.3	10.2
2015	15.2	15.9	14.7	10.3
2016	15.2	15.8	13.9	10.0
2017	14.7	15.0	13.6	10.1
2018	15.7	17.3	16.8	10.5
2019	15.4	16.1	15.2	10.6

1	2	3	4	5
Healthcare				
2010	3.8	3.7	3.9	7.8
2011	4.0	3.7	4.1	8.0
2012	4.0	3.9	4.0	8.1
2013	4.0	4.2	4.0	8.3
2014	3.9	4.2	4.0	8.2
2015	4.3	4.3	4.4	8.1
2016	4.3	4.8	4.5	8.3
2017	4.5	4.6	4.6	8.5
2018	4.0	4.8	4.1	8.0
2019	4.2	4.7	4.1	8.1

Source: own calculations based on: *Budżety gospodarstw domowych…* (2011-2020).

Over the ten years analyzed, there have been significant changes in the consumption structure of Polish society. In 2019, compared to 2010, the share of expenditures on food and healthcare increased in all groups of households. An upward trend was also recorded in expenditures on transport and communications, with the exception of farming households where this share decreased by 1.0 percentage point. In 2019, compared to 2010, a downward trend in the share of expenditure on housing was visible in all household groups, and the indicators of the share of expenditure on clothing and footwear decreased in almost all households (except for farming households, which showed a slight increase – by a 0.1 percentage point).

The highest share of expenditure on food and non-alcoholic beverages in total expenditure was recorded in farming households (31.7% in 2019), and the lowest in self-employed households (21.1% in 2019). It can be noted that the shares of food expenditure in global expenditure are highest in the poorest households and the lowest in the richest. It is worth noting that a slight increase in food expenditure indicators (in a situation of growing household incomes) proves that Engel's law[4] ceased to apply, which can be explained primarily by the change in the structure of demand for food (more expensive products and functional food play a greater role), as well as a relatively faster increase in food prices than in other consumer goods.

Expenditure on healthcare was another group of expenses that showed an upward trend in the analysed period. The highest percentages of this group of expenses were recorded in the households of retirees and pensioners (8.1% in 2019), and the lowest – in the households of the self-employed (4.1% in 2019).

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[4] According to Engel's law, with an increase in household income, the share of food expenditure in total household expenditure decreases (Bywalec & Rudnicki, 2002).

The upward trend in this group of expenses is a consequence of the progressive ageing of the Polish society, limited access to medical care in the public system and, consequently, an increasing private expenditure on healthcare.

Expenditure on transport and communications in 2019 increased in comparison to 2010 in almost all groups of households (with the exception of self-employed households), which is the result of the dynamic development of wireless telephony and greater availability of the Internet. The highest percentages of this group of expenses were recorded in farming households (16.1% in 2019) and the lowest were in households of retirees and disability pensioners (10.6%).

Expenditure on housing was characterized by a downward trend. The highest share of expenditure on housing was recorded in the households of retirees and disability pensioners (in 2019 – 21.3%) and the lowest was in the households of farmers (13.9%), which results from the specificity of the rural housing economy, e.g. houses are owned and not rented; as well as lower water and heating costs.

In 2019, as compared to 2010, the share of household expenditure on clothing and footwear also decreased in almost all households (except for farming households). The highest percentages of this group of expenditures were reported by self-employed households (in 2019 they amounted to 7.0%), and the lowest were reported by retirees and disability pensioners (3.4%), which can be explained by the low rank of clothing needs in this group of households.

Assessment of the financial situation of households

The analysis of disposable income and consumption expenditure made it possible to assess the financial situation of Polish households in 2010-2019 in the light of Keynes' hypothesis describing the relationship between household income and expenditure (Tab. 8).

According to Keynes' hypothesis, with the increase in the level of economic welfare of households, their propensity to consume (measured by the share of consumer spending in disposable income) decreases and the propensity to save increases. It should be emphasized that the propensity to consume does not depend only on the level of income, but it is the most important factor shaping the consumption behaviour of households (Bywalec, 2010).

In 2019, as compared to 2010, a decreasing propensity to consume was observed in all groups of households. The highest ratio of consumption expenditure in the disposable income of households in 2019 was recorded in the households of retirees and pensioners (70.0%), and the lowest was in farming households (52.8%). The decreasing propensity to consume in all groups of households proves an increasing level of income accumulation and their growing propensity to save. The growing savings of households

Propensity to consume by household group in 2010–2019 (in %)

Years Type of household	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Employees	81.3	80.9	77.5	77.4	75.7	74.6	72.3	69.9	66.1	65.1
Farmers	73.9	74.8	68.8	65.7	73.2	71.7	68.3	68.5	53.3	52.8
Self-employed	82.2	81.6	79.5	78.3	76.4	71.9	70.5	76.0	67.1	64.9
Retirees and disability pensioners	88.2	87.6	81.0	81.4	78.9	77.1	76.9	76.0	71.3	70.0

Source: own calculations based on: *Budżety gospodarstw domowych…* (2011-2020).

in the analysed period could result from risk aversion resulting from the consequences of the global financial crisis of 2007-2009 (Kulpaka, 2015, p. 315), money transfers from abroad resulting from economic emigration and a growing awareness among Polish households of the need to have material security for the future.

Conclusions

Over the ten years analysed, clear differences were observed in the level of disposable income and consumption expenditure of Polish households.

1. The highest level of income and expenditure in all years was observed in self-employed households, while the lowest was in farming households. In 2019, compared to 2010, an increasing disparity was observed between households with the highest and lowest incomes, which proves the deepening process of social polarization of income.

2. Income and expenditure in individual groups of households showed an upward trend, which indicates an improvement in the level of household wealth. However, the growth rate of income and expenditure in particular groups was diversified. Farming households recorded the highest increase in income and households of employees recorded the highest increase in expenditure.

3. Significant changes were observed in the structure of household consumption expenditure. The share of expenditure on food, healthcare, as well as transport and communications is growing, while the share of expenditure on housing, clothing and shoes is decreasing and the level of these changes varies across groups of households.

4. The upward trend in disposable income and a slight increase in the share of expenditure on food and non-alcoholic beverages in total household expenditure indicate the cessation of Engel's law.

5. The decreasing share of consumer spending in household disposable incomes shows a decreasing propensity to consume and an increasing propensity to save, which suggests that the growing level of income accumulation will contribute to an improvement in household economic welfare in the future.

Translated by Biuro Tłumaczeń OSCAR
Proofreading by Michael Thoene

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