

*Agnieszka Strzelecka*  
*Danuta Zawadzka*  
*Politechnika Koszalińska*

## FACTORS DETERMINING THE TENDENCY OF RURAL HOUSEHOLDS IN CENTRAL POMERANIA TO SAVE – PILOT STUDY RESULTS

*The aim of this research is to identify factors affecting the propensity of rural households to save, on the example of 100 entities in Central Pomerania, based on pilot studies (direct questionnaire technique) using the logistic regression model. The study assumes that the dependent variable is the occurrence of savings in the household in 2018. The selection of independent variables for the logistic regression model was made on the basis of literature studies. The results of the analysis confirmed that statistically significant parameters for the variables were: average monthly net income per one person in the household, diversification of the income sources and the share of expenses on food and non-alcoholic beverages in total household consumption expenditure. The first two parameters increase the probability of saving by rural households of Central Pomerania. The last of these parameters reduces the chance of deferring consumption through savings.*

**Keywords:** rural household, propensity to save, income, Central Pomerania, Poland.

**JEL codes:** D1, D14.

### Introduction

Savings can be seen as consumption deferred in time and the effect of a decision-making process which is based on many factors that are considered subjectively by households. The primary purpose of collecting savings is the ability to have more purchasing power in the future and the ability to meet future needs. The saving process is related to the concept of propensity to save, meaning the strength of determination to refrain from current consumption for the sake of future consumption<sup>1</sup>. According to Świecka<sup>2</sup>, the propensity to save means the phenomenon of saving current income in the form of savings. Assuming the definition of propensity proposed by Hozer<sup>3</sup>, it can be assumed that this is the inclination of an individual's attitude towards saving, which increases the probability of the saving process. According to Popper<sup>4</sup>, the tendency is contained in every possibility and we can estimate its size by referring to the relative frequency of occurrences of a given event by stating how often the given event actually takes place. The aim of this research is

<sup>1</sup> See Kłopocka A.: Skłonność gospodarstw domowych do oszczędzania a wiedza finansowa, Bank i Kredyt, nr 49(5), 2018, s. 463.

<sup>2</sup> Świecka B.: Niewypłacalność gospodarstw domowych. Przyczyny - skutki - przeciwdziałanie, Difin, Warszawa 2009, s. 43.

<sup>3</sup> Hozer J., Doszyń M.: Ekonometria skłonności, Polskie Wydawnictwo Ekonomiczne, Warszawa 2004, s. 7.

<sup>4</sup> Popper K.R.: Świat skłonności, Wydawnictwo ZNAK, Kraków 1996, s. 21.

to identify factors affecting the tendency to save in rural households on the example of entities in Central Pomerania based on pilot studies. The income situation of households varies strongly depending on where they live. The greatest impact on this is income from hired labor and self-employment, derived from the variation of wages in the rural and urban labor market<sup>5</sup>. In rural households, needs are determined by family consumption, production and accumulation determining the ability to invest in an agricultural holding<sup>6</sup>. These processes undoubtedly have an impact on the propensity to save.

### **Household propensity to save in light of existing research results**

The process of saving is identified with every action consisting in refraining from spending all the income obtained in a given time. According to Gersovitz<sup>7</sup>, saving is the renunciation of current consumption, which leads to the accumulation of capital. This capital is a source of additional income that can potentially be used for future consumption. According to Liberda<sup>8</sup>, saving means postponing consumption in a short or indefinite period. Savings are usually defined as the surplus of the income obtained in a given period over the expenditure incurred. The scientific literature mentions various classifications of savings determinants<sup>9</sup>, however, each of them contains one common factor – the income obtained. It is undoubtedly the basic factor that affects the ability to make a savings decision, as well as the propensity to save. Research on the relationship between income and savings was also conducted by Fall, Loisy and Talon<sup>10</sup>. They

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<sup>5</sup> Chmielewska B.: Ekonomiczno-społeczna sytuacja gospodarstw domowych rolników po akcesji Polski do Unii Europejskiej, *Studia i Monografie, IERiGŻ-PIB, Warszawa 2013*, s. 202; see.: Łącka I.: Sytuacja dochodowa wiejskich gospodarstw domowych w Polsce w latach 2007–2014 i jej skutki, *Problemy Drobnych Gospodarstw Rolnych*, 2017, s. 29–42.

<sup>6</sup> Leśniak-Moczuk K.: Dywersyfikacja wewnętrznej struktury dochodów ludności wsi i miast w kierunku spójności pomiędzy środowiskami, [w:] *Nierówności społeczne a wzrost gospodarczy w kontekście spójności społeczno-ekonomicznej*, M.G. Woźniak (red.), Wyd. Uniwersytetu Rzeszowskiego, z. 12, Rzeszów 2018, s. 280-281.

<sup>7</sup> Gersovitz M.: *Saving and Development*, [in:] H. Chenery, T.N. Srinivasan (ed.) *Handbook of Development Economics*. Vol. I, Elsevier Science Publishers B.V., Amsterdam 1988.

<sup>8</sup> Liberda B.: *Oszczędzanie w gospodarce polskiej. Teorie i fakty*, Polskie Towarzystwo Ekonomiczne, Dom Wydawniczy Bellona, Warszawa 2000.

<sup>9</sup> e.g. Rha J.Y., Montalto C.P., Hanna S.D.: The Effect of Self-Control Mechanisms on Household Saving Behavior, *Financial Counseling & Planning*, Vol. 17, Iss. 2/2006, pp. 3-16; Kitamura Y., N. Takayama, F. Arita: Household Savings in Japan Revisited, *Research in Economics*, Vol. 55, Iss. 2/2001, pp. 135-153; Schmidt-Hebbel K., Webb S.B., Corsetti G.: Household Saving in the Developing Countries: First Cross Country Evidence, *The World Bank Economic Review*, Vol. 16, No. 3/1992, pp. 530-536; Pati A.P., Shome D.: Do Households Still Prefer Bank Deposits? An Analysis of Shift in Savings and Savings Determinants, *The IUP Journal of Bank Management*, Vol. 10, No. 1/2011, pp. 46-59; Kowhakul M.: Personal Factors Affecting to the Saving Behavior of People in Bangkok Metropolitan Region, Thailand, *Proceedings of International Academic Conferences 4106595*, International Institute of Social and Economic Sciences, 2016, pp. 277-287; Aidoo-Mensah D.: Determinants of rural household savings behaviour: The case of tomato farmers in Ghana, *Review of Agricultural and Applied Economics*, No. 2, 2019, pp. 55-70; Copur Z., Gutter M.S.: Economic, Sociological, and Psychological Factors of the Saving Behavior: Turkey Case, *Journal of Family and Economic Issues*, Springer, vol. 40(2)/2019, pp. 305-322; Pandu G.A., Sankar R.: Relationship between savings determinants and savings behaviour among households in Tamil Nadu and Puducherry, *Journal of Commerce and Accounting Research*, Vol. 8(4), 2019, pp. 1-11; Nwosu E.O., Anumudu Ch.N., Nnamchi Ch.E.: Microeconomic determinants of household savings in Nigeria, *Journal of International Development*, Vol. 32, 2020, pp. 150-167.

<sup>10</sup> Fall M., Loisy Ch., Talon G.: An Empirical Analysis of Household Savings in France 1984-1998, *Research in Economics*, Vol. 55, Iss. 2/2001, pp. 155-172.

showed that the average income of households which did save was almost twice as high as the income of households which spent savings from previous periods on current consumption. Among the factors determining the decisions of households regarding savings, access to alternative sources of financing is also mentioned. This applies to the diversification of income by this group of entities, as well as to the possibility of obtaining external sources of financing (e.g. loans). In a situation where a budgetary constraint arises, the financial services market enables households to allocate consumption over time in order to best meet their needs<sup>11</sup>.

There is also research in the literature confirming the relationship between savings and the age of the saver<sup>12</sup>. The research conducted by Fall, Loisy and Talon<sup>13</sup> shows that households have an increasing savings rate from the moment they start work until they reach the age of 60. The results confirm the hypothesis of the life cycle of Modigliani and Brumberg<sup>14</sup>. Non-financial factors determining the savings of households also include social factors such as: education of the head of the household and professional activity of household members<sup>15</sup>. These factors have a positive impact on the potential of households for saving. This is confirmed by the studies of such researchers as: Borko<sup>16</sup> or Lugauer, Ni and Yin<sup>17</sup>. With professional activity and the size of the household, dependency ratio is also associated. It is calculated as the ratio of the number of people who do not provide income to the household (e.g. children, the unemployed) to the total number of people making up the household. The higher the dependency ratio, the larger the amount of household income that is spent on consumption and, consequently, the smaller the amount that is dedicated to savings<sup>18</sup>.

## Materials and methodology of research

The study covered rural households in the Central Pomerania region. The source of the empirical data was the results of a pilot study conducted in May 2019 in a group of 120 rural households (direct questionnaire technique). The number of 100 correctly filled questionnaires was obtained (83.33% response rate). Respondents were asked to provide information for 2018. In selected questions, the studied time range covered the years 2004-2018. The research was carried out as part of the project entitled *Financial aspects of the functioning of Central Pomerania's households*. A logistic regression model was

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<sup>11</sup> Wałęga G.: Zadłużenie polskich gospodarstw domowych z tytułu kredytów bankowych, [w:] D. Kopycińska (red.), *Zachowania rynkowe gospodarstw domowych i przedsiębiorstw w okresie transformacji systemowej w Polsce*. Uniwersytet Szczeciński, Szczecin 2006.

<sup>12</sup> e.g. Saqib S., Panazi S., Ullah H., Ullah U., Usman H.: Determinants of Household Savings in Rural and Urban Areas: The Case of Chitral District, Pakistan, *International Journal of Academic Research in Business and Social Sciences*, Vol. 6, No. 3/2016, pp. 54-64; Borko Z.P.: Determinants of Household Saving the case of Boditi Town, Wolaita Zone, Ethiopia, *Open Journal of Economics and Commerce*, Vol. 1, Issue 3/2018, pp. 11-19.

<sup>13</sup> Fall M., Loisy Ch., Talon G., op.cit., pp. 155-172.

<sup>14</sup> Modigliani F., Brumberg R.: *Utility Analysis and the Consumption Function: An Interpretation of the Cross-Section Data*, [in:] F. Modigliani (ed.), *The Collected Papers of Franco Modigliani*, Vol. 6, The MIT Press, Cambridge-Massachusetts-London 2005.

<sup>15</sup> e.g. Kowhakul M., op.cit., pp. 277-287.

<sup>16</sup> Borko Z.P., op.cit., pp. 11-19.

<sup>17</sup> Lugauer S., Ni J., Yin Z.: Chinese household saving and dependent children: Theory and evidence. *China Economic Review*, Vol. 57, October 2019, pp. 131-164.

<sup>18</sup> Rodriguez J.A.A., Meyer R.L., op. cit., p. 10.

used to verify the empirical factors affecting the propensity to save in the surveyed rural households in Central Pomerania region. It was assumed that the dependent (response) variable is the occurrence of savings in the household in 2018. It is a dummy variable. In the case where the surveyed rural household had savings in 2018, the variable takes the value 1 (58 cases), in the opposite case – the value 0 (42 cases). The selection of independent variables to build the logistic regression model was made on the basis of literature studies. Nine independent variables were adopted to assess the probability under study, the characteristics of which and the hypothetical impact on the propensity to save in rural households in Central Pomerania are presented in Table 1.

**Table 1.** Hypothetical influence of independent variables adopted in the model of factors determining the propensity to save in rural households of Central Pomerania

Variables included in the analysis		Predicted variable impact
<b>Y</b>	A dummy variable, defining whether the household had savings in 2018. This variable takes the value = 1 if the household declared having savings, otherwise it takes the value = 0.	
<b>x<sub>1</sub></b>	Variable defining the average monthly net income per one person in a household in 2018 - taking into account all sources of income for all members of the household (1 - below 500 PLN, 2 - 501-1000 PLN, 3 - 1001-1500 PLN, 4 - 1501-2000 PLN, 5 - above 2000 PLN)	+
<b>x<sub>2</sub></b>	Variable defining the share of expenditures on food and non-alcoholic beverages in total household consumption expenditure (in %).	-
<b>x<sub>3</sub></b>	A dummy variable that determines whether there has been a steady increase in income since 2004 in the household. If yes, the variable takes the value = 1, otherwise it takes the value = 0.	+
<b>x<sub>4</sub></b>	A dummy variable that determines whether the household has more than one source of income. If yes, the variable takes the value = 1, otherwise it takes the value = 0.	+
<b>x<sub>5</sub></b>	A dummy variable that determines whether the household has debt. If yes, the variable takes the value = 1, otherwise it takes the value = 0.	+
<b>x<sub>6</sub></b>	Variable defining the share of dependent children in the total number of household members (in %).	-
<b>x<sub>7</sub></b>	Variable defining the age of the head of the household (in years)	
<b>x<sub>8</sub></b>	Variable defining the education of the head of the household (1- at most elementary, 2 - elementary and finished vocational course, 3 - basic vocational, 4 - incomplete secondary, 5 - secondary, 6 - post-secondary, 7 – higher).	+
<b>x<sub>9</sub></b>	Variable defining the share of household members who perform paid work in the total number of household members (in %).	+

Source: author's own study.

The paper assumes that the savings are the difference between the income received by the household in a given period and the expenses incurred. For a household to be able to allocate a portion of its income to finance future needs, there must be financial opportunities for doing so. Five explanatory variables were adopted in the course of the research, which were classified as income factors. The first of the variables refers to the *average monthly income per one person in the household* ( $x_1$ ). Five income classes were established<sup>19</sup>: 1) below 500 PLN, 2) 501-1000 PLN, 3) 1001-1500 PLN, 4) 1501-2000 PLN, 5) above 2000 PLN. The higher the income, the higher the propensity to save.

<sup>19</sup> According to the project assumptions (project: *Financial aspects of the functioning of Central Pomerania's households*), the income ranges were based on: 1) average monthly available income per capita in household in Poland by quintile groups, 2) average monthly available income per capita in household in Poland, 3) average

The variables also include the *share of expenditure on food and non-alcoholic beverages in total household consumption expenditure* ( $x_2$ ). It is a measure of the income situation of a household. According to E. Engel's law, it was assumed that the lower the value of this indicator, the better the income situation in a household. Thus, a smaller share of this expenditure category in the household's total consumption expenditure is conducive to the probability that the household will use part of its income for savings. Therefore, the negative impact of this financial variable on the adopted dependent variable was assumed.

Next, a variable was adopted determining whether there had been *a steady increase in income in the household since 2004* ( $x_3$ ). Including this predictor in the analysis makes it possible to assess the impact of changes in the level of income on the probability of collecting savings by the surveyed rural households. The increase in total income may have a positive effect on the households' likelihood of saving. Considering precaution as a motive for saving<sup>20</sup>, these entities may show a tendency to postpone consumption to protect against possible adverse changes of income in the future.

Among the variables identified as access to alternative sources of financing, two predictors were adopted. First, an independent variable of *whether the household has more than one source of income* ( $x_4$ ) was taken into account. This may include, among other things: income earned from hired work, income from a farm, income from activities (other than agricultural), income from pensions or income from property, and any other source of income alternative to the main source of income in the household. A positive impact of this variable on the savings accumulated by the surveyed households was assumed. Subsequently, the use of external sources of financing of expenditures was taken into account. A variable was adopted to determine if the *household had debt* ( $x_5$ ). The positive influence of the variable on the studied phenomenon was assumed based on precaution as a motive for saving.

Among the variables referring to the size and composition of the household, *the number of dependent children in the total number of household members* was taken into account ( $x_6$ ). A situation where the household includes children may be conducive to the accumulation of savings, for example due to the precautionary motive or the pride motive. However, too many children can have a negative impact on savings. Therefore, the negative influence of this variable on the examined phenomenon was assumed.

The next adopted variable is *the age of the household head* ( $x_7$ ). Based on the results of research presented in the literature, a positive influence of this variable on the dependent variable was assumed. The variable range also includes the *education of the head of the household* (variable  $x_8$ ). It was assumed that a higher level of education has a positive impact on the savings accumulated by the surveyed rural households.

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monthly available income per capita in household in Poland in the West Pomeranian Voivodeship and in the Pomeranian Voivodeship. (Budżety gospodarstw domowych w 2017 roku. Główny Urząd Statystyczny, Warszawa 2018, s. 121, 127).

<sup>20</sup> See, e.g., Keynes J.M.: *Ogólna teoria zatrudnienia, procentu i pieniądza*. Wydawnictwo Naukowe PWN, Warszawa 2003; Yao R., Wang F., Weagley R.O., Liao, L.: Household saving motives: Comparing American and Chinese consumers. *Family and Consumer Sciences Research Journal*, 40(1)/2011, pp. 28-44; Lugalde A., Bande R., Riveiro D.: Precautionary saving: a review of the empirical literature, *Journal of Economic Surveys*, Vol. 33, No. 2, 2019, pp. 481-515.

The variable group included also the professional activity of household members, expressed as *the share of household members who perform paid work in the total number of household members* ( $x_9$ ). Higher value of this variable indicates higher professional activity of household members, which has a positive effect on the total income of the household in a given period. It is also connected with a lower value of the demographic dependency ratio which in effect creates favorable conditions for the household to decide on the allocation of a part of the income for savings.

In order to find the best combination of factors significantly affecting the propensity to save in rural households of Central Pomerania, the method of backwards elimination was used. The assessment of the degree of fit of the logistic regression model to the empirical data was carried out using the statistics of *Cox-Snell*  $R^2$ , *Nagelkerke's*  $R^2$  and Count  $R^2$ . Verification of the significance of individual model parameters was made using  $z^2$  Wald Test. To assess the goodness of fit of the obtained model, the AUC - *Area Under Curve* value was used. The quality of the logistic regression model was also evaluated using the ROC (*Receiver Operating Characteristic Curves*) curve.

### Characteristics of the studied population

Among the surveyed group of rural households in Central Pomerania, over half (58%) accumulated savings. Table 2 presents descriptive statistics of the variables on which the characteristics of the analyzed entities were assessed.

**Table 2.** Descriptive statistics of independent variables adopted for the model

<i>Continuous variables</i>								
<i>Variable</i>	<i>Average</i>	<i>Median</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Standard deviation</i>			
$x_2$	36,11	35,00	10,00	84,00	15,21			
$x_6$	31,05	33,33	0,00	75,00	22,59			
$x_7$	47,58	47,00	22,00	84,00	13,61			
$x_9$	52,60	50,00	0,00	100,00	27,32			
<i>Discrete variables</i>								
<i>Variable</i>	<i>Average</i>	<i>Number of households in particular classes of net income per one person in a household</i>						
		<i>1 below 500 PLN</i>	<i>2 501-1000 PLN</i>	<i>3 1001-1500 PLN</i>	<i>4 1501-2000 PLN</i>	<i>5 over 2000 PLN</i>		
$x_1$	3,44	3	25	27	15	30		
<i>Variable</i>	<i>Average</i>	<i>Number of farms in which the head of the household had the following education:</i>						
		<i>1 at most elementary</i>	<i>2 elementary and finished vocational course</i>	<i>3 basic vocational</i>	<i>4 incomplete secondary</i>	<i>5 secondary</i>	<i>6 post- secondary</i>	<i>7 higher</i>
$x_8$	5,33	8	2	35	4	25	7	19
<i>Dichotomous variables</i>								
<i>Variable</i>	<i>Average</i>	<i>Occurrences 1</i>		<i>Occurrences 2</i>				
$x_3$	0,42	42		58				
$x_4$	0,58	58		42				
$x_5$	0,32	32		68				

Source: authors' own study.

The results show that 28% of entities included in the study were characterized in 2018 by an average monthly net income per one person in a household not exceeding 1000 PLN (of which 3% of entities achieved income lower than 500 PLN). For 30% of surveyed rural households, the income was higher than 2,000 PLN. 42% of the group was characterized by a constant increase of income in 2004-2018. It was also found that 58% of entities obtained income from more than one type of source. 32% of respondents declared using external sources of financing for expenses incurred when meeting the needs of household members. The expenditure structure of the examined households was dominated by expenditure on food and non-alcoholic beverages (on average 36.11% of total expenditure). The average age of the household head was 47.58 years. The largest group among the entities in question were those whose household head had basic vocational education (35%). 19% of respondents declared that the head of the household had completed higher education. The average value of the share of employed persons in the total number of household members was 52.6%, while the average share of children dependent on households was 31.05%.

## Results and discussion

The estimation results of model parameters of saving in rural households in Central Pomerania are presented in Table 3.

**Table 3.** Results of the estimation of model parameters - initial model

Variable*	Variable parameter	Standard error	$z^2$ Wald test	Significance level	Odds ratio
<b><math>x_1</math> - average monthly net income per person in a household</b>	<b>0.692</b>	<b>0.244</b>	<b>8.005</b>	<b>0.005</b>	<b>1.997</b>
<b><math>x_2</math> - share of expenditure on food and non-alcoholic beverages in total household consumption expenditure (in %).</b>	<b>-0.038</b>	<b>0.017</b>	<b>4.763</b>	<b>0.029</b>	<b>0.963</b>
$x_3$ - constant increase in household income since 2004	0.538	0.519	1.074	0.300	1.713
<b><math>x_4</math> - more than one source of income</b>	<b>1.466</b>	<b>0.525</b>	<b>7.808</b>	<b>0.005</b>	<b>4.332</b>
$x_5$ - household has debt	0.596	0.548	1.183	0.277	1.815
$x_6$ - share of dependent children in the total number of household members	0.010	0.013	0.610	0.435	1.010
$x_7$ - age of the head of the household	0.009	0.023	0.169	0.681	1.009
$x_8$ - education of the head of the household	-0.141	0.155	0.830	0.362	0.869
$x_9$ - share of household members who perform paid work, in the total number of household members	0.014	0.012	1.192	0.275	1.014
Intercept	-2.554	2.099	1.482	0.224	0.078
AIC = 127,2 Cox-Snell $R^2 = 0,2507$ ; Nagelker's $R^2 = 0.3372$ ; count $R^2 = 0,73$ AUC = 0,798 LR = 28,86 (df=9, p<0,01)					

\*Variables statistically significant at the significance level of 5% are marked in bold.

Source: author's own study.

Using the backwards elimination method, based on the Akaike information criterion (AIC), predictors were eliminated from the initial model one by one and the evaluation of change in the values of the criteria adopted for the assessment of the model quality

was made. In the end, six independent variables were eliminated:  $x_3$  - steady increase in household income since 2004,  $x_5$  - household debt,  $x_6$  - share of dependent children,  $x_7$  - age of the household head,  $x_8$  - household head education, and  $x_9$  - the share of household members who perform paid work in the total number of household members. The impact of the eliminated variables on the tested probability was not statistically significant. At each stage, an improvement in the accepted measure of fit was observed (reduction of the AIC value). Three predictors remained in the final model. The results obtained for the final model of savings propensity in rural households in Central Pomerania are presented in Table 4.

**Table 4.** Results of the estimation of model parameters – final model

Variable	Variable parameter	Standard error	$z^2$ Wald test	Significance level	Odds ratio
$x_1$ - average monthly net income per person in a household	0.717	0.202	12.667	<0.001	2.049
$x_2$ - share of expenditure on food and non-alcoholic beverages in total household consumption expenditure (in %).	-0.035	0.016	4.791	0.029	0.966
$x_4$ - more than one source of income	1.230	0.477	6.660	0.010	3.422
Intercept	-1.509	0.899	2.816	0.093	0.221
AIC = 120,6 Cox-Snell $R^2 = 0,2507$ ; Nagelker's $R^2 = 0,2813$ ; $countR^2 = 0,72$ AUC = 0,772 LR = 23,46 (df=3, p<0,01)					

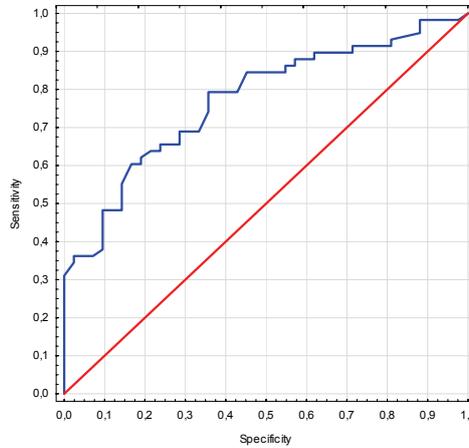
Source: author's own study.

The final estimated model of the propensity to save in rural households of Central Pomerania has the following form:

$$Prob(Y=1) = A(0,717x_1 - 0,035x_2 + 1,230x_4 - 1,509)$$

where:  $A(x) = \frac{e^x}{1 + e^x}$  distribution function of logistic distribution

The significance of the model was assessed based on the LR test. The model is significant at the 1% significance level (the LR-statistics value is 23.46, the critical value of this statistic for 3 degrees of freedom is 11.34). 72% of cases were correctly classified on the basis of the model ( $countR^2 = 0.72$ ). The quality assessment of the constructed model was based on the Cox-Snell  $R^2$  coefficient (0.2507), Nagelkerke's  $R^2$  (0.2813) and using the receiver operating characteristic curve (ROC curve), which is shown in Figure 1.



**Figure 1.** Receiver operating characteristic curve for the model of propensity to save in surveyed rural households of Central Pomerania region  
Source: authors' own study.

The area under the ROC curve (AUC) is 0.772. Because a field larger than 0.5 was obtained, this indicates a good quality of the constructed model. The results of estimation of parameters of the final model showed that three independent variables had a statistically significant impact on the probability of allocating income to savings by surveyed rural households in Central Pomerania. It was found that the increase in the average monthly net income per person in the household and the transition to the next income class, ( $x_1$ , *ceteris paribus*), will increase the chance (by 104.9%) for deferment of consumption over time. In the case of units that earn income from more than one type of source ( $x_4$ , *ceteris paribus*), the chance of accumulating savings will be higher (by 242%). The obtained results also prove that the theoretical increase in the share of expenditures on food and non-alcoholic beverages in total household consumption expenditure ( $x_2$ , *ceteris paribus*) will reduce the chance of allocating part of income to savings by rural households analyzed by 3.4%. The direction of influence of these variables on the tested probability is consistent with the assumptions adopted in the model (see Table 1).

## Summary

The main objective of the research was to identify factors affecting the propensity to save in rural households on the example of entities in Central Pomerania based on pilot studies. The obtained results confirm the existing scientific conclusions, proving that income is the key factor determining the tendency to save in rural households. The statistical significance of the estimated parameters was shown by three variables: average monthly net income per one person in the household, diversification of income, and the share of expenses on food and non-alcoholic beverages in total household consumption expenditure. The first two parameters increase the probability of saving by rural households of Central Pomerania. The last of these parameters reduces the chance of deferring consumption in time through savings.

## Literature

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## **Czynniki determinujące skłonność wiejskich gospodarstw domowych Pomorza Środkowego do oszczędzania - wyniki badania pilotażowego**

### **Streszczenie**

Celem badań jest identyfikacja czynników wpływających na skłonność do oszczędzania wiejskich gospodarstw domowych na przykładzie 100 podmiotów na terenie Pomorza Środkowego, w oparciu o wykonane badania pilotażowe (technika ankiety bezpośredniej), przy zastosowaniu modelu regresji logistycznej. W badaniu przyjęto, iż zmienną zależną jest występowanie oszczędności w gospodarstwie domowym w 2018 roku. Doboru zmiennych niezależnych do budowy modelu regresji logistycznej dokonano na podstawie przeprowadzonych studiów literaturowych. Wyniki analiz potwierdziły, iż statystycznie istotnymi parametrami przy zmiennych okazały się: przeciętny miesięczny dochód netto na jedną osobę w gospodarstwie domowym, dywersyfikacja źródeł utrzymania oraz udział wydatków na żywność i napoje bezalkoholowe w wydatkach konsumpcyjnych ogółem gospodarstwa domowego. Dwa pierwsze parametry zwiększają prawdopodobieństwo oszczędzania przez wiejskie gospodarstwa domowe Pomorza Środkowego. Ostatni z wymienionych parametrów zmniejsza szansę na odroczenie konsumpcji w czasie w drodze oszczędności.

**Słowa kluczowe:** wiejskie gospodarstwo domowe, skłonność do oszczędzania, dochód, Pomorze Środkowe, Polska.

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#### Information about the authors:

**dr Agnieszka Strzelecka**

Katedra Finansów, Wydział Nauk Ekonomicznych, Politechnika Koszalińska  
ul. Kwiatkowskiego 6E, Koszalin, Polska

e-mail: agnieszka.strzelecka@tu.koszalin.pl

ORCID: 0000-0003-4803-0092

**dr hab. Danuta Zawadzka, prof. PK**

Katedra Finansów, Wydział Nauk Ekonomicznych, Politechnika Koszalińska  
ul. Kwiatkowskiego 6E, Koszalin, Polska

e-mail: danuta.zawadzka@tu.koszalin.pl

ORCID: 0000-0001-9353-5941