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HOUSEHOLDS SAVINGS AND FINANCIAL BEHAVIOR IN RELATION TO THE ABILITY TO HANDLE FINANCIAL EMERGENCIES: CASE STUDY OF KOSOVO

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ABSTRACT

To reflect the financial situation of households, especially for emergencies, the main purpose of this research is to analyze financial behavior in relation to savings. This research explains the interaction of minimum savings rules and committed forms of saving, which means that the use of personal budgets depends on financial behavior due to insecurity and the financial situation of families. The research is consistent with some empirical findings on financial behavior in relation to savings, which affect the growth or decline of the economy, because the lower the well-being of families the lower the economic growth or vice versa. The validation of the hypotheses was realized through the analysis of field findings, using the econometric model of savings in relation to financial behavior through factor analysis, reliability analysis and multiple regression analysis. The main finding of this research is the lack of financial behavior to save for emergencies. These findings are important in order for households to be aware of financial behavior in relation to savings, because there is no emergency fund to cover their needs.

Key words: Savings, financial behavior, multiple regression analysis, households, growth and decline economics.

JEL codes: C1, R12, M4

INTRODUCTION

There are many people who have lost money or not saved properly. Some economic models argue that households need to effectively save money to cope with emergencies [Gokhale and Kotlikoff 1999]. The key is to identify spending behaviors. A family can become immersed in debt by buying luxury items (car, house, expensive brand-name clothing, etc.), not saving for emergencies in order to look beautiful or successful in the eyes of others rather than practicing good financial behavior. Moreover, families often borrow from relatives and friends. For example, during the Great Recession about 24% of American households borrowed money from a family member or friend. [Morin et al. 2010].

Financial advisors can help households a lot in terms of savings and financial behavior [Baker et al. 2017]. Households that save for emergencies have higher incomes and are financially educated or have better financial behavior than households that are not financially educated [Lawson and Hershey 2005, Lusardi and Mitchelli 2007, Rooij et al. 2011]. It is very important for households to know that financial be-

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havior that includes savings helps to get out of emergency situations [Mandell and Klein 2009].

Researchers analyzed financial behavior through an international consumer finance questionnaire, forming a financial practice based on four variables of financial behavior: cash flow management, credit management, savings and investment practices. According to this result, they emphasized that households with good financial behavior have increased savings [Hilgert et al. 2003]. If high school students learn about budgeting and using credit or debt, the knowledge and skills acquired during that time are more likely to continue during university and in their jobs [Castellani and DeVaney 2001]. Other studies also show the need for better personal financial behavior in relation to savings [Hilgert et al. 2003]. Some of the previous practices emphasize that households have been uninformed about financial behavior in relation to savings. [Stephen 1988, Gustman and Steinmeier 2000]. Other findings on financial behavior in relation to savings also show that some low-income households save more in various forms than higher-income and more educated families. Therefore, programs should be designed to adapt to the needs and barriers related to saving. [Schreiner and Sherraden 2007].

LITERATURE REVIEW

The economic literature usually analyzes the relationships between economic growth and savings using correlation coefficient and dynamic econometric models [Bacha 1990]. In order to analyze the relationship between savings and economic growth through financial behavior, econometric methods have been used. The research proved that the higher the level of domestic savings, the higher the economic growth rate of households and the country in general [Misztal 2011]. From the point of view of a standard theory of economics, a positive correlation between savings, financial behavior and economic growth can emerge in advanced economies, while in poor countries there is less of a relationship between these variables than is found in developed countries.

According Shin and Kim [2018], savings are an important means by which American households accumulate wealth to meet their financial goals, such as preparing for retirement, saving for college, educating and protecting their assets against unpredictable stochastic risks, etc. Many studies argue that personal savings depend on the financial behavior of the individual [Aguiar and Amador 2011], which includes expenditures and revenues divided into categories in certain time periods (weeks, months, years, etc.) [Nageeb 2011] and which should be adjusted according to the circumstances of the household [Jamieson and Jamieson 2009]. Research by F. Gómez [2009] emphasizes the importance of financial behavior as a condition for increasing household savings. But there are no absolute results on saving according to Bajtelsmit, Bernasek and Jianakoplos [1999], given the other factors (education level, income, country economy, employment, financial situation, etc.) which affect the financial behavior of savings.

According Karlan and Morduch [2009] in research analyzing the differences between lower and higher income people, they pointed out that lower income people do not have savings accounts, unlike the higher income group. Other researchers [King and Levine 1993, Beck et al. 2000, Klapper et al. 2006, Beck et al. 2007] in analyzed savings from the perspective of financial behavior in the investments people make. All proved that the state should provide financial stability and economic growth for the needs of the people by promoting innovation or development culture to enable people to save, because by investing their savings, they can generate profits and thus increase their legacy and awareness of financial behavior in relation to savings [Lulaj 2020]. Similar analysis has been given by other analysts [Scholtz 1992, Bernheim and Garrett 1996, Bajtelsmit et al 1999].

Studies have shown that demographic factors also have a major impact on saving money, resulting in recommendations that most working households should save money, due to new reforms that may come in the future [Kotlikoff and Morris 1989, Wiatrowski 1993, Sterns, 1998, Ferraro 1999, Kleinman et al. 1999]. Additional research concluded that the economic growth of households is influenced by the financial behavior of individuals in managing their budget in relation to savings [Sonuga and Webley 1993, Furnham 1999, Karlan and Morduch 2009].

There are many studies that emphasize that focusing financial behavior as part of financial management

has positive effects on financial stability and well-being by increasing the level of savings. Some analysis has shown that low-income households, which reported any reason for saving (savings motives) were more likely to be better savers compared to those without savings motives [Meier and Sprenger, 2008; Sherraden 1991, Hogarth and Anguelov 2003, Schreiner and Sherraden 2007, Fry et al. 2008]. Households are responsible for significant savings in all countries [Hebbel et al. 1992].

In various literature it is pointed out that the level of savings in relation to financial behavior in households can be influenced by many different factors such as: external factors (macro) and internal factors (micro). Some of the macroeconomic factors that affect household savings are (overall GDP ratio), income level, growth rates of households with disposable income, unemployment rate, real interest rate, inflation rate, etc. [Callen and Thiman 1997]. While microeconomic factors that affect the financial situation of households are savings in relation to financial behavior [Fehr and Hishigsuren 2006]. In general, savings can be defined as money that is not spent at the moment, because people usually save so they can buy more later. Without savings, households find it more difficult to have a secure financial situation in extraordinary situations [Chowdhury 2004].

Economic, social, demographic and cultural factors determine the behavior of households to save [Niculescu and Mihaescu 2014]. Household savings indicate the level of living conditions or financial situation [Zhuk 2015]. Households cannot make changes in savings until they identify where they spend their money or have good financial behavior. Relationships of families with money are quite complicated; people often buy for many reasons other than necessity [Dupas and Robinson 2013]. There are also many characteristics of financial behavior in relation to savings, often unobservable for households and the environment, determining how much wealth people want to keep, including the degree of risk in emergencies, time preferences and the subjective probability of coping with shocks [Deaton 1992]. Households may fail to save for emergencies because they lack financial behavior, failing to adequately assess the risk of a money emergency [Collins and Gjertson 2013]. In theory, households need to save for emergencies in order to protect themselves from unexpected risks [Deaton 1992]. Analyzes made by many studies have found a strong link between financial behavior and savings, but recent findings show that subjective behavior may be a more effective predictor of financial behavior than objective knowledge about savings [Robb and Woodyard 2011].

Based on the numerous studies in the literature review, the findings will help with this case study of households regarding their behavior in relation to savings.

DATA AND METHODOLOGY

The research includes households throughout the country of Kosovo during the years 2019–2020. The interview was conducted through a questionnaire for all households; in this case 5000 people were interviewed. The findings are elaborated in Tables, giving recommendations for the future. The issues that were considered when choosing the procedure to evaluate savings in relation to financial behavior are: first, allowing a savings ratio that results from the residual effects of explanatory variables on savings [Chowdhury 2015]; second, some regressors included in the equation such as savings factors and financial behavior may be jointly significant, i.e. related to the term error; third, specific factors of savings and unobserved financial behavior may be correlated with explanatory variables that produce biased and inconsistent estimates.

To address these issues, the research is based on a data analysis technique through the method of factor analysis, reliability analysis and multiple linear regression analysis. The factor analysis model presents statistical techniques in more variables, or variables whose purpose is to reduce the number of variables that are related to each other to a smaller number, independent of each other, named as a factor. Therefore, this analysis simultaneously tests the integrity of the measurement and guides the further improvement of the theory. In this case this analysis deals with the variables of savings and financial behavior [Henson and Roberts 2006].

According to Kieffer, the use of factor analysis techniques in the social sciences is inextricably intertwined with both development theories and the assessment of the construct validity of austerity factors and financial behavior [Kieffer 1999]. When saving factors and financial behavior during analysis are fac-

tored [Campbell 1996], then the total number of factors is equal to the number of variables [Thompson and Larry 1996].

The model of factor analysis for savings, in algebraic form is marked in this way: If p variables x_1, x_2, x_3, ..., x_p, are measured in a sample of n subjects, then the variable i can be denoted as a linear combination of m factors F_1, F_2, F_3, F_k, $k < p$, [Bai at al. 2015].

$$x_i = \alpha_{i^1} F_1 + \alpha_{i^2} F_2 + \alpha_{i^k} F_k + ... + \mu_i$$

Where: α_{i^1}, are factor loads or results for savings and financial behavior variables, and μ_i is the part of variable x_i that cannot be explained by the factors or error term. The principal component model is transformed into the Factor model for savings and financial behavior as in the following equation.

$$X_i = \sum_{j=1}^{m} a_{ij} PC_j, \quad i = 1, 2, ..., k, \quad j = 1, 2, ..., m$$

$$\sum_{j=1}^{m} a_{ij} F_i \sqrt{\lambda_i}, \quad L_{ij} = a_{ij} \sqrt{\lambda_i}$$

$$\sum_{j=1}^{m} L_{ij} F_i$$

Referring to earlier analysis by Richardsonand Kuder [Feld 1969], Cronbach claims that by making the same assumptions, but removing the limitations in the model, we have the mathematical equation which we denote by the sign alpha (α) [Cronbach and Goldine 1959]:

$$\alpha = \frac{p}{1-p}\left(1 - \sum_{i=1}^{p} \sigma x_i^2 / \sigma_{\mu}^2\right)$$

where:

p – the number of variables (items),
σxi_2 – the variance of the values of i,
$\sigma x\mu_2$ – the total variance of results for the savings and financial behavior,
$\mu = x_1 + x_2 + ... + x_p$.

To test the significance of the data for each factor of savings and financial behavior, we used the t test, while to test whether the model as a whole is important, we used the F test [Zsuzsannaa and Liviu 2012]. The following equation presents the multiple linear regression model to the savings and financial behavior of households [Bremer 2012]:

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2, ... + \beta_k x_k + \mu$$

Where:

Y – dependent variable,
$x_1, x_2, x_3, \ldots, x_n$ – independent variables $\beta_0, \beta_1, \beta_2, ...$,
β_k – linear parameters (estimated),
μ – error term,
k – number of terms in the model: $x_3 = x_1^2$, $x_4 = x_2^3$, $x_5 = x_1 x_2$ (replaced by k).

The model of interaction between variables $x_1 x_2$ is as follows:

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2, ...\beta_{12} x_1 x_2, + \mu$$

The multiple linear regression model squaring force in savings and financial behavior is used to find the optimal response values from the RMS analysis (surface optimal response methods) for all variables.

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_1^2 + \beta_3 x_1^3 + \mu$$

We consider the multiple linear regression model with predictive variables for savings and financial behavior:

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2, ..., + \beta_k x_k, + \mu$$

Using k for each of the predictive variables of savings and financial behavior for x_1, x_2, x_3, for each level (n). Then X_{ij} represents the level i and j for the predicted variables of X_j. Observations Y_1, Y_2, ..., Y_n, for each n level are presented through this equation to savings and financial behavior in emergencies cases.

$$Y_1 = \beta_0 + \beta_1 x_{11} + \beta_2 x_{12}, ..., + \beta_k x1_k + \mu_1$$

$$Y_2 = \beta_0 + \beta_1 x_{21} + \beta_2 x_{22}, ..., + \beta_k x_{2k} + \mu_2$$

$$Y_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2}, ..., + \beta_k x_{ik} + \mu_i$$

$$Y_n = \beta_0 + \beta_1 x_{n1} + \beta_2 x_{n2}, ..., + \beta_k x_{nk} + \mu_n$$

The system of equations n presented above is represented by the matrix symbol as in the following equation shows the savings and financial behavior [Tampis and Urrutia 2017].

THE MAIN HYPOTHESES

Another purpose of this research is to take a closer look at the financial situation of households in relation to savings, given the coronavirus pandemic that has swept the world. The question of how well households are able to cover emergencies through previous savings has become now become even more relevant.

Financial behavior of households in relation to savings = $\beta_0 + \beta_1$ (Financial behavior related to saving) + β_2 (Savings funds based on financial behavior) + β_3 (Implications or non-saving due to financial behavior) + μ

H_0: Savings factors and financial behavior are not important (do not have a positive effect) on households for emergencies.

H_A: Savings factors and financial behavior are important (have a positive effect) on households for emergencies, or

$$\mathbf{H_0 = \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = \beta_8 = 0}$$

$$\mathbf{H_A = \beta_1 \neq 0 - not\ all\ parameters\ are\ equal\ to\ zero}$$

ANALYSIS OF THE RESULTS

Findings have emerged as a result of several types of analyzes of the survey data: Factorial analysis, reliability analysis, multiple linear regression analysis, including all tests within these analyzes.

Table 1 shows the following findings: in the employment variable, the largest number of responses

Table 1. Frequency analysis of respondents to questionnaire

Variables		Frequency	(%)
Gender	M	47	37.6
	F	76	60.8
Age	18–24	29	23.2
	25–34	50	40.0
	35–44	35	28.0
	45–59	9	7.2
	over 60	1	8
Employment	full time	52	41.6
	part time	16	12.8
	rarely work	2	1.6
	there are employed by my family	6	4.8
	I'm unemployed	21	16.8
Members of the family	1–3 member	13	10.4
	3–5 member	56	44.8
	5–7 member	45	36.0
	Over 7 members	10	8.0
Income	EUR 100–300	25	20
	EUR 300–500	31	24.8
	EUR 500–1000	26	20.8
	over EUR 1000	23	18.4
	there is no answer	9	7.2

Source: Authors' own computations based on the survey data.

were given by full-time employees at a percentage of 41.6%. In the gender variable, women gave the greatest number of responses, 60.8%. In the age variable, the largest number of responses were from persons in the age group 25–34 years, at 40%. In the family variable, the largest response group had families of 3–5 members, at 44.8%. In the income variable, families with monthly income of EUR 300–500 had the highest number of respondents, at 24.8%.

Table 2 explains the KMO (.884 > 0.50, Sig .000), variance (66.58% >.50.), and Alpha (.892 ≤α ≤1.00). The data on savings and financial behavior of households for emergencies are suitable for the model and have very high reliability for factor analysis.

Table 3 explains that the data are suitable for analysis, because the variances have a value greater than .500. The variables with the highest variance are .757 and .754 (variables 6 and 7). Through the rotation phase, the factor of savings and financial behavior in households in exceptional cases is divided into three sub-factors by naming them: Financial behavior related to saving (FBRS), Savings funds based on financial behavior (SFBFB), Implications or non-saving due to financial behavior (IFB).

Factor I – Financial behavior related to saving

Exits from the econometric model for factor I: KMO = .877, SIG = 000 TVE = 66.23%, RCM = 1 (6),

Table 2. KMO, variance and Cronbach Alpha results from questionnaire

KMO and Barlett test		Factors	Eigen value	% of variance	Cronbach 's Alpha
KMO	**.884**	1	5.677	31.188	.**892**
Barlett test	685.426	2	1.283	49.101	
DF	66	3	1.030	**66.581**	
Sig.	.000	12	.207		

Source: Authors' own computations based on survey data.

Table 3. Common variances and factor matrix of questionnaire

Item	Principal component analysis		Factor matrix (RCM)		
	Start	Extraction	FBRS	SFBFB	IFB
1	1.000	**.585**	**.831**	.115	.167
2	1.000	**.642**	**.828**	.183	.194
3	1.000	**.657**	**.819**	.014	.286
4	1.000	**.528**	**.741**	.249	.315
5	1.000	**.711**	**.688**	.404	.143
6	1.000	**.732**	**.585**	**.582**	.342
7	1.000	**.757**	.055	**.830**	.006
8	1.000	**.754**	.409	**.652**	.076
9	1.000	**.611**	.134	**.608**	.404
10	1.000	**.724**	.165	.327	**.768**
11	1.000	**.598**	.214	–.118	**.684**
12	1.000	**.692**	.417	.201	**.629**

Source: Authors' own computations based on survey data.

ALPHA = .895, ITEM = 6. KMO (.877 > 0.50, Sig .000), variance (66.23% >.50.), and Alpha (.895 ≤ α ≤ 1.00.). Financial behavior data in relation to savings, are suitable for the model and have very high reliability for factor analysis. The variance with the highest variance is .852 (variable 2).

Factor II – Savings funds based on financial behavior

Exits from the econometric model for factor II: KMO =.759, SIG = 000 TVE = 55.94%, RCM = 1 (4), ALPHA = .895, ITEM = 6. KMO (.729 > 0.50, Sig .000), variance (55.94% >.50.), and Alpha (.729 ≤ α ≤ 1.00.). Savings fund data based on financial behavior, are suitable for the model and have very high reliability for factor analysis. The variable with the highest variance is .754 (variable 1).

Factor III – Implications or non-saving due to financial behavior

Exits from the econometric model for factor III: KMO = .775, SIG = 000 TVE = 59.93%, RCM = 1 (3), ALPHA = .895, ITEM = 6. KMO (.863 > 0.50, Sig.000), variance (59.93% > .50.), and Alpha (.863 ≤ α ≤ 1.00.). Data of implications or non-savings due to financial behavior, are suitable for the model and have very high reliability for factor analysis. The variance with the highest variance is .884 or (variable 1).

Table 4 shows that 91% (R = .915, Sig. = 000, F = 41.1764) for Factor I or FBRS, depends on the independent variables (saving and investment are important – RKI, saving as cash – KPG, savings such as deposits or non-withdrawal of money from accounts – KD, savings for consumption – KK, savings for health and home – KSHK, savings for necessities and survival of the family – KNM), while 9% depends on other variables outside this model by random error. Adjusted R^2 in the value of .927 indicates that 93% of the variables are related to the model, while according to the Durbin-Watson test (1.168) the model is significant and the auto correlation is negative, which means that the *SD* of coefficient b or financial behavior in relation to savings is very small.

Table 5 shows the parameter values of the predicted model results and the t values by analyzing them for each variable at the 5% significance level. The constant in the value of .185 shows that if the financial behavior in relation to savings is based on: independent variables (RKI, KPG, KD, KK, KSHSH, KNM) is zero, then this variable is correct 22%. If the financial behavior in relation to savings is done in accordance with the independent variables, the accuracy will be 144% (RKI = 17%, KPG = 5%, KD = 37%, KK = 49%, KSHSH = 19%, KNM = 17%). The Beta coefficient shows that all the independent variables are important in the model, but the variable which is most important is the consumption saving at 49%. Collinearity statistics including tolerance and VIF values (1.300 = .892, .884 = .867, 2.775 = 1.892, 1.432 = 1.521) are important in the model because there is no problem of multiple relationships between independent variables.

$$\hat{y} = \alpha_0 + \beta_1 (\text{RKI}) + \beta_2 (\text{KPG}) + \beta_3 (\text{KD}) + \beta_4 (\text{KK}) + \\ + \beta_5 (\text{KSHSH}) + \beta_6 (\text{KNM})$$

$$= 0.218 + 0.172 x_1 + 0.054 x_2 + 0.371 x_3 + 0.495 x_4 + \\ + 0.191 x_5 + 0.172 x_6 + 0.07\mu$$

$$F = \frac{R^2 / k}{(1 - R^2)/(n - k - 1)} = \frac{.813/2}{(1 - .813)/35} = \\ = \frac{0.4065}{0.187/35} = \frac{0.22}{0.00534286} = 41.1764$$

Table 4. Summary of the model for financial behavior related to saving

Model Summary										
Model	R	R^2	Adjusted R	*SD* of the estimate	Change statistics – Anova					
					R^2	F	Df. 1	Df. 2	Sig.	Durbin-Watson
1	**.915**	**.813**	**.927**	.18221	.813	**41.1764**	**2**	**35**	**.000**	**1.168**

Source: authors' own computations

Table 5. Coefficients for financial behavior in relation to savings

Coefficients								
		Model						
		constant	RKI	KPG	KD	KK	KSHSH	KNM
Unstandardized coefficients	*B*	**.218**	**.172**	**.054**	**.371**	**.495**	**.191**	**.172**
	SD	.275	.114	.074	.075	.122	.275	.114
Standardized coefficients	beta		**.211**	**.082**	**.409**	**.499**		**.211**
t		**.675**	**1.708**	**.1.002**	**5.134**	**3.910**	**.675**	**1.708**
Sig.		**.000**	**.007**	**.003**	**.000**	**.000**	**.000**	**.007**
95.0% Confidence interval for *B*	lower bound	–.373	–.037	–.125	.232	.228	–.373	–.037
	upper bound	.744	.425	.076	.538	.722	.744	.425
Collinearity statistics	tolerance		**1.300**	**.892**	**.963**	**.867**		1.400
	VIF		2.775	**1.892**	**1.432**	**1.521**		**2.173**
Dependent variable: Financial behavior in relation to savings								

Source: Authors' own computations.

Reliability interval is 95% (Sig. 2-tailed), $p = 0.000 < 0.05$, $t = 1.708, .1.002, 5.134, 3.910 > .573$), the value of p is less than the significance level 5%, so H_0 is rejected and accepted ($\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6 \neq 0$.

Table 6 shows that 91% ($R = .912$, Sig. = 000, $F = 51.824$) for Factor II depends on the independent variables (Survival savings – CMC, Unspent money savings – KPPSH, Savings related to the financial situation – KLSF, Emergency Savings Funds – FKU), while 9% depends on other variables outside this model by random error. Adjusted R^2 at a value of .892 indicates that 89% of the variables are related to the model, while according to the Durbin-Watson test (1.136) the model is significant and the auto correlation is negative, which means that the *SD* of the coefficient *b* or Factor II is very small.

Table 7 shows the parameter values of the predicted model results and the *t* values by analyzing them for each variable at the 5% significance level. The constant value of 34% shows that if the savings funds based on independent variables: KMK, KPPSH, KLSF, FKU is zero, then the savings funds based on financial behavior have an accuracy of 34%. If the saved funds are made in accordance with the independent variables, the accuracy will be 74% (KMK = 17%, KPPSH = 57%, KLSF = 9%, FKU = –9%,). Beta coefficient shows that all independent variables are important in the model, the most important variable is KPPSH = 62%. Collinearity statistics including tolerance and VIF values (.590 = .842, .331 = .739, .288 = .453, .283 = .735) are important in the model because there is no problem of multiple relationships between independent variables.

Table 6. Summary of the model for savings funds based on financial behavior

Model Summary										
Model	*R*	R^2	Adjusted *R*	*SD* of the estimate	Change Statistics – Anova					
					R^2	*F*	Df. 1	Df. 2	Sig.	Durbin-Watson
1	**.962**	**.912**	**.892**	.16461	.912	**51.82407**	**6**	**30**	**.000**	**1.136**

Source: Authors' own computations.

Table 7. Coefficient for savings funds based on financial behavior

Coefficients						
		Model				
		constant	KMK	KPPSH	KLSF	FKU
Unstandardized coefficients	*B*	**.341**	**.176**	**.571**	**.087**	**–.916**
	SD	.170	.130	.087	.221	.188
Standardized coefficients	Beta		.130	.617	.736	–.721
t		–.525	.854	5.767	3.403	–5.87
Sig.		**.000**	**.000**	**.000**	**.000**	**.000**
95.0% confidence interval for *B*	lower bound	–.437	–.142	.426	.499	–1.14
	upper bound	.258	.390	.780	1.402	–.344
Collinearity statistics	tolerance		**.590**	**.331**	**.288**	**.283**
	VIF		.842	.739	**.453**	**.735**
Dependent variable: savings funds based on financial behavior						

Source: authors' own computations

$$\hat{y} = \alpha_0 + \beta_1 (\text{KMK}) + \beta_2 (\text{KPPSH}) + \beta_3 (\text{KLSF}) + \\ + \beta_4 (\text{FKU})$$

$$= 0.341 + 0.176 x_1 + 0.571 x_2 + 0.087 x_3 - \\ - 0.916 x_4 + 0.011\mu$$

$$F = \frac{R^2 / k}{(1 - R^2)/(n - k - 1)} = \frac{.912/6}{(1 - .912)/30} = \frac{0.152}{0.088/30} =$$

$$= \frac{0.152}{0.002933} = 51.82407$$

Reliability interval 95% (Sig. 2-tailed), $p = 0.000 < 0.05$, $t = .854, 5.767, 3.403, –5.87 > .223$, the value of p is less than the significance level 5%, H_0 is rejected and accepted $(\beta_1, \beta_2, \beta_3) \neq 0, \beta_4 = 0$, i.e. there are not enough funds for emergencies .

Table 8 shows that 96% ($R = .959$, Sig. = 000, $F = 304.074$) for Factor III depends on the independent variables (Investments in luxury items – INVLL, Lack of awareness about saving and increasing concerns about extraordinary situations – MVKRRSH, excessive giving of money to family or friends – HTFM), while 4% depends on other variables outside this model by random error. Adjusted R^2 in the value of .867 indicates that 87% of the variables are related to the model, while according to the Durbin-Watson test (1.841) the model is significant and the auto correlation is negative, which means that the *SD* of the coefficient *b* or Factor III is very small.

Table 9 shows the parameter values of the predicted model results and the *t* values by analyzing them for each variable at the 5% significance level.

Table 8. Summary of the model of implications or insufficient savings due to financial behavior

Model Summary										
Model	*R*	R^2	Adjusted *R*	*SD*	Change Statistics – Anova					
					R^2	*F*	Df. 1	Df. 2	Sig.	Durbin-Watson
1	**.901**	**.959**	**.867**	.24413	.867	**304.074**	**3**	**39**	**.000**	**1.841**

Source: Authors' own computations.

Table 9. Coefficients for Factor III – implications or non-savings due to financial behavior

Coefficient					
		Model			
		constant	INVLL	MVKRRSH	HTFM
Unstandardized coefficients	*B*	**.211**	**.376**	**.341**	**.542**
	SD	.285	.084	.099	.175
Standardized coefficients	beta		**–.247**	–.187	1.263
t		**–.2672**	**4.012**	**.1646**	**5.361**
Sig.		**.000**	**.000**	**.000**	**.000**
95.0% confidence interval for *B*	lower bound	–.1343	–.424	–.376	1.286
	upper bound	–.182	–.083	.028	1.998
Collinearity statistics	tolerance		**.439**	**.359**	**.467**
	VIF		**.939**	**.850**	**.861**

Dependent variable: implications or non-saving due to financial behavior

Source: Authors' own computation.s

The constant in the value of .211 indicates that if the implications or non-savings based on the independent variables: INVLL, MVKRRSH, HTFM is zero, then Factor III has an accuracy of 21%. If the implications or non-savings due to financial behavior are made in accordance with the independent variables the accuracy will be = 126% (INVLL = 38%, MVKRRSH = 34%, HTFM = 54%). The beta coefficient indicates that all independent variables are important in the model, the most important variable being HTFM. Collinearity statistics including tolerance and VIF values (.439 = .939, .359 = .850, .467 = .861) are important in the model because there is no problem of multiple relationships between independent variables.

$$\hat{y} = \alpha_0 + \beta_1 (\text{INVLL}) + \beta_2 (\text{MVKRRSH}) + \beta_3 (\text{HTFM}) =$$
$$= 0.211 + 0.376 x_1 + 0.341 x_2 + 0.542 x_3 + 0.04\mu$$

$$F = \frac{R^2 / k}{(1 - R^2)/(n - k - 1)} = \frac{.959/3}{(1 - .959)/39} = \frac{0.319667}{0.041/39} =$$
$$= \frac{0.319667}{0.00105128} = 304.074081$$

Reliability interval 95% (Sig. 2-tailed), $p = 0.000 < 0.05$, $t = 4.012, .1646, 5.361 > .6423$, the value of p is less than the significance level 5%, H_0 is rejected and accepted $(\beta_1, \beta_2, \beta_3) \neq 0$

CONCLUSION

Factor analysis of financial behavior of households in relation to savings: a reflection of the financial situation for emergencies. Based on the questionnaire which was distributed and completed by households, 3 factors were created from 13 variables, therefore in the model of factor analysis and reliability analysis all results are acceptable and have very high reliability (i.e. in each factor created by the variables we have results as: KMO >.0500, Barlett test (Sig.) =. 000, Variance >.500, Alpha >.700, Eigen value >50%. In this case it has been shown that saving factors and financial behavior are important (have a positive effect) on families for emergencies. For each factor, the variance fits the factor where it further specifies the econometric model of financial behavior in relation to savings.

Multiple regression analysis: Multiple regression analysis: To make the model more relevant and robust, all factors from the results of factor analysis and reliability were further processed through multiple regression analysis for savings and financial behavior variables. In this case the factors from 1–3 emphasize that they are important in the regression model for households (i.e. R^2 >50%, correlation analysis <.0800, Anova (p) = .000 <0.05, Durbin-Watson test to all factors it is within the mean and there is no autocorrelation, all independent variables affect (are important to) the model or the dependent variable. But care must be taken to improve the emergency sub-factor.

Rationale for proving the H_A hypothesis

H_A: Savings factors and financial behavior are important (have a positive effect) on households for emergencies. Starting from literature review, financial behavior practices in relation to savings, research data methodology according to the method of factor analysis, reliability analysis, multiple regression analysis, and extensive research results in the interpretation of the main results and findings, proves that the alternative hypothesis has a positive effect on households. In some variables, where the tests were positive but with a lower value, households should take into account the recommendations of the research in order to further increase financial behavior in relation to savings, especially for emergencies.

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OSZCZĘDNOŚCI GOSPODARSTW DOMOWYCH I ZACHOWANIA FINANSOWE W ZWIĄZKU Z UMIEJĘTNOŚCIĄ PORADZENIA SOBIE Z TRUDNYMI SYTUACJAMI FINANSOWYMI: STUDIUM PRZYPADKU KOSOWA

STRESZCZENIE

Chcąc odzwierciedlić sytuację finansową gospodarstw domowych, zwłaszcza w sytuacjach kryzysowych, przyjęto główny cel niniejszego badania – analizę zachowań finansowych w odniesieniu do oszczędności. Niniejsze badanie wyjaśnia interakcję zasad minimalnych oszczędności i zaangażowanych form oszczędzania, co oznacza, że wykorzystanie budżetów osobistych zależy od zachowań finansowych wynikających z niepewności i sytuacji finansowej rodzin. Badanie jest zgodne z niektórymi empirycznymi ustaleniami

dotyczącymi zachowań finansowych w odniesieniu do oszczędności, które wpływają na wzrost lub upadek gospodarki, ponieważ im niższy dobrobyt rodzin, tym niższy wzrost gospodarczy lub odwrotnie. Weryfikacja hipotez została zrealizowana poprzez analizę ustaleń terenowych z wykorzystaniem ekonometrycznego modelu oszczędności w odniesieniu do zachowań finansowych poprzez analizę czynnikową, analizę rzetelności oraz analizę regresji wielorakiej. Głównym wnioskiem z tego badania jest brak zachowań finansowych w celu oszczędzania na sytuacje awaryjne. Ustalenia te są ważne, by uświadomić gospodarstwom domowym roli oszczędzania na pokrycie awaryjnych potrzeb.

Słowa kluczowe: oszczędności, zachowania finansowe, analiza regresji wielorakiej, gospodarstwa domowe, ekonomia wzrostu i spadku