Incomes and Savings of Polish Seniors in View of Research Outcomes*

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The observed demographic changes involving mainly progressive ageing of the Polish population are leading to increased market importance of the senior consumer segment. One of the key criteria for evaluating the market attractiveness of segments is consumer purchasing power resulting from the income earned. It is disposable income that determines consumer behaviour on the market to the largest extent. The aim of this article is to present the financial situation of older people in Poland. The article consists of three parts. The first one focuses on conceptualisation of the research and characteristics of the research sample. In the second part, a synthetic explanation of the essence of disposable income is followed by an analysis of income levels and self-assessed financial situation of Polish seniors. The third part addresses savings of the elderly in Poland. In that section, after a brief literature review, the structure, preferences and purposes of Polish seniors' savings are investigated based on the research outcomes.

Keywords: disposable income, savings, consumption, seniors.

Poziom dochodów i oszczędności osób starszych w Polsce w świetle wyników badań

Obserwowane zmiany demograficzne związane głównie z postępującym procesem starzenia się polskiego społeczeństwa wpływają na wzrost znaczenia segmentu konsumentów seniorów na rynku. Jednym z kluczowych kryteriów oceny atrakcyjności rynkowej segmentów jest siła nabywcza konsumentów, która wynika z osiąganej wysokości dochodów. To właśnie dochód rozporządzalny determinuje w największym stopniu zachowania konsumentów na rynku. Celem artykułu jest przedstawienie sytuacji materialnej osób starszych w Polsce. Artykuł składa się z trzech części. W pierwszej skoncentrowano się na omówieniu konceptualizacji badań i scharakteryzowaniu próby badawczej. W części drugiej opracowania po syntetycznym wyjaśnieniu istotny rozporządzalnych dochodów, uwagę skupiono na przeanalizowaniu poziomu dochodów i subiektywnej oceny sytuacji materialnej polskich seniorów. Natomiast część trzecia opracowania została poświecona oszczędnościom osób starszych w Polsce. W tej części artykułu po krótkim przeglądzie literatury przedmiotu, na podstawie wyników badań przeanalizowano strukturę, preferencje oraz cele gromadzenia oszczędności przez polskich seniorów.

Słowa kluczowe: rozporządzalny dochód, oszczędności, konsumpcja, osoby starsze.

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1. Introduction

In the era of profound demographic changes witnessed as the population is progressively ageing, senior citizens form a significant group of consumers on the market. It should be borne in mind that population ageing is a global process and the old-age rate is closely correlated with the socio-economic development of a country.

In Poland, gains in life expectancy are observed. According to demographic data, more than 7 million people aged over 60 lived in Poland in 2014[1]. According to current demographic projections for Poland for the next twenty-five years, life expectancy will increase by 7.2 years to 77.6 years for men and by 4.5 years to 83.3 years for women (Rószkiewicz, 2006, pp. 7–10; *World Population Prospects*, http://www.esa.un.org/wpp, accessed on 15.04.2014). Moreover, the population of seniors in our country is estimated to exceed 10 million in fewer than 15–20 years.

Until recently, seniors were seen as a group with limited consumption needs, low level of activity and incomes. However, older people make an essential contribution to the socio-economic life as family members, employees, volunteers and consumers (the so-called silver economy). It should be emphasised that inter-generational transfers such as financial support, time devoted, emotional support are taking place from the older to the younger generation, whereas reverse support is much smaller. For the above-mentioned reasons, the elderly are not only important actors in consumption but also significant research entities. In the sphere of consumption, an increasing proportion of older people and their economic emancipation have an essential impact on both level and structure of consumption. Because security systems for old age such as complex pension schemes are developing and children are becoming self-dependent earlier, older people have not only much free time but also more and more money that they largely spend on current consumption. Another important factor determining changes in the structure of this group is a change in their lifestyles. Dynamic development of medicine and lifestyle rationalisation lead to older people trying to delay the passage of time and "cheat the nature" by striving to imitate some behaviours (e.g. clothes worn, the way of spending free time, etc.) of the younger generations (Zalega, 2013, pp. 18–19). This directly translates to their purchasing behaviours within the consumer decision-making process and provides a basis for the development of a megatrend known as "rejuvenating population" in the literature (Gunter, 1998, pp. 16–17; Zalega 2015, p. 153). The existing stereotype of older persons as lonely and poor is slowly starting to be replaced by the image of active people and consumers interested in active life whose approach to life is more hedonistic and who try to meet their needs and those of their immediate family members. Therefore, the elderly are increasingly regarded as an important segment of the market.

The aim of the article is to present the financial situation of older people in Poland. The article consists of three parts. The first one focuses on conceptualisation of the research and characteristics of the research sample. In the second part, a synthetic explanation of the essence of disposable income is followed by an analysis of income levels and self-assessed financial situation of Polish seniors. The third part addresses savings of the elderly in Poland. In that section, after a brief literature review, the structure, preferences and purposes of Polish seniors' savings are investigated based on the research outcomes. Finally, major conclusions end this study.

2. Conceptualisation of research

Prior to the main survey, pilot surveys were conducted covering a group of 10 households in Warsaw. Those pilot surveys aimed at verifying the selection and understandability of questions contained in the questionnaire and the appropriateness of the questionnaire structure. The surveys resulted in some amendments in the questionnaire structure, whereby some questions were deleted and replaced with new ones and some were modified. It should also be mentioned that well-tested techniques commonly applied in market and marketing research were employed to design the survey. The survey consisted of 28 essential questions, mostly closed ones, including 7 on personal data. Different groups of questions were closely correlated with successive stages of the consumer decision-making process of households.

The empirical material contained in this article comes from direct research conducted in the form of a survey on a sample of 2537 households in 2014–2015 in ten Polish cities of various populations and sizes. In accordance with the research assumptions, the sample included persons over 65 years of age who took independent purchasing decisions on the market. In order to select the sample, the selective quota sampling procedure was used. The characteristics (quotas) covered by the research were: sex and age. The survey was conducted as part of statutory research and fully funded by the Faculty of Management of the University of Warsaw.

The characteristics and properties of the group investigated were complemented by means of explanatory research that was treated by the author as a supplement to the information obtained in the questionnaire-based interview. To that end, in the first half of February 2015, personalised in-depth interviews were carried out with 11 people selected in a targeted manner, taking into account the key socio-demographic characteristics such as: sex, age, education and place of residence. Those were interviews with inhabitants of Warsaw, Katowice and Toruń. An interview lasted approximately 45 minutes. Later, the in-depth interviews were transcribed and analysed in line with the qualitative research methodology.

This research method was chosen in view of the older age of respondents whose openness to new media (Internet, smartphone, i-Pod) often used in research is limited. The primary objective was to outline the structure of consumption and consumer behaviours of older people. The research focused on their purchasing preferences and attitudes towards various consumer goods and services. Their social situation was also examined, as were their self-assessed health and physical and mental fitness. One of the research objectives was to seek the views of respondents on new consumer trends also followed by the elderly and to gather information on the impact of marketing tools on their behaviour. An important research task was also to assess their financial situation, structure of monthly budgetary spending and consumer decision-making process. This allowed for creating a psychological profile of today's older consumers in Poland.

The surveys were conducted among participants of the University of the Third Age at state universities in: Warsaw, Kraków, Łódź, Poznań, Gdańsk, Katowice, Lublin, Białystok, Toruń and Wrocław, as well as among members of parochial clubs in parishes located in the Archdioceses of Warsaw, Kraków, Łódź, Białystok, Gdańsk, Katowice, Lublin, Poznań, Wrocław and the Diocese of Warsaw-Praga and Toruń.

The material collected during direct research was arranged, i.e. grouped, counted and pre-assessed for information completeness. The verification and evaluation of the material allowed for eliminating filling errors, inaccuracies, logical and systematic errors. From among 2594 initial questionnaires, 2537 were considered eligible, representing 97.8% of the total sample. Further, they were coded, and the data set thus created was processed by a statistical package. The application of SPSS 14.0 PL statistical package made it possible to analyse the information obtained from the standardised interviews. Then, after the data collected were grouped, counted and initially described, they were analysed qualitatively and quantitatively. To do this, correlation coefficients, mainly Pearson's, Spearman's rank, Cramer's V association coefficients, were used. It should be stressed that contingency tables were the key statistical analysis method.

3. Selection and characteristics of the research sample

The survey covered 71% of women, with only every third respondent being male. There were definitely more women than men, and people aged 65–74 formed the largest age group in the sample[2]. Place of residence was also an important variable in the research. In line with the research assumptions, the sample comprised respondents who lived in the largest Polish cities.

Senior citizens were also asked about their level of education. The questionnaire included four categories of education: primary, basic vocational, secondary and higher education. Senior respondents with secondary education formed the largest group. Nearly two fifths of those surveyed declared this

level. Every fourth respondent was a university graduate, and those with basic vocational education represented a similar percentage. In the sample surveyed, people with primary education were the smallest group (11.4%).

Nearly half of those surveyed were members of households consisting of two persons, while fewer that two fifths represented three-person households. Every sixth respondent was a member of a single-person household.

The largest group of respondents included people whose monthly income per capita did not exceed PLN 2000.00. For every third respondent, monthly income per household member ranged from PLN 2001.00 to 3000.00. In turn, every fourth person interviewed had monthly disposable income per capita of between PLN 3001.00 and 4000.00. The smallest group of respondents included households where income was above PLN 4000.00 per capita a month.

4. Disposable income as the main factor determining consumers' needs and behaviours: theoretical view

Disposable personal income is the key economic indicator of consumption that, together with other factors, determines the allocation of amounts spent on meeting consumer needs. Income earned by consumers may, therefore, be said to constitute an economic pillar for each household's functioning, thereby defining the standard of living, level of consumption and ability to satisfy collective and individual needs of household members (Carroll, 1997; Flavin, 1981; Shefrin and Thaler, 1988; Zalega, 2012).

The higher the household income is, the more important the higher-ranked needs become. A vital role in this respect is played by discretionary income, commonly referred to as discretionary fund. It is this part of disposable income that remains after satisfying primary needs, allowing for further (secondary) needs to be met. We talk about a normal standard of living when no more than 80% of income is spent on primary needs, with the remaining 20% being the discretionary fund.

The amount and allocation of household disposable income depend chiefly on income sources. Wages earned are first and foremost spent on viscerogenic needs, and only then (if possible) on secondary needs of household members. In turn, non-wage (regular and irregular) income is saved and/or spent on consumer goods and services, generally meeting higher-ranked needs.

The income level is one of the principal factors determining financial behaviours of households in terms of savings. The income amount affects both the mere fact of having savings and their level and the structure of the savings portfolio, thereby conditioning the type of savings strategy pursued (Beer et al., 2006; Ang, 2009; Aktas et al., 2010).

The financial situation of households is analysed on the basis of their incomes. It should be strongly emphasised that older people do not form

a homogeneous group in terms of financial situation. Varying income levels of senior citizens' households lead to marked differences also in the ways and purposes of spending money. Furthermore, such households also have an adverse structure of expenditure because of a small number of household members and a high proportion of fixed expenditure in the total spending. In those households, housing and health expenses account for a bigger share. Food expenditure decreases, while housing and health spending grows considerably.

5. Incomes of Polish seniors

Respondents were asked about the amount of monthly income per household member. These incomes were classified into four groups, where incomes up to PLN 2000.00 may be defined as "low income". This category comprised almost 31% of all households surveyed. It is worth adding that three out of every hundred survey participants earned only up to PLN 2000.00 per capita a month, and the lowest reported income was about PLN 1124.00 per person.

Monthly per capita income of PLN 2001.00–3000.00 was earned by 44.8% of respondents and PLN 3001.00–4000.00 by one fifth of those surveyed. The other households reported slightly higher income levels. Only 4.2% of respondents had monthly disposable incomes in excess of PLN 4000.00.

The surveys conducted also show the effect of various determinants on the level of current income (Table 1). Current incomes of the households examined are particularly strongly influenced by: education, number of family members and place of residence.

In the light of statistical analyses, it was found that the level of education reported by the households interviewed conditioned their income per capita (Spearman's correlation coefficient r = 0.135, with $p = 0.01$). For example, taking into consideration households of senior citizens with low monthly disposable income (up to PLN 2000.00), this category comprises more than one fourth of respondents with higher education. As disposable income declines, this percentage increases to reach 34.3% of people with basic education.

When the place of residence is taken into account, statistically significant differences among the households surveyed occur as regards the criteria in Table 1, although it should be stressed that those differences are smaller than in the case of education (Cramer's V = 0.213, with $p \leq 0.01$). Taking into consideration the place of residence of respondents, it appeared that most low-income families came from Toruń (33.7%), Łódź (33.3%) and Białystok (33.2%). By far the fewest people declaring low incomes in their families came from Poznań (28.8%), Warsaw (28.9%) and Kraków (29.3%).

Income per household member was statistically significantly influenced by the age of respondents (Pearson's correlation coefficient r = –0.154,

Characteristics of respondents	Up to PLN 2000.00	PLN 2001.00–3000.00	PLN 3001.00–4000.00	More than PLN 4000.00
Total	31.0	44.8	20.0	4.2
Age:				
65–74	26.3	47.0	20.6	6.1
75–84	31.4	45.2	19.5	3.9
85 and more	35.3	42.2	19.9	2.6
Sex:				
Female	35.6	44.1	17.3	3.0
Male	26.4	45.5	22.7	5.4
Education:				
Primary	34.3	42.5	19.3	3.9
Basic vocational	32.3	45.0	20.2	2.5
Secondary	31.9	44.4	19.9	3.8
Higher	25.5	47.3	20.6	6.6
Place of residence:				
Warsaw	28.9	43.9	19.8	7.4
Kraków	29.3	45.1	21.3	4.3
Łódź	33.3	44.3	21.3	1.1
Poznań	28.8	44.8	19.6	6.8
Wrocław	30.2	45.2	20.1	4.5
Gdańsk	30.8	44.8	18.8	5.6
Katowice	30.2	44.3	20.1	5.4
Lublin	31.6	44.7	20.3	3.4
Białystok	33.2	46.0	18.8	2.0
Toruń	33.7	44.9	19.9	1.5

Tab. 1. Income per capita in the households surveyed (%). Source: Elaborated by the author.

$p \leq 0.01$). The lowest income (up to PLN 2000.00 per capita) was most frequently indicated by people aged 85 and more (35.3%), whereas PLN 2001.00–3000.00 by respondents aged 65–74 (47%). On the other hand, the highest income – above PLN 4000.00 per capita – was reported by persons aged 65–74. Every sixteenth respondent in this age group declared such household income per capita.

6. Self-assessed financial situation of Polish seniors

Diversified financial situation of older people is reflected by their self-assessments. The degree of their satisfaction with the current material status is revealed by an analysis of the distribution of answers to the question about their current material status. In view of the income indicators discussed above, it is not surprising that only few respondents assessed the financial situation of their families as very good (2.9%) and one quarter of respondents as good. Half of those surveyed considered their family's situation as bad, and every fifth respondent as very bad. This suggests that in the period under analysis half of the senior respondents were dissatisfied with their current disposable income.

Their assessments of their families' financial situation were quite varied depending on characteristics of the respondents and their families (Table 2).

Age had a statistically significant impact on respondents' opinions about their financial situation (Pearson's correlation coefficient r = –0.141, with $p \leq 0.01$). Senior citizens aged 65–74 most often chose the highest assessments on the four-point scale. Those aged 85 and more gave the lowest scores to the financial situation in their households. Only nearly one in seven evaluated it as good or very good.

The assessment of the current financial situation was affected by income per family member (Pearson's correlation coefficient r = 0.373, with $p \leq 0.01$). Indeed, although one tenth and 69% of respondents with monthly incomes of up to PLN 2000.00 per capita assessed their financial situation as very bad and bad respectively, in higher-income groups these indicators steadily decreased, and groups earning PLN 3001.00–4000.00 and more than PLN 4000.00 included no one who assessed their financial situation as very bad. In these income groups, 28.5% and 8.6% of older people respectively regarded their financial situation as bad, and 53.7% and 67.1% respectively as good. In contrast, almost every fifth respondent with a monthly income per capita exceeding PLN 4000.00 said that their financial situation was very good.

Similarly to the amount of monthly disposable income, self-assessment rises with the education level of those interviewed (Spearman's correlation coefficient r = 0.315, with $p = 0.01$). As many as four fifths of respondents with primary education rated the financial situation of their families as very bad or bad, whereas this proportion was only one tenth among people with higher education.

Characteristics of respondents	Very good	Good	Bad	Very bad
Total	6.6	44.5	39.1	9.8
Age:				
65–74	7.5	50.3	34.9	7.3
75–84	6.7	45.8	37.6	9.9
85 and more	5.6	37.4	44.8	12.2
Sex:				
Female	5.9	43.9	41.5	8.7
Male	7.3	45.1	36.7	10.9
Education:				
Primary	2.3	35.6	45.4	16.7
Basic vocational	5.4	39.9	44.9	9.8
Secondary	5.2	48.7	38.7	7.4
Higher	13.5	53.8	27.4	5.3
Income per capita:				
up to PLN 2000.00	–	17.8	69.0	13.2
PLN 2001.00–3000.00	–	39.4	50.3	10.3
PLN 3001.00–4000.00 more than PLN 4000.00	8.4 18.0	53.7 67.1	28.5 8.6	9.4 6.3
Place of residence:				
Warsaw	8.8	50.3	32.2	8.7
Kraków	7.1	48.2	36.5	8.2
Łódź	5.1	37.6	42.0	15.3
Poznań	6.9	44.1	39.2	9.8
Wrocław	6.3	45.2	39.1	9.4
Gdańsk	6.7	45.3	39.5	8.5
Katowice	8.4	51.2	30.9	9.5
Lublin	5.3	39.1	44.9	10.7
Białystok	5.4	40.2	44.0	10.4
Toruń	6.0	43.8	42.7	7.5

N.B.: Four-point scale: 1 – very bad, 2 – bad, 3 – good, 4 – very good.

Tab. 2. Assessment of the financial situation of the households surveyed (%). Source: Elaborated by the author.

Place of residence also varied (but to a lesser extent) the population studied (Cramer's V coefficient was 0.056, $p \leq 0.05$). The financial situation of seniors living in those cities where there were lower disposable incomes was also rated lower. The most negative assessments were reported in Toruń, Lublin and Łódź, and by far the fewest in Poznań, Katowice and Warsaw.

Sex was a variable with no statistically significant impact on respondents' opinions about their satisfaction with financial situation (Pearson's correlation coefficient was r = –0.039, $p = 0.572$).

7. Saving in economic theories: literature review

Savings are that portion of disposable income that has not been spent on current consumption. Savings can thus be said to represent a delay of consumption. The choice between current consumption and saving depends primarily on subjective individual preferences as to the current and future consumption. It should, nevertheless, be remembered that the sphere of broadly understood consumption and saving is a system that is multilaterally linked with the environment. Relationships and interactions that exist between consumption and saving and the environment make it necessary to continuously monitor changes in the environment in order to identify new determinants and conditions of consumption and saving on the one hand and consumer behaviours on the other. Consumption and saving environment should be considered as a system built by conditions that arise out of not only economic transformation but also economic processes of globalisation and internationalisation. The changes in household environment are economic and non-economic. Economic changes relate mainly to market operators, while non-economic changes driven by new circumstances are generally associated with a significant revaluation of consumers' actions and behaviours, shift in their attitudes, desires, aspirations, hierarchy of values, fundamental objectives and changes in decision-making by household members.

The starting point for analysing household saving behaviours are the absolute income hypothesis by J.M. Keynes, the permanent income hypothesis by M. Friedman, and the life-cycle theory by A. Ando and F. Modigliani. In contrast to J.M. Keynes' absolute income hypothesis assuming dependence of consumption on current income, the permanent income hypothesis by M. Friedman presupposes that household consumption expenditure depends not so much on current income but on permanent income defined as average income earned throughout life. M. Friedman (1957, p. 21) divided the income earned by an individual into two components: a constant element associated with an individual's potential resulting, among others, from education, abilities or profession (corresponding to permanent income in theory) and a variable (transitory) component reflecting the other elements affecting income (considered as random). The life-cycle theory by A. Ando and F. Modigliani is connected with the permanent income hypothesis. It implies a need to accumulate savings throughout one's working life in order to maintain the level of consumption in retirement when income declines. This theory distinguishes between two periods: working life when individuals accumulate wealth and retirement when they can benefit from the

wealth accumulated while working, which allows for maintaining a certain standard of living even when the income is lower (Dirschmid and Glatzer, 2004). This hypothesis presumes that current household consumption is not conditional upon current income. Future income plans and forecasts are more important. In consequence, an individual's current consumption may be expressed as a function of resources, return on assets accumulated and age (Modigliani and Brumberg, 1954, p. 25).

The need for saving arises in households in connection with various motives that often derive from anticipation of some future needs and the necessity to satisfy them. Saving becomes possible only when financial resources of households are large enough to generate surplus after their viscerogenic needs have been met. Whether such surplus is saved or not depends on the propensity of households to save as measured by, inter alia, the savings-to-GDP ratio. In Poland, the propensity to save is small (especially in households of pensioners) compared with most developed countries.

Depending on the motivation to save, the desired attributes of savings products change. When money is accumulated as a reserve for unexpected expenditure, what is most important is the availability of funds, hence high-liquidity investments are preferred. Households saving in the long term in order to secure themselves for old age do not focus on liquidity but rather on the rate of return and risk. According to the life-cycle risk-aversion hypothesis, risk appetite decreases with age, meaning that demand for securities shifts from stocks to bonds (Baskin and Chen, 1994). R.A. Morin and A.F. Saurez (1983, p. 74) argue that less affluent investors tend to exhibit increased risk aversion as they become older, whereas the rich demonstrate greater risk tolerance. W.B Riley and K.V. Chow (1992), based on their research, proved that risk aversion tended to decline until 65 years of age, increasing significantly thereafter.

According to P. Lunt and S. Livingstone (1995, p. 622), reserve savings meet psychological needs that are permanently linked with the system of values and personality of a consumer and are associated with the time preference, self-control and risk aversion. When making saving decisions, households may be motivated by: precaution, foresight, need for independence, enterprise, desire to take advantage of higher interest rates, achieve greater prosperity, leave an inheritance, and avarice (Keynes, 2003). The precautionary motive may be manifested by a wish to accumulate money for old age, education, etc. In turn, foresight means predicting various unexpected events such as job loss or illness, with the desire to protect oneself against such contingencies. A higher interest rate encourages households to build up savings, offering the possibility of increasing the accumulated capital. Savers are motivated by the opportunity to reap additional benefits from an expected change in prices of certain assets. A drive to greater future prosperity at the expense of current consumption increases

the propensity to save. By contrast, avarice influences savings by reducing current expenditure.

These saving motives and purposes significantly affect the directions and forms of investing temporarily available funds. As they derive from the human psyche, their effects on individual decisions of consumers have not been thoroughly investigated. Contemporary economists chiefly concentrate on the precautionary motive. It was included in the models developed by H. Leland (1968), H.M. Shefrin and R.H. Thaler (1981, 1988) and M. Kimbal (1990) as an attempt to bring the life-cycle model by A.K. Ando and F. Modigliani (1963) and the permanent income hypothesis by M. Friedman (1957) closer to reality in response to the observed deviations from them.

The behavioural life-cycle hypothesis by H.M. Shefrin and R.H. Thaler, based on the self-control theory and the mental accounts system, is particularly noteworthy. The self-control theory assumes that consumers struggle internally because their preferences are inconsistent over time. The success of such actions is determined by how closely the actual situation will resemble the predictions of the life-cycle hypothesis as defined by A.K. Ando and F. Modigliani. Due to the costs entailed by the use of willpower (which arise in the case of self-limitation), the state assumed in the life-cycle model will never be fully achieved (Shefrin, Thaler, 1988). The costs of the willpower use decrease as income increases, which results in a violation of the principle of proportionality. Their existence explains excessive vulnerability of consumption to unanticipated income variations and its strong dependence on current income. Inconsistent preferences in the long term and impossibility to ensure complete self-control lead to insufficient savings for old age (Zalega, 2012, pp. 216–217; Wałęga, 2013). The mental accounts system, in turn, involves mental calculation of profits and losses while making decisions. Among mental accounts, those authors identified three basic accounts to which households allocate their assets. These include current income, current assets and future income. Current income is understood as disposable income net of retirement savings rate. Current assets mean accumulated savings which are not part of the retirement funds. Future income includes income that will be achieved in the future and funds accumulated for retirement. The behavioural life-cycle hypothesis assumes that the marginal propensity to consume for each of these accounts is different: current income is most at risk of depletion while such risk for future income is the lowest. The system of mental accounts introduced by H. M. Shefrin and R. H. Thaler can, therefore, be said to have shown that the marginal propensity to consume for the various groups depends on the type of account and is the highest (close to one) for current income, the lowest (close to zero) for future income and intermediate for current assets. Furthermore, according to the logic of the mental accounts system, access to each of these accounts is different from a psychological point of view and any spending charged against current assets or future

income leads to discomfort expressed as negative utility (i.e. consumer dissatisfaction). In other words, spending money from these accounts is more painful than in the case of current income. As a consequence, the utility resulting from initial spending of funds in these accounts is lower than the utility resulting from expenditure charged against the current income account (Thaler, 1986, p. 283; 1990, p. 201). To conclude, H.M. Shefrin and R.H. Thaler have proved that people perceive income, current and future assets of the same potential value in a different way depending on psychological factors, presentation of information, externally imposed rules or absence of such rules and internally developed principles for the purposes of interpretation of new phenomena (Zalega, 2008, p. 33).

8. Saving behaviours of Polish seniors

Age as a factor influencing saving behaviours becomes more important in the face of population ageing. According to G. Rytlewska and A. Kłopocka (2010), growing dynamics of population ageing will bring about a permanent decline in the savings rate and a shift in the structure of savings products towards low-risk instruments such as bank deposits, bonds and life insurance. Research carried out by V.I. Bejtelsmit and A. Bernasek (2001) among the elderly shows that their financial portfolio contains much fewer high-risk assets in comparison with a portfolio of younger people. In addition, those authors found that wealthier households had financial portfolios consisting of riskier financial instruments than less affluent households. Similar conclusions were drawn by G. Clark and K. Strauss (2008), who noted that apart from age, a key risk aversion determinant was the level of wealth. Among less affluent investors, risk aversion increases with age, while wealthy investors show an opposite tendency. S. Collard (2009) observed that women were more risk averse than men. The impact of sex on saving behaviours was also confirmed by P. Fischer (2010), who noticed a lower rate of savings among households whose heads were women. A. Lusardi and L. Mitchell (2007) proved in their research that differences in saving behaviours between men and women are mainly caused by differences in financial awareness and phases of family life.

In the survey, more than two fifths of respondents declared that they had financial resources in the form of money, bank deposits or securities. Almost 60% of the elderly, however, admitted having no savings, including fewer than 5% who said that prior to retirement they had still had some money saved but they had already spent it (Table 3).

The various socio-demographic factors had a significant statistical impact on respondents' opinions about their savings. It is obvious that having savings is inextricably linked with the financial and material situation of households. Not surprisingly, a variable that significantly influences the differences in savings among the households examined is the income group

Characteristics of respondents	Households (%)	
	Having savings	Having no savings
Total	41.6	58.4
Age:		
65–74	46.3	53.7
75–84	40.7	59.3
85 and more	37.8	62.2
Sex:		
Female	39.8	60.2
Male	43.4	56.6
Education:		
Primary	26.3	73.3
Basic vocational	36.8	63.2
Secondary	38.1	61.9
Higher	65.2	34.8
Income per capita:		
up to PLN 2000.00	25.8	74.2
PLN 2001.00–3000.00	32.7	67.3
PLN 3001.00–4000.00	42.9	57.1
more than PLN 4000.00	65.0	35.0
Place of residence:		
Warsaw	46.6	53.4
Kraków	42.8	57.2
Łódź	37.8	62.2
Poznań	42.3	57.7
Wrocław	42.0	58.0
Gdańsk	44.6	55.4
Katowice	46.1	53.9
Lublin	38.9	61.1
Białystok	37.1	62.9
Toruń	37.8	62.2

Tab. 3. Savings in the households surveyed (%). Source: Elaborated by the author.

under which a given household was categorised (Pearson's correlation coefficient r = 0.473, with $p \leq 0.01$). The higher the income group, the greater the propensity to save. In addition, savings increase in such households. A variety of financial resources was most often declared by those who achieved monthly disposable incomes of above PLN 4000.00 per family member (more than two thirds of respondents) and respondents in the income group of PLN 3001.00–4000.00 (more than two fifths of respon-

dents). The higher the income was, the less often seniors held available money at home, choosing to make profitable market investments instead. It should be noted, nonetheless, that even in the wealthiest households surveyed nearly three fifths of respondents stated that their households did not have any financial reserves. Obviously, the position of the elderly who were in a much worse socio-economic situation was less favourable.

Polish seniors who more frequently reported that they had savings were those better educated and more affluent, more satisfied with their material status and living in bigger cities. Financial reserves were also more often mentioned by elderly people in the age groups of 65–74 (almost every second respondent) and 75–84 (two fifths of respondents). The smallest savings were declared by the oldest respondents in the age group of 85 and more (fewer than 40% of those interviewed).

Education is the variable that statistically affects not only the mere fact of having savings but also savings amounts (Spearman's correlation coefficient $r = 0.321$, $p = 0.01$). Seniors with a higher level of education more often had any savings, regardless of the amount of accumulated money. Having a variety of financial resources was declared by more than three fifths of respondents with higher education, while only one in four respondents with primary education said so. It can be concluded, therefore, that the higher the level of education of seniors, the higher their savings.

Place of residence slightly less and statistically insignificantly affects the differences among households as regards their propensity to save (Cramer's V was 0.078, with $p = 0.491$). Taking into account the place of residence of respondents, those living in Warsaw, Katowice and Wrocław (over 40%) were found to have the biggest savings. By far the largest number of Polish seniors who said that they had no savings came from Białystok, Łódź and Toruń (more than three fifths of respondents).

Among those with the biggest savings, most stated that their savings did not exceed monthly or at most three-month household incomes.

Socio-demographic variables, i.e. age, education and place of residence, weakly and statistically insignificantly affect the differences in the propensity to save among seniors. The surveys carried out show that savings of up to monthly household income were most frequently held by people aged 75–84 (every tenth respondent), while respondents aged 85 and more had the smallest savings.

Seniors aged 65–74 represented the highest proportion in the category of people with savings of more than annual incomes. On the other hand, people aged 75–84 held savings of three-month income at most.

The level of education did not affect the opinions about savings in a statistically significant way (Pearson's correlation coefficient $r = 0.123$, $p = 0.114$). On the basis of information obtained from the surveys, it was observed that the higher the level of education of seniors, the higher the percentage of savings, regardless of savings amounts. A pattern can be

noticed, namely that respondents with a higher education had more savings in excess of annual incomes than households headed by people with only primary education.

Only every tenth household represented by people with higher education possessed savings of monthly income, and every eighth on average held savings in excess of three-month income. The level of education may thus be said to be a variable that statistically significantly diversifies the households surveyed not only in terms of the mere fact of having savings but also as regards the amounts of accumulated money.

Place of residence slightly less influences the differences among households as regards savings held (Cramer's V was 0.087, with $p = 0.413$). It was noted that more seniors living in Łódź and Toruń had no savings. In contrast, almost every other elderly person living in Warsaw and Katowice had some savings.

A variable diversifying (albeit slightly) Polish seniors in terms of savings is income group under which a given household was categorised (Pearson's correlation coefficient $r = 0.146$, with $p \leq 0.01$). The higher the income group, the greater the propensity to save and the bigger savings. Among the highest-income (more than PLN 4000.00 per capita) households that had savings, the share of those with savings exceeding annual household income was twice as big as among other households.

Having savings and their stability are one of the key indicators of households' financial security (Table 4).

Savings and other assets that can be sold if necessary	Declared by respondents (%)
Cash (in PLN) at home	60.3
Term deposits in banks (in PLN)	48.6
A vista bank account in PLN	26.4
Insurance policy	10.3
Investment funds	2.6
Real property investment	2.5
Valuables that can be sold if necessary	1.8
Treasury bonds	1.4
Securities listed on the stock market	1.1

Tab. 4. Forms of savings held by the households surveyed (%). Source: Elaborated by the author.

More than three fifths of respondents who had savings held them in cash and every second in the form of bank deposits in PLN. Bank deposits in PLN were most popular among respondents aged 65–74 (more than three quarters of respondents) and savings in cash were relatively most frequently held by seniors aged 85 and more. Relatively, the biggest proportion of older people held their savings in PLN in banks in Warsaw (almost

four fifths of respondents), Poznań (more than three quarters) and Łódź (more than 50%). By far the highest percentage of the seniors surveyed who had savings in cash lived in Toruń (more than 77% of respondents in this voivodeship).

Every fourth respondent who had savings held an *a vista* bank account in PLN. A relatively high percentage of holders of such accounts allows for concluding that Polish seniors increasingly tend to deposit their money in banks. However, such findings should be considered with due caution as a comparison of data on this form of investing money (and only in relation to keeping money at home) indicates periodic changes of opinions rather than a change of style of managing one's own cash. Seniors who claimed to have an *a vista* account in PLN were university graduates with monthly income per capita of above PLN 3000 who lived in Warsaw, Kraków and Wrocław.

The surveys confirmed a small percentage of individual life insurance policy holders among the seniors surveyed. Only one in ten respondents indicated a life insurance policy as a form of savings. Such a form of investment was preferred by the relatively largest proportion of seniors aged 65–74, with higher education and monthly disposable income per capita above PLN 3000, who lived in Warsaw, Kraków and Katowice.

Other forms of investments and savings were not very popular. Undoubtedly, investing in securities was the least common choice among the seniors surveyed. This is understandable in view of increased uncertainty and risk of investing cash in such instruments. The surveys show that respondents prefer traditional, proven, and thus safe financial instruments.

Drawing conclusions about the forms of saving money by Polish seniors, it may be said that the investment style obviously depends on the economic situation of respondents. The higher the education and the better the self-assessment of financial situation, the more respondents claimed that they had various financial investments and the less frequently they declared to have no savings. It should be highlighted that even among persons with a better financial standing, there were people who had no investments or other financial resources offering a sense of material security.

Those seniors who said that they were able to save money most frequently intended to secure themselves against unexpected random situations or spend it on medical treatment, rehabilitation, helping their own children, fixed charges and current consumer expenditure (Table 5).

Examination of saving purposes suggests that the strongest saving motive among Polish seniors was the desire to secure themselves against unforeseen circumstances (the so-called buffer savings). Almost 90% of respondents who were able to save money stated that they accumulated reserves for this purpose. Savings built up as a reserve for random events were the most popular among senior savers in the 65–74 age group (93.8%), living in Warsaw, Gdańsk and Białystok (over 93.5%), with higher and secondary

Purpose	Percentage of responses
Reserve for random events	89.7
Medical treatment	46.3
Current consumer expenditure	24.3
Fixed charges	23.6
Flat/house refurbishment	20.4
Rehabilitation	19.8
Help for children	19.6
Leisure and entertainment	9.8
No specific purpose	8.2
Purchase of durables	4.8

Tab. 5. Allocation of savings in the households surveyed (%). Source: Elaborated by the author.

education (92.4%), and achieving a monthly income per capita of PLN 2001.00–3000.00 (94.2%).

An important motive for saving were also medical expenses. Health expenditure was most often indicated by people aged 75–84 and 85 and more (over 58.7%), living in Warsaw and Łódź (over 54.3%), with secondary and higher education (over 52.9%), and having a monthly income per capita of PLN 4000.00 and more (59.3%).

Current consumer expenditure also ranked high in the hierarchy of saving purposes. Typical consumers who saved money for this purpose were seniors aged 75–84 (26.6%), having at least secondary education (27.5%), living in Warsaw, Gdańsk and Lublin (24.2%), and earning a monthly income per capita of PLN 3000.00 and more.

Almost 20% of those saving money mentioned help for their children by ensuring a good start in life and educational opportunities. The future of their children was indicated as an important motive for saving by respondents aged 65–74 (27.3%), with higher education (29.9%), living in Warsaw (26.3%) and Poznań (25.7%), and achieving a monthly income per capita of over PLN 4000.00 (28.8%).

Relatively few elderly people indicated spending on durables (furniture, household appliances and electronics) as a purpose of saving. It should be emphasised that purchase of furniture and household appliances was most often mentioned by those aged 65–74 (8.7%), with secondary and basic vocational education (6.9%), living Katowice (6.5%) and Wrocław (5.9%), with a monthly income of PLN 3000.00 and more per capita (5.7%), and assessing their own financial situation as good.

9. Conclusion

The analysis of the financial situation of Polish seniors allows for drawing the following conclusions:

1. The style of investing money is linked with the economic situation of the elderly. The higher the education and the better the self-assessment of financial situation, the more respondents claimed that they had various financial investments and the less frequently they declared to have no savings.
2. Half of the respondents were dissatisfied with their current disposable incomes, and their assessments of their household financial situation were quite diverse depending on characteristics of the respondents and their families.
3. More than two fifths of respondents declared that they had financial resources in the form of money, bank deposits or securities. Fewer than 60% of seniors, however, admitted having no savings, including fewer than 5% who said that prior to retirement they had still had some money saved but they had already spent it.
4. Relatively, the largest percentage of the surveyed seniors who had savings invested them in cash and in bank deposits in PLN. On the other hand, investing in securities was the least common choice among respondents.
5. Older people who said that they were able to save any money most frequently intended to secure themselves against unexpected random situations or spend it on medical treatment, rehabilitation, helping their own children, fixed charges and current consumer expenditure.

Endnotes

[1] Societies where the percentage of people aged over 60 has exceeded 12% are considered demographically old. Poland reached this threshold already in the early 1960s.

[2] The Anglo-Saxon literature uses the following division of older people: 1) young old – people aged 60/65–74; 2) old old – people aged 75–84; and 3) the oldest old – people aged 85 and more. The age classification in the study is similar to that proposed by the WHO. The author divided seniors into: 1) young old – people aged 65–74, 2) old old – people aged 75–84, and 3) the oldest old – people aged 85 and more. According to the UN, the conventional old-age threshold is 65. It should be remembered, however, that old age is not just the number of years that a person has lived. We distinguish calendar (chronological) age and biological age. Many factors often cause very large discrepancies between chronological and biological ages.

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