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DOI: 10.15290/OES.2021.04.106.04

DISPOSABLE INCOME AND CONSUMPTION EXPENSES IN PENSIONERS' HOUSEHOLDS IN POLAND IN THE YEARS 2010-2019 – THE ANALYSIS OF CHANGES IN VIEW OF DEMOGRAPHIC TRANSFORMATIONS¹

Summary

Purpose – The aim of the article is to study the changes of disposable income and consumption expenses in pensioners' households in the years 2010-2019 and the attempt to draw conclusions corresponding to the deepening process of society ageing.

Research method – Categories of disposable income and consumption expenses as well as selected issues from the field of demographic transformations were presented in the theoretical considerations, using the descriptive analysis method. The basis of empirical considerations were secondary data from the Central Statistical Office.

Conclusions – The average amount of pension benefits in the common occupational system is generally lower than the average work income and it can be claimed that it gets lower systematically. Disposable incomes in pensioners' households in 2019 were about 50% higher than in 2010. This tendency was reflected in the increase (of about 3% a year on average) of real expenses on consumption produce and services per capita in households. The increase was comparable to the general increase of consumption expenses of households in Poland. In the years 2010-2019 expenses related to food, house maintenance and energy carriers were increasing more slowly than the rise of income.

Originality / value / implications / recommendations – Conducted considerations constitute a point of view in the evaluation of the changes in the income situation of pensioners' households in view of the deepening process of ageing of the Polish society. In times of extensive demographic changes related to the ongoing process of society ageing, the elderly constitute a numerous and important consumer group on the market.

Keywords: pensioner, senior, 60+ population, disposable income consumption expenses, free choice expenses, basic expenses, society ageing, demographic changes

JEL Classification: D12, D13, J11

¹ Article received on 21 June 2021, accepted on 26 August 2021.

1. Introduction

The consumption research conducted so far clearly shows that it is a dynamic category, which requires systematic analyses. Taking into consideration demographic prognoses for Poland which indicate longevity growth, and so a growing number of the elderly and their greater share in the society, it was considered appropriate to study the changes in pensioners' consumptions and to attempt their evaluation in the long term perspective.

For many years, Poland has been ranked among the thirty demographically oldest countries in the world. In 1967 it crossed the threshold of demographic old age and in 1980 – the threshold of advanced demographic old age. In the years 1990-2005 the share of population aged 65 and more rose from 10.1% to 13.2%, and of those aged 60 and more from 14.8% to 17.1% in the general social structure. According to the Central Statistical Office's prognoses, the number of people in the post-productive age will be increasing and in the year 2035 will amount to 26.7% of the whole population [*Prognoza ludności na lata ...*, 2009, p. 308; Berbeka et al., 2021].

Along with the longevity growth and the deepening of society ageing, the shift of population activity from the production sphere to the consumption sphere will be becoming more and more prominent. According to the Central Statistical Office, in 2008 in Poland for each 100 people in the productive age there were 41 people in the retirement age. In 2035 for each 100 people in the productive age there will be 46 people in the post-productive age and in 2060 – 91 people and only on condition that the birth rate will have increased [*Starzenie się społeczeństwa ...*, 2011, p. 4].

Taking into consideration the importance of the research in this field, the main aim of the article is to study the changes of disposable incomes and consumption expenses in pensioners' households in the years 2010-2019 and the attempt to draw conclusions corresponding to the deepening process of society ageing.

It was considered relevant to research in theory the essence of the studied categories defining household consumption and in the empirical sphere to study the changes in the consumption in the Polish pensioners' households. The descriptive and quantitative analysis methods were used. The basis of empirical analyses were secondary data from the Central Statistical Office. Descriptive statistics were used for the research into the range of changes of disposable incomes and consumption expenses. On the basis of considerations, conclusions and recommendations were formulated.

2. The state and prospects of changes of the population in the retirement age

The decrease in number of general population and the increase in number of seniors are observed in Poland. In conclusion, it is said that the deepening process of society ageing is present. The share of the elderly in the population of Poland is systematically increasing. At the end of 2019 the number of people aged 60 and more exceeded 9.7 million and grew by 2.1% in relation to the previous year.

The percentage of the elderly in the population of Poland stood at 25.3%. According to the Central Statistical Office's prognoses, the number of people aged 60 and more will increase to 10.8 mln in 2030 and to 13.7 mln in 2050. Those persons will constitute about 40% of the general population of Poland [*Sytuacja osób starszych w Polsce...*, 2021, p. 15, 21; Berbeka et al., 2021].

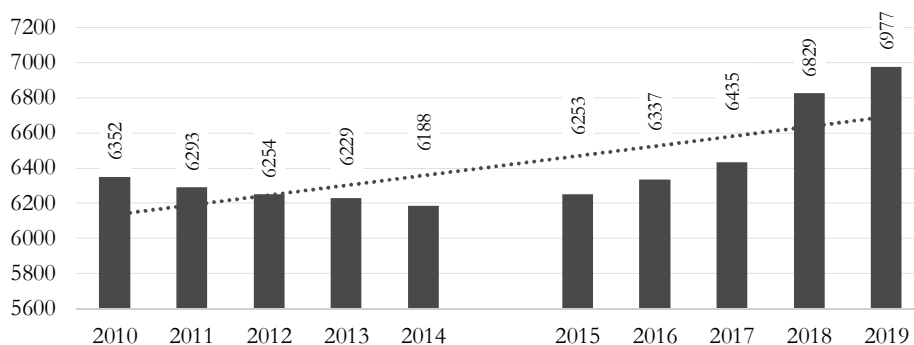
In 2019, the predicted average lifespan of a male newborn was 74 years and 1 month, while of a female – 81 years and nearly 10 months. In comparison with the previous year this indicator improved in both cases. In comparison with the year 2010, a woman aged 60 could expect further 24 years and 3 months of life, i.e. 8 months more than a woman who became 60 in 2010. A man aged 60 could expect further 19 years and 4 months of life, i.e. one year more than a man who became 60 in 2010 [author's own calculations on the basis of: *Sytuacja osób starszych w Polsce...*, 2021, p. 28].

The decrease in the number of general population and the increase in the number of seniors result in the increased indicator of old age dependency (the number of people aged 65 and more per 100 people aged between 15 and 64). In 2019, the indicator of old age dependency rose to 27.2 from 26.1 in the previous year. It is worth pointing out that the dynamic growth of that indicator has been observed since 2011. In previous years the indicator stayed on a relatively stable level [*Sytuacja osób starszych w Polsce...*, 2021, p. 15, 23].

The dynamic increase in the number of the elderly results in the increase in the number of people in post-productive age (i.e. 65 years old or more in the case of men and 60 years old or more in the case of women). In 2019, the indicator of the post-productive age population per 100 people in productive age amounted to 36.5, i.e. 1.2 more than in 2018, 5.1 more than in 2015 and 10.5 more than in 2010 [*Sytuacja osób starszych w Polsce...*, 2021, p. 24].

CHART 1

The number of pensioners in Poland in the years 2010-2019 (in thousands)



Source: own elaboration based on: [*Emerytura i renty...*, 2020, p. 14].

Analysing the number of pensioners² in Poland, it can be noticed that an average annual decrease of 0.6% (37.6 thousand people) was observed in the years 2010-2014, while in the years 2001-2009 a systematic yearly increase was noticed (from 4 627 thousand in 2001 to 6 376 thousand in 2009) [*Emerytura i renty ...*, 2013, p. 17]. The number of pensioners in 2014 was lower by 164 thousand (2.6%) than in 2010. In the years 2015-2019, a systematic growth of the number of pensioners has been observed, i.e. an average annual of 2.4% (157.8 thousand). In 2019, the number of pensioners was higher by 724 thousand (11.6%) than in 2015, and by 625 thousand than in 2010 (chart 1).

In 2019, the number of pensioners amounted to 16.3% of the population of Poland and was higher by 2.1 pp than in 2014 and lower by 1.9 pp than in 2010. According to the demographic prognosis, that factor will continue to grow.

3. Categories defining consumptions in the pensioners' households – theoretical approach

The essence of consumption is satisfying needs. In other words, consumption is people's activity whose essence is transforming resources and streams of goods and values into other goods and values in order to satisfy needs. The basis of households' functioning are monetary and physical resources gathered in the form of assets and durable goods, leisure time assets as well as the assets of knowledge, skills and social competence. Those assets and their mutual relations – substitutional and complimentary – decide about the scope and character of consumption.

The factor which majorly influences satisfying and the change in the structure of an individual's consumption needs is their financial situation. The lack of financial assets often prevents or restricts the ability to purchase certain goods and consumption services. Due to the limited freedom of using financial assets changes in the level of needs' satisfaction arise. The demand on goods and services decreases. Therefore, it is hard to disagree with Thomas L. Friedman who claims that 'People do not change when they are told they should, but when their situation forces them to'.

Income is a key determinant not only of households' situation, but also of the quantity and structure of expenses. It can be, therefore, claimed that income, consumption expenses and standards of living are closely correlated.

3.1. Disposable income

Disposable income characterizes households' current financial situation. It comprises current financial and non-financial income, including natural consumption (goods and consumption services collected for a household from an individual household in agriculture or individual economic activity) as well as free goods and

² Pensioners, that is people receiving pensions, that is cash benefits available to an insured person who fulfils conditions entitling to a pension from social security services.

services. Disposable income is a sum of current household incomes from individual sources reduced by personal income tax, tax paid by a payer on behalf of the taxpayer (income tax from contract work and certain benefits of social insurance and other social services), income and property tax paid by freelancers, including free professionals and individual farmers or social security contributions [*Budżety gospodarstw...*, 2020, p. 269; *Konsumpcja w Polsce...*, 2012, p. 32].

Pensioners' disposable income is, in fact, a social insurance benefit, i.e. a pension. Additional income sources may be: property income, family benefits with bonuses, gifts, contract work, individual agricultural household usage, freelance work or work in free profession. It means that income from additional sources is lower than pension income [*Budżety gospodarstw...*, 2020, p. 265].

Disposable income is used for expenses and raising savings. Income has a significant impact on the structure of the needs satisfied by an individual. The measure of rational managing limited financial resources is not, as it is in the case of a company, maximising revenues, but the best and fullest fulfilment of the needs of the household members and of the household as a whole.

The level of the achieved income accounts for the reproduction scope of individuals' vital forces and the scope of fulfilling consumption needs. It is an indicator of accounting liquidity limits [Lopez de Castro, 2008, p. 75]. Therefore, it can be stated that income indicates the upper limit of the consumption expenses level, the level and structure of satisfying needs, and so determines the standard of living [Rajan, 2010; Solomon et. al, 2010].

3.2. Consumption expenses

Household expenses, their level and structure define households' economic situation. They include consumption in value terms (goods and consumption services) and other expenses.

Consumption expenses are, in a way, an image of consumption behaviours on macroeconomic scale. Their structure reflects attachment to certain consumption patterns, which evolve over longer period. Therefore, if the structure of expenses changes in a major way, it reflects a crucial change in the conditions of needs fulfilment. However, the increase of consumption expenses does not necessarily involve a real increase in the consumption level. Taking into consideration the increase of prices and consumption services, it is possible to calculate the real value of consumption expenses in a given year [Zalega, 2017, p. 157].

Targeting expenditure on purchase of particular groups of goods and services is recognised as a meter of household and market efficiency and of society's living standards. Whereas the share of consumption expenses in the individual's income defines propensity to consumption.

In general terms, household's consumption expenditure can be divided into basic expenses and free choice expenses. Basic expenses include expenditure on food and drink, clothes and shoes, manufactured tobacco, usage of house or flat, energy carriers, house equipment and maintenance, hygiene and health care. Free choice

expenses (i.e. those fulfilling secondary needs of individuals and households) include expenditure on transport, communication, tourism and leisure, recreation and culture, education and upbringing, sport [Zalega, 2017, p. 157; Gardocka-Jalowiec, 2015, pp. 260-262; Berbeka et al., 2021].

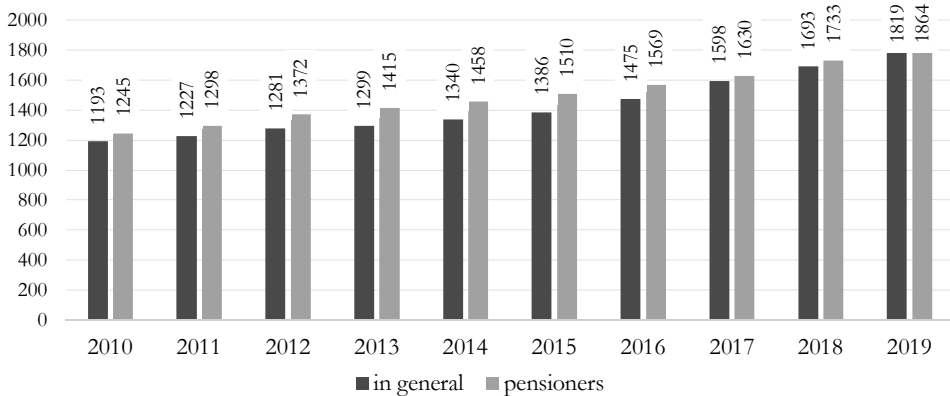
Boundaries between basic and free choice expenses may be difficult to define, e.g. expenses on transport, which may be basic are included in the free choice expenses; housing expenses, or – more specifically – equipment expenses may fulfil secondary needs of household members, consequently becoming free choice expenses. The share of basic and free choice expenses in income defines, among others, the household's level of wealth. The higher the share of income spend on free choice expenses, the higher the level of wealth and vice versa [Racjonalność konsumpcji..., 2004, pp. 76-77; Zalega, 2017, p. 157].

4. Disposable income in pensioners' households in the years 2010-2019

The average amount of pension benefits in the common occupational system is generally lower than the average work income. In 2019, the ratio of an average pension benefit from ZUS (PLN 2352.91³) to an average salary (PLN 4918.17) amounted to 45.5%, while in 2010⁴ it amounted to 51%, and in 2012⁵ to 52%. This does not mean, however, that the economic situation of pensioners is worse than that of working persons (chart 2).

CHART 2

**Disposable income per capita in pensioners' households
in the years 2010-2019 (in PLN)**



Source: own elaboration based on: [Budżety gospodarstw ..., 2011-2020].

³ The average amount of pensioner benefits from ZUS in 2019 was higher by 4.2% than in the previous year [Emerytury i renty ..., 2020, p. 19].

⁴ The average salary PLN 3224,98, pensions PLN 1642,90.

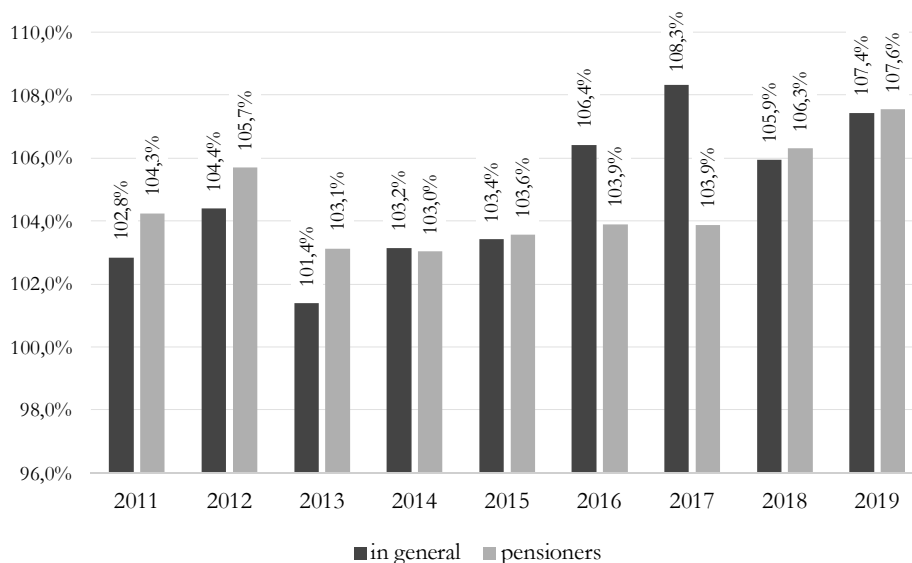
⁵ The average salary PLN 3521,67, pensions PLN 1820,99.

In the years 2010-2019 the average disposable income per capita in pensioners' households was higher than the average income in households in general by almost 6%. In 2019 the increase of the monthly disposable income per capita in households in general amounted to 7.4% (in 2018 there was an increase by 5.9%), whereas in pensioners' households – 7.6% (6.3% in 2018), which means it was higher by 0.2 pp when compared to households in general (chart 3).

In the years 2010-2019, the median of the average disposable income per 1 person in pensioners' households (rounded up to PLN 1) amounted to PLN 1484 while in households in general to PLN 1363. The median of the average disposable income per 1 person in pensioners' household was higher by about 4% than the value of the average disposable income [author's own elaboration on the basis of: *Budżety gospodarstw ...*, 2011-2020].

CHART 3

The dynamic of changes in disposable income per capita in pensioners' households in the years 2010-2019 (the previous year = 100)



Source: own elaboration based on: [*Budżety gospodarstw ...*, 2011-2020].

The higher level of income per capita in pensioners' households results from the fact that these are, in general, relatively small households, usually single- or double-person, while other households are bigger, so the income of a whole household spreads over a larger number of people. In Poland in the years 2007–2012, the number of single-person pensioners' households was systematically rising. In 2012, those amounted to over 100 thousand, i.e. 95.5% of pensioners' households. In 2015, single-person households constituted 98% of all pensioners' households (including 80.7% of households of people aged 65 and more) [*Budżety gospodarstw*

domonnych..., 2016, p. 91], while in 2019 their number was higher by 0.8 pp than in 2015 (by 5.3 pp. for households of people aged 65 and more) [*Budżety gospodarstw domonnych...*, 2020, p. 98].

CHART 4

The dynamic of changes in disposable income per capita in pensioners' households in the years 2015 and 2019 (2010 = 100)



Source: own elaboration based on: [*Budżety gospodarstw ...*, 2011-2020].

Analysing the changes in the disposable income of pensioners' households regarding its level in 2010, it can be observed that the pensions in 2015 increased by 21% (which was a major increase taking into consideration the general increase of households' income by 16%) and in 2019 by nearly 50% (chart 4).

5. The level of consumption expenditure in the pensioners' households in the years 2010-2019

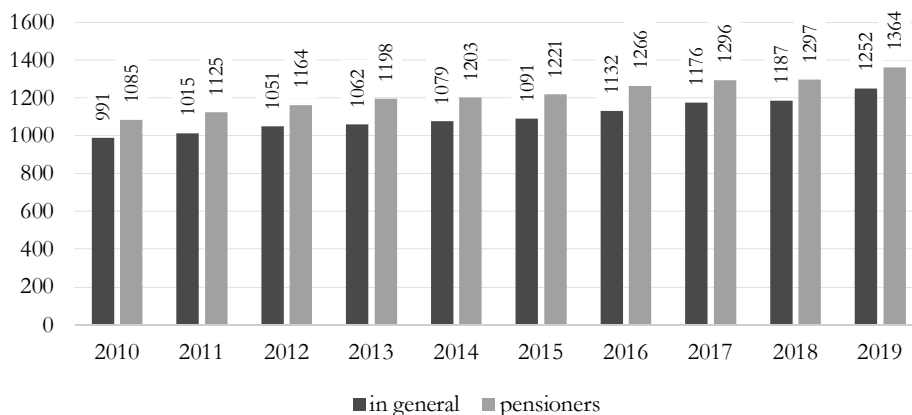
In the years 2010-2019, real expenditure on consumption goods and services per 1 person in pensioners' households was steadily growing – by 2.6% on yearly average. The increase was comparable to the increase of households' consumption expenditure in Poland in general (chart 5).

In the whole studied period, the share of consumption expenditure in the disposable income of Polish households was systematically decreasing. In 2019, pensioners' households devoted to satisfying their basic and free choice needs a little over 73% of disposable income, which was less than in 2010 (83%) (chart 6).

In the years 2010-2019, the median of the average monthly consumption expenditure per 1 person in pensioners' households (rounded up to PLN 1) amounted to PLN 1212, while in households in general to PLN 1233. The quotient of the median to the value of the average monthly expenditure per 1 person in pensioners' households amounted to 99%, and in households in general to 108.8%.

CHART 5

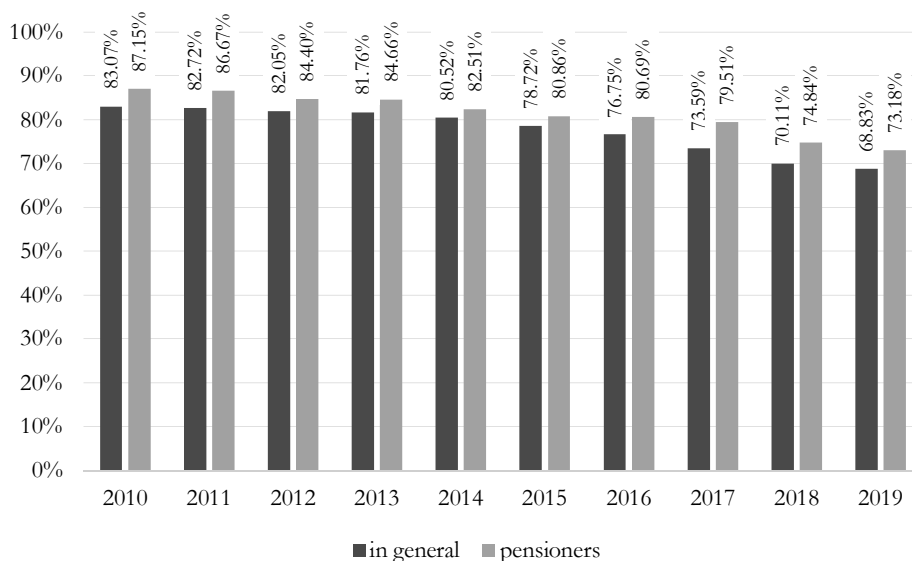
The average consumption expenditure per capita in the pensioners' households in the years 2010-2019 (in PLN)



Source: own elaboration based on: [*Budżety gospodarstw ...*, 2011-2020].

CHART 6

The share of consumption expenditure in the disposable income of pensioners' households in Poland in the years 2010-2019 (in PLN)

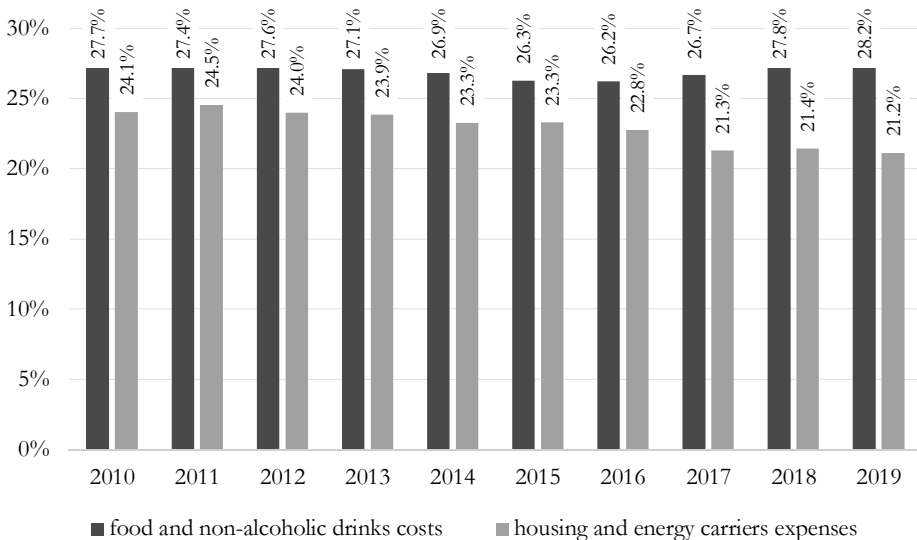


Source: own elaboration based on: [*Budżety gospodarstw ...*, 2011-2020].

While studying the structure of the consumption expenses in pensioners' household, it should be noted that the largest share was spent on food and non-alcoholic drinks (chart 7). In the years 2010-2016, the percentage share of those expenses in the structure of general expenses was decreasing. Their average level amounted to 27% of general expenditure. In the years 2017-2019, the share of food and non-alcoholic drinks costs was systematically increasing, from 26.7% in 2017 to 28.2% in 2019. It is worth noting that the share of those expenses in the general expenditure was in 2016 lower by 1.5pp and in 2019 by 0.5pp as regards the level in 2010.

CHART 7

The share of food, non-alcoholic drinks, housing and energy carriers expenses in the general expenditure of pensioners' households in Poland in the years 2010-2019 (in PLN)



Source: own elaboration based on: [*Budżety gospodarstw ...*, 2011-2020].

In the years 2010-2019, apart from 2011, food costs were rising slower than the income increase (this tendency confirms the regularity formulated in Engel's first law). However, the dominant position in non-food pensioners' expenditure was taken by housing and energy carriers costs. The average share of those expenses in the general expenditure amounted to 23%, and the average yearly pace of their increase of 1.1% was lower than the average dynamics of disposable income.

6. Conclusions

The average amount of pension benefits in the common occupational system is generally lower than the average work income and it can be claimed that it gets lower systematically. Notwithstanding, in the years 2010-2019, the average disposable income *per capita* in pensioners' households was higher than the average income of households in general by almost 6%. This fact is connected with the number of people in one household. Pensioners' household are usually single-person ones, while other households are bigger, so the income of the whole household spreads over a larger number of people.

Disposable income of pensioners' households was in 2019 higher by almost 50% than in 2010. That tendency was reflected in the increase (by 3% on a yearly average) in the real expenditure on consumption goods and services per one person in a household. This increase was comparable to the increase in consumption expenses in households in Poland in general. The share of consumption expenditure in the disposable income of pensioners' households in 2019 amounted to over 73% of disposable income and was lower than in 2010 (83%).

In the years 2010-2019, the share of expenditure on food and non-alcoholic drinks was slightly decreasing. Food expenses were growing slower than the income increase. Pensioners' households were burdened by growing housing and energy carriers costs. The yearly average of their increase which amounted to 1.1% was lower than the average dynamics of disposable income.

In conclusion, the growing index of demographic old age will be accompanied by the changes in the structure of purchasing goods and services. Therefore, it may be predicted that in the following years there will be a growing demand on rehabilitation equipment, ergonomic furniture and household equipment, new mobile phone models, nursing homes and care services. The demand on such social services as healthcare, culture, active forms of recreation will also be dynamically increasing. The increasing process of dematerializing consumption should be accompanied by providing financial means for satisfying the changing needs of pensioners. It is crucial for maintaining the level and quality of this social group's living conditions.

The analysis of households' situation indicates that, in the following decades, the state should focus on developing the range of goods and social services for people aged 60+, and should take action aimed at providing disposable income on the level which would guarantee their comfortable existence.

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