European Research Studies Journal
Volume XXIV, Issue 2, 2021

pp. 948-968

Economic Welfare and Subjective Assessments of Financial Situation of European Households

Submitted 21/03/21, 1st revision 11/04/21, 2nd revision 03/05/21, accepted 25/05/21

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Abstract:

Purpose: *This work presents a model of the relationship between subjective assessments of the financial situation of domestic households and financial well-being expressed in actual consumption and saving levels.*
Design/Methodology/Approach: *The research was conducted through a detailed analysis of changes in subjective assessments of the financial situation of households in particular periods. Confirmatory factor analysis was used for formal empirical verification. Modeling was preceded by a k-means grouping of European countries and reduced variables by analyzing the main components.*
Findings: *Subjective assessments of household finances are of varying strength but significantly correlated with consumption and saving in different clusters of European countries. The CFA model presented considers the personal effects of countries and explains the volatility of household financial behaviors.*
Practical implications: *One of the new results is that subjective assessments of household finances are of varying strength but significantly correlated with consumption and saving in different concentrations of European countries. The identification of household financial assessment factors was carried out based on a survey covering all European Union countries and the United Kingdom, i.e., 28 countries.*
Originality/Value: *The CFA model presented considers the personal effects of countries and explains the volatility of household financial behavior. Finally, the article contributes to the literature on personal feelings and financial decisions of households.*

Keywords*: Economic welfare, subjective assessments, households, consumption, saving.*

JEL Code: *C22, C33, D14, E21, G50.*

Paper type: *Research paper.*

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1. Introduction

Standard macroeconomic measures of economic prosperity are GDP per capita, national income, personal income of the population, and inflation rate. They are used as tools to compare prosperity, especially between countries or regions (Kasprzyk and Leszczyńska, 2012; Grzywińska-Rąpca, 2018b). Analyses of the economic well-being of households on a micro-scale take into account, in particular, the income achieved by the managing entities. A subjective assessment of one's economic situation may be vastly different from the actual economic situation of the household concerned and may not coincide with objective test results. It should be emphasized that subjective assessments are probably reflections of households' ability to maintain or improve their financial well-being (Grzywińska-Rąpca, 2019). They can also be a kind of motivator for its improvement. Subjective assessments in economic analyses are highlighted by Hira and Mugenda (1999), Joo and Grable (2004), and Xiao *et al.* (2014). Subjective assessments more than the household's objective financial capacity reflect household personal finance needs (Norvilitis *et al.,* 2003; Gerrans *et al.,* 2014; Grzywińska Rąpca, 2018a; Ali *et al.,* 2019).

This work assumes the following research hypotheses; the first hypothesis is subjective assessments of the material situation, significantly differentiating the households of European countries, the second hypothesis – a statistically significant model can be established based on which differences between the concentrations of European countries can be indicated in the context of the level of consumption and saving. An essential objective of this work is to examine the impact of subjective assessments on the development of consumption and savings, indirectly measuring economic well-being. In addition, the article aims to analyze and assess changes in financial well-being in EU countries in the context of subjective assessments of households and propose models of the relationship between subjective assessments and the level of consumption and household savings. The following research methods were used to achieve the goal, literature studies, statistical ordering, cluster analysis, and CFA. Eurostat is the primary source of data used in the survey.

The contribution of this work is to complement existing literature about the results presented by various authors examining the importance of subjective assessments of the financial situation of households in shaping individual beliefs. The analysis highlights the diversity of subjective assessments of the financial situation in different European Union countries. It should be stressed that at the time of the COVID-19 pandemic (the analyses carried out relate to 2020 data), many households may have felt uncertainty about their current and future financial condition, as reflected in subjective assessments. Households are in a unique, crisis-like economic environment (this is undoubtedly the economic environment during the pandemic) and are more pessimistic about their future finances. This work is linked to growing literature on household financial expectations. Econometric panel models were used in the analysis. The analyses presented in this study indicate that subjective assessments of the overall economic situation in European countries have a significant positive impact on consumption and household savings.

2. Economic Welfare and its Determinants

The concept of prosperity in economics is comprehensive, and it can generally be said that prosperity is the result of satisfaction with financial resources and satisfaction with individuals' lives. In the broader perspective, it is an indicator of the wealth of states. As a multidimensional concept, it covers both economic and non-economic dimensions. Such a classification seems justified. Economic prosperity, also referred to by some researchers as a barometer of the economic situation, is mainly analyzed based on quantitative measures in macroeconomic and microeconomic terms (Aitken, 2019). In macroeconomic terms, GDP is the simplest and most commonly used in comparative surveys between economic units. Although it is popular, it is unfortunately not perfect. Aksman (2010), for example, points to shortcomings in the use of GDP in analyses on the diversity of economic prosperity. According to Aksman, GDP or GDP per capita, the level of total consumption, the rate of economic growth, productivity, technological progress, the level of education of society, the state of social security determines social well-being, not economic well-being. Although GDP is a good measure of the economy's production, it is not a measure of prosperity (Aitken, 2019).

There are also aspects of prosperity not related to income, consumption, and household wealth. Economic prosperity in the economic sciences means the utility of income as a basis for social well-being, which means that the needs of the predominantly living population are to be catered for (Reinsdorf, 2020; Wronowska, 2015). More broadly, prosperity, taking into account non-economic aspects, can be defined as a state of satisfaction of the material and intangible needs of the individual and society, and at the same time as a trigger for a sense of self-realization, enabling the achievement of happiness and satisfaction (Markiewicz, 2014). As a result, international comparisons also use indicators such as the Human Development Index (HDI), the EAW (Index of the Economic Aspects Welfare), and the Index of Sustainable Economic Welfare (ISEW). Many economists in the previous century equated economic prosperity with economic growth, which was reflected, for example, in economic growth models such as the Harod model – Domara, Rostov, or Sotov (Wronowska, 2015; Garbicz, 2012).

From the point of view of the household management unit (microeconomic approach), the economic well-being of the individual is primarily equated with the level of consumption and, more specifically, the level of household consumption expenditure (Bartels and Urminsky, 2015; Witt, 2017; Aitken, 2019). Already Sen (1977) suggested focusing on individuals who made up a given society and stressed the need to include in welfare studies the heterogeneity of individuals due to m.in. Characteristics such as demographic characteristics (e.g., gender and age) or relativism (comparability with other members of society through household income levels).

According to the economic definition of prosperity, higher levels of income are associated with higher levels of well-being, thanks to an increase in household

consumption. Given this definition, it is worth asking how vital are subjective assessments of the financial situation for consumption levels and savings? The assessment of prosperity, conditions, and quality of life consists of objective (monetary) factors and how a person perceives his or her material and intangible financial situation (Joo and Grable, 2004). The determination of whether an individual's economic well-being (socio-economic status) and subjective assessments are interrelated has been studied not only by economists but also by researchers in other fields such as psychology. Psychologists primarily tried to identify the existing relationship between income and subjective satisfaction and tried to determine the nature of this relationship and the importance of economic prosperity on subjective assessments. The relationship between income levels and household financial satisfaction is also positive (Aboagye and Jung, 2018; Fan and Babiarz, 2019; Hastings, 2019). The critical ability to explain economic variables makes it possible to conclude that economic variables are part of subjective assessments of financial well-being (Diener *et al.,* 1992).

On the other hand, researchers observed a weak relationship between demographic variables (gender, age, and marital status) and subjective feelings about economic well-being (Andrews and Whitey, 1976; Campbell *et al.,* 1976). Fuentes and Rojas obtained similar results (2001). They concluded that income does not substantially impact well-being (Fuentes and Rojas, 2001). Van Praag and Ferrer-i-Carbonell (2007) also found, based on studies, the relationship between household incomes and the level of financial satisfaction. This empowers us to conclude that subjective feelings about households' financial well-being are becoming essential in managing their finances. Therefore, the level of thee current income of the population is an economic indicator of consumption formation which determines, together with other determinants, the satisfaction of consumer needs. Therefore, the income achieved by consumers is an economic pillar of the functioning of each family, thereby establishing the standard of living, the level of consumption, and the ability to meet the needs of joint and individual household members (La legal, 2012). The level of income directly impacts individual assessments of household finances, directly impacts behaviors, regardless of the relationship to the objective situation. The objective measurement of households' financial well-being is their consumption and savings, and households with similar subjective assessments of their financial situation can make different decisions in this regard (Vlaev and Elliott, 2018).

3. Empirical Evidence

A subjective assessment of one's economic situation may be vastly different from the actual economic situation of the household concerned and may not coincide with objective test results. The diversity of the material situation of the households surveyed is expressed in their self-assessment. The Eurostat survey provides answers in the form of a balance for the opportunities available to respondents (Likert scale) to the questions presented in Table 1.

Table 1. *Questions setting out subjective assessments of households' financial situation*

Questions
Financial situation over last 12 months
Financial situation over next 12 months
General economic situation over last 12 months
General economic situation over next 12 months
Price trends over last 12 months
Price trends over next 12 months
Unemployment expectations over next 12 months
Major purchases at present
Major purchases over next 12 months
Savings at present
Savings over next 12 months
Statement on financial situation of household

Source: *Ec.europa.eu.*

The survey of subjective assessments of households on the financial situation and current economic phenomena consists of a survey conducted by the method of economic test. The balance expressed as an indicator is due to the percentages of positive and negative responses. For each response category, the appropriate weights are assigned. For the very positive response variant, we take weight 1, for the positive variant the weight 0.5, the negative variant the weight -0.5, and the negative variant the weight -1.0. For the other variants of the response, a weight of 0 has been established according to the methodological assumptions. In order to achieve comparability between European countries and maintain the representativeness of the data, the individual responses shall be weighted according to the respondent's age and education. Indicators according to the procedure obtained shall take values from -100 to 100. Negative values of the indicator indicate that there is a predominance of negative subjective assessments of a given phenomenon, and positive values indicate a predominance of positive opinions. Subjective assessments in the countries studied refer to current assessments of the phenomena analyzed compared to the situation 12 months ago but are also predictive for the next 12 months. Only financial assessments over the last 12 months will be taken into account in this analysis.

In order to identify similar groups in terms of subjective assessments of the financial situation, European households were grouped first. This was done in two stages. In the first stage, ward grouping was carried out. One of the most common hierarchical clustering methods is the Ward method, described in (Ward, 1963), also known as the Minimum Variance Method (Hervada-Sala and Jarauta-Bragulat, 2004). Hierarchical clustering methods place elements in clusters based on similarities (Kaufmann and Rousseeuw, 2008). The Ward algorithm tries to find the optimal number of clustering steps and creates more or less such groups in several elements (Almeida *et al.*, 2007). Hands *et al.* (1987) pointed out that the ward's method, compared to other methods, generally performs better than other hierarchical methods. Blashfield *et al.* (1976) also pointed out that the Ward method performs much better clustering than other

clustering procedures (Eszergár-Kiss and Caesar, 2017). At a later stage, European countries based on selected diagnostic characteristics were divided into focus. For this purpose, cluster analysis was carried out, and the k-medium method, which belongs to non-hierarchical grouping methods, was used. At the beginning of the procedure, this method requires an arbitrary decision on the number of clusters into which the initial set of objects (Walesiak and Gatnar, 2009) will be divided, as determined by Ward's analysis. The basic idea of this method is to allocate taxonomic units to k groups, which minimizes variability within the resulting clusters and, at the same time, maximizes the variability between them. Objects (country) between concentrations should be moved in such a way as to achieve the highest level of variance analysis (ANOVA) significance. The high variability between the focus and the relatively low concentrations indicates an appropriate grouping of countries due to the variables analyzed.

Analyses of the relationship between subjective assessments of households and the level of consumption and savings were carried out in designated concentrations of European countries. Confirmatory Factor Analysis (CFA) has been used. The following assumptions were made:

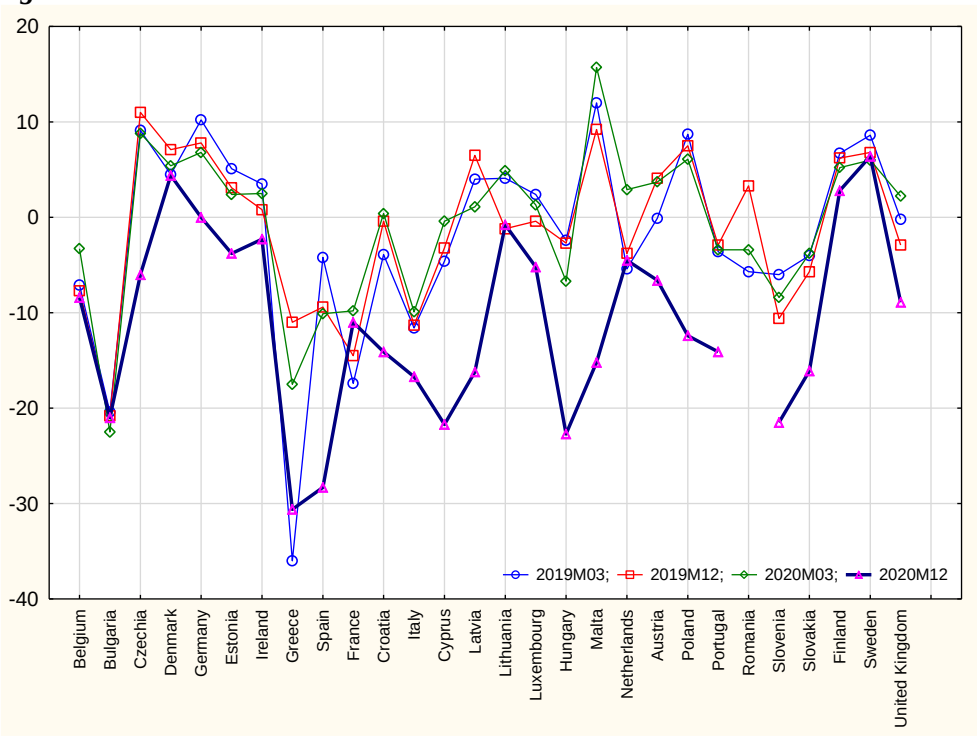
- there may be correlations between assessments,
- the main components obtained in the exploratory factor analysis are implicit variables in the confirmation analysis;
- for each component, a model was constructed according to specific constructs specified in the exploratory factor analysis;
- the resulting model does not provide a clear solution to the problem and is permissible for other construction,
- model parameters were estimated by the most reliable method (Brown, 2015; Cole, 1987; Sarmento and Costa, 2019; Olejnik, 2016; *Frątczak et al.,* 2009).

A subjective assessment of one's economic situation may be vastly different from the actual economic situation of the household concerned and may not coincide with objective test results. Often, satisfaction with material living conditions is not proportional to changes in current finances in households.

SAFS changes over the selected four periods are shown in Figure 1. The results presented are based on four terms. The author wanted to show changes in time before the covid-19 pandemic (March and December 2019) and after the outbreak (March and December 2020). From the data presented (Figure 1), it can be concluded that there is a downward trend in the assessments of the financial situation of households expressed in the balance of their subjective assessments in most European countries. The deterioration of subjective assessments in December 2020 occurred in Croatia, Italy, Cyprus, Lithuania, and Latvia. A sharp deterioration in these assessments is observed for Hungary, Malta, Greece, Slovenia, and Slovakia. It is worth pointing out that, despite the outbreak in the early 2020s, there was no such significant deterioration in the subjective assessments of the financial situation of households in

March 2020. The changes throughout 2020 may have been determined by concerns about the likelihood of job losses and the decrease and the loss of all or part of the income. It should be emphasized that, for the first time in many decades, the people of European countries have faced a crisis.

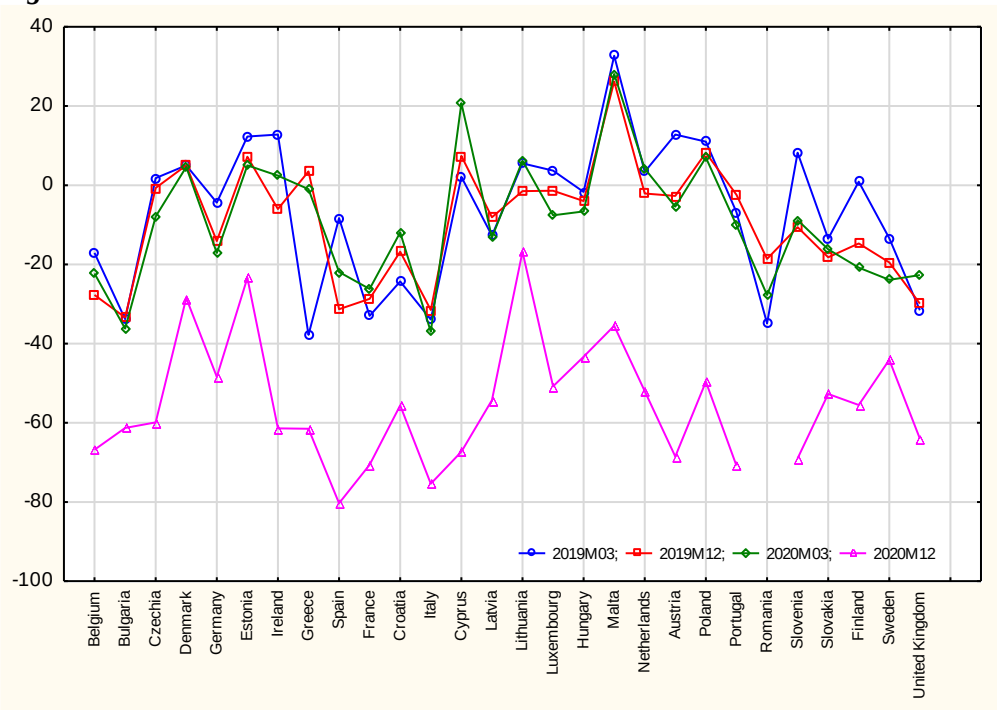
Figure 1. *Financial situation over the last 12 months*



Source: *Own study (Statistica 13.3).*

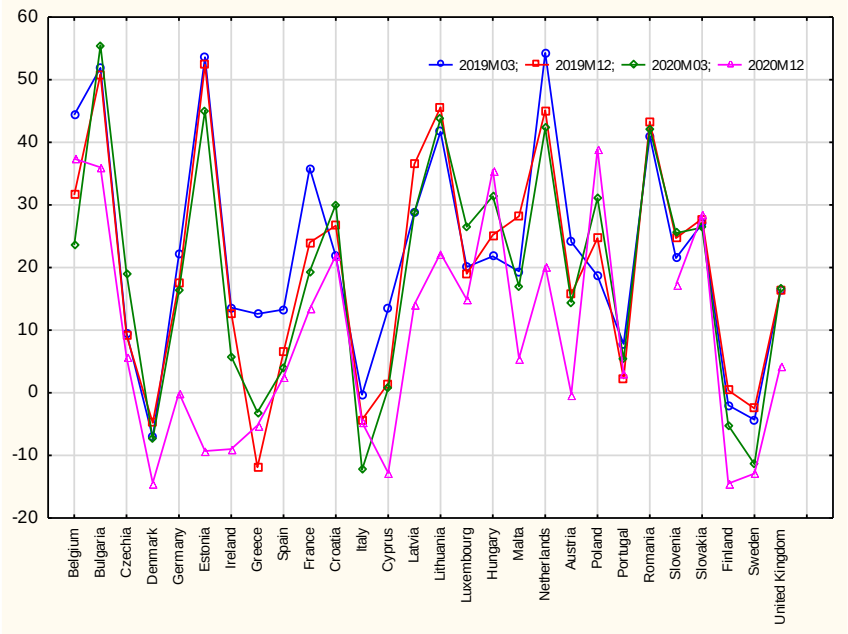
Another indicator, linked to subjective assessments of households' financial situation, is an assessment of the economic situation. The economic situation of households may be due to changes in, for example, GDP per capita, unemployment rate, budget deficit, or the number of jobs lost. Subjective assessments of the economic situation in all European countries in December 2020 predominate negative opinions. This indicator has deteriorated (Figure 2). The lowest ratings can be seen in Spain and Italy. This is probably because these countries have been most affected by the economic impact of COVID19. The high number of coronavirus cases and deep lockdown were reflected in subjective assessments of the economic situation of households. Another potential variable that could affect households' financial well-being is assessing current price trends over the next 12 months. Price developments reflecting inflation often present a risk of reducing the purchasing value of durable goods, cars, or real estate, especially in the future. The values of the indicator, determined according to the equation [3], are shown in Figure 3.

Figure 2. *General economic situation over the last 12 months*



Source: *Own study (Statistica 13.3).*

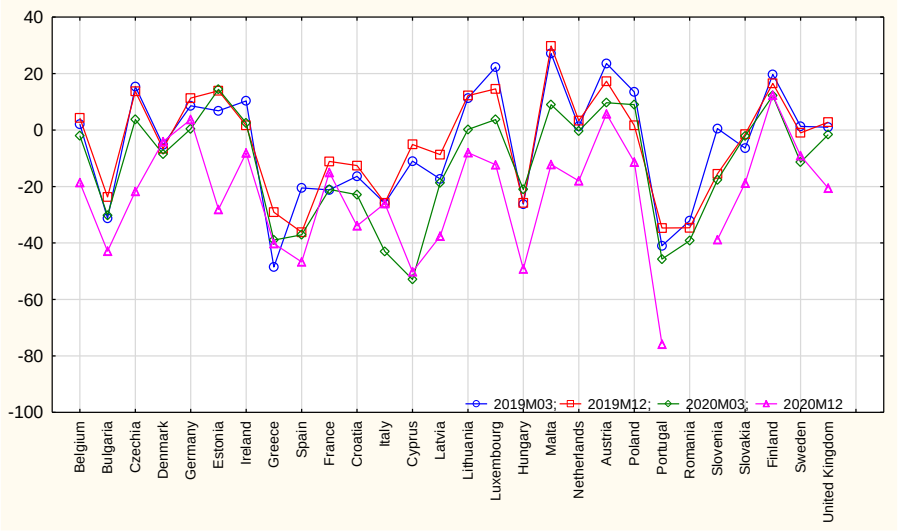
Figure 3. *Price trends over the last 12 months*



Source: *Own study (Statistica 13.3).*

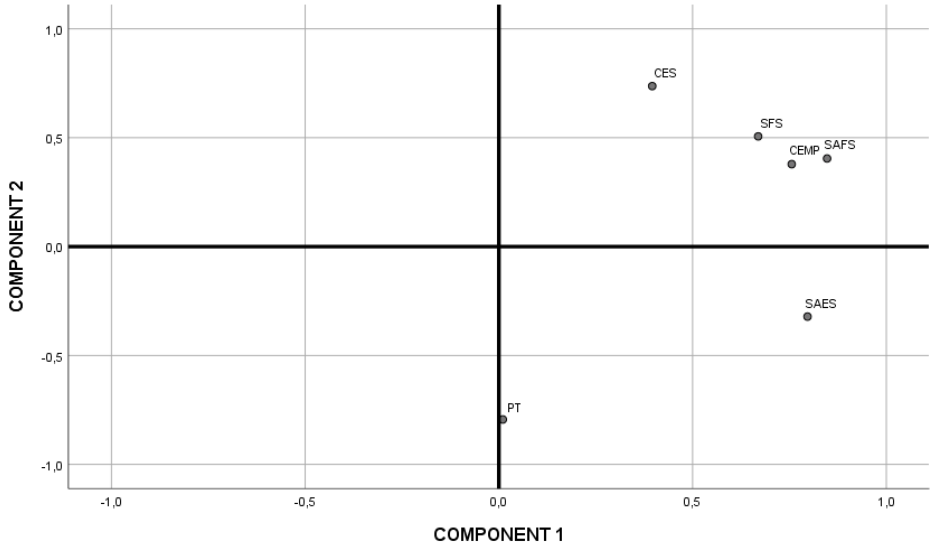
In the case of subjective assessments of price trends, as in the case of the current economic situation is adequate to make major purchases, no significant changes in the indicators were observed (Figure 4 and Figure 5).

Figure 4. *The current economic situation is adequate to make major purchases*



Source: *Own study (Statistica 13.3).*

Figure 5. *Graph of components in a rotated solution*



Source: *Own study (IBM SPSS 26).*

The analysis on the designation of concentrations of countries showing similarities in the subjective assessments of finance by households included variables: Financial situation over the last 12 months, General economic situation over the last 12 months, Price, trends over the last 12 months. The current economic situation is adequate to

make significant purchases, the current economic situation is adequate for savings and Statement on the financial situation of the household. Descriptive statistics for the indicators used for analysis are given in Table 2.

Table 2. *Subjective household assessments - descriptive statistics*

Specification	Average	Standard deviation
Financial situation over the last 12 months	-10.907	9.7735
General economic situation over the last 12 months	-55.085	15.6248
Price trends over the last 12 months	8.837	17.0112
The current economic situation is adequate to make major purchases	-23.167	19.9664
The current economic situation is adequate for savings	1.281	31.3131
Statement on financial situation of household	21.541	13.2856

Source: *Own study (Statistica 13.3).*

The statistics provided show that the diversity of European countries in terms of subjective household assessments is highest for the variable. The current economic situation is adequate for savings. The standard deviation is 31.313 for this variable and the coefficient of variation, which is a relative measure of differentiation, is 24.4%.

Based on a set of indicators of subjective assessments of European households, groups of factors were identified using the principal components method before estimating parameters and modeling. Analysis of the main components allows reducing the variables accepted for analysis to new (components) without losing information loads (Panek and Zwierzchowski, 2013). Before you reduce dimensions, verify that all correlation coefficients between input variables are not zero (Barlett, 1954). For assessing the adequacy of the correlation matrix, the Kaiser-Mayer-Olkina coefficient (KMO) and the Bartlett sphericality test (Table 3) were used.

Table 3. *Kaiser-Mayer-Olkin and Bartlett tests*

Specification		
KMO measure of the adequacy of the sample selection.		.744
Bartlett Sphericality Test	Approximate chi-squared	67.138
	Df	15
	Significance	.000

Source: *Own study (IBM SPSS 26).*

In the case of the KMO analysis, it is 0.744, which, combined with the bartlett sphericality test, suggests that further action will allow for a meaningful effect. For the variables analyzed, bartlett's sphericality test was 67,138 (approximate $\chi 2$) with 15 degrees of freedom and $p = 0.000$. The values of both measures authorize an analysis of the separation of common factors. The total explained variance is shown in Table 4.

Table 4. *Total explained variance*

Component	Initial own values			Total squares of loads after separation			Total squares of loads after rotation		
	Total	% variance	% cumulative	Total	% variance	% cumulative	Total	% variance	% cumulative
1	3.236	53.939	53.939	3.236	53.939	53.939	2.528	42.130	42.130
2	1.131	18.846	72.785	1.131	18.846	72.785	1.839	30.654	72.785
3	.704	11.739	84.524						
4	.477	7.957	92.481						
5	.304	5.059	97.540						
6	.148	2.460	100.000						
Method of separation of factors – the main components.									

Source: *Own study (IBM SPSS 26).*

From the data presented in Table 4, it appears that the first three components provide relevant information. The cumulative percentage of the sum of squared loads after extraction is 72.785%. This means that the acceptance of three components for analysis is appropriate. Table 5 shows the relevant factoring loads that are part of the factor. It is arbitrarily assumed that the components of the factor are those variables which, when rounded, obtain absolute values equal to 0,5 or greater. Finally, a coherent group of ingredients were obtained, forming two main (synthetic) types of factors (Table 5).

Table 5. *Component matrix*

Sneering	Component	
	The ability of consumer	Consumer readiness
Financial situation over the last 12 months	.925	
Statement on financial situation of household	.839	
The current economic situation is adequate to make major purchases	.835	
The current economic situation is adequate for savings	.750	
General economic situation over the last 12 months		.724
Price trends over the last 12 months		.652
Method of extracting factors - the main components.		
a. 2 – number of isolated components.		

Source: *Own study (IBM SPSS 26).*

The factor referred to later in the study as The ability of consumer (Table 5) is described by the following subjective household assessments: Financial situation over the last 12 months, General economic situation over the last 12 months, The current economic situation is adequate to make major purchases and Statement on financial situation of household.

Based on the designated factor charges, *the ability of consumer* may be recorded with the equation (1):

$$AC = 0.925_{SAFS} + 0.839_{SFS} + 0.835_{CEMP} + 0.750_{CES} \quad (1)$$

Where:
AC - The ability of consumer
SAFS - Financial situation over the last 12 months
SFS - Statement on financial situation of household
CEMP - The current economic situation is adequate to make major purchases
CES - The current economic situation is adequate for savings.

Based on the data given in Table 5, the components referred *to Consumer readiness* can be represented by the equation (2):

$$CR = 0.724_{GES} - 0.797_{PT} \quad (2)$$

Where:
CR - Consumer readiness
GES - General economic situation over the last 12 months
PT - Price trends over the last 12 months.

Assuming that the sum of the components determines the consumption and saving of households, it is assumed that:

$$AC + CR = C + S \quad (3)$$

Where:
AC - The ability of consumer
CR - Consumer readiness
DF – household financial well-being
C – household consumption
S – household savings rate.

It can therefore be assumed that the financial well-being of households is the result of capacity (AC) and consumer preparedness (CR). So:

$$DF = AC + CR \quad (4)$$

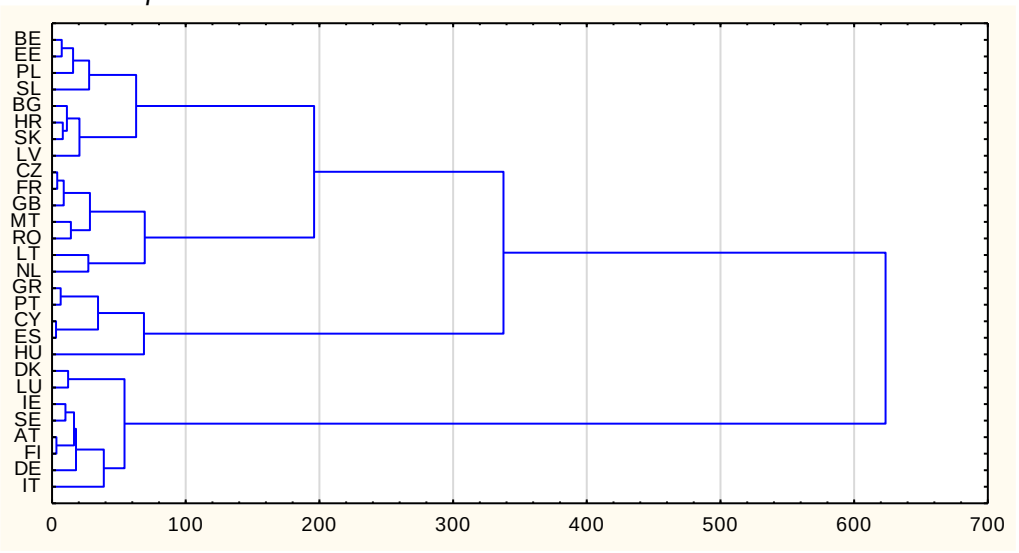
Where:
DF – household financial well-being
AC - The ability of consumer
CR - Consumer readiness.

Further analysis related to the determination of the relationship between subjective assessments of the financial situation of European households and their level of

consumption and savings will be carried out in groups of countries separated by the k- means method.

This is because the preliminary statistical analysis of variables indicates a varying level of variables in European countries. In order to better describe this phenomenon, it seems appropriate to distinguish spatial regions, bringing together countries with similar levels of subjective assessments of the financial situation of households. Ward's method was used in the first stage of focus determination. This is one of the hierarchical methods of grouping objects, in which the researcher cannot indicate the number of clusters. The breakdown of European countries according to subjective assessments of households on focus is shown in Figure 6.

Figure 6. *Breakdown of European countries according to subjective assessments of households' focus*



Source: *Own study.*

Based on the Ward graph (Figure 6), it was decided to divide European countries into four concentrations in further analysis. The assessments of the F-test in Table 6 indicate that the variables accepted for the analysis well discriminate against the focus at a materiality level of 0,05.

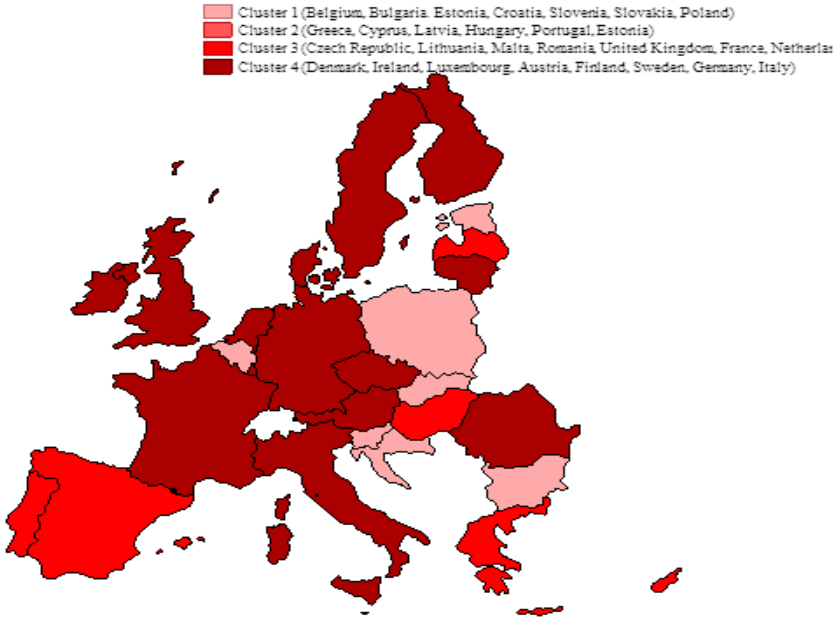
Table 6. *Analysis of the variance of readiness and consumption capacity*

Variable	Consumer readiness	The ability of consumer
Intergroup variance	63784.8	1889.37
Df	3	3
Intragroup variance	4206.96	4667.04
Df	24	24
F	121.294	3.2387
Q	0	0.03984

Source: *Own study (IBM SPSS 26).*

The procedure resulted in an arbitrarily accepted number of four concentrations. Grouped into four clusters, European countries contain objects with similarities in terms of the characteristics analyzed. The focus elements are shown in Figure 7.

Figure 7. *Graphical presentation of clusters*



Source: *Own study (Statistica 13.3).*

The resulting classification results and descriptive statistics for clusters are presented in Table 7 and Figure 8.

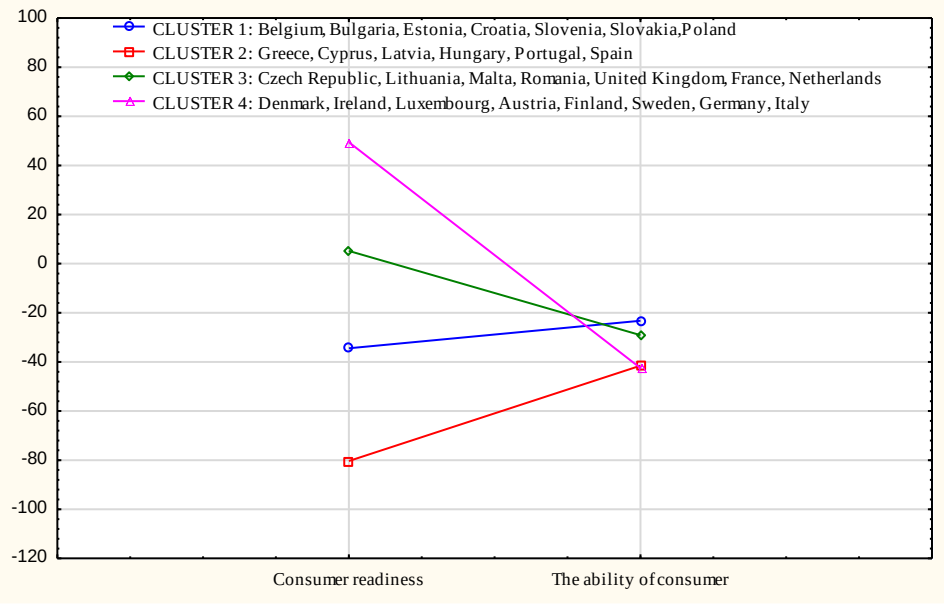
Table 7. *Descriptive statistics for clusters*

Elements of focus	Variable	Descriptive statistics of focus		
		Average	Deviation Standard	Variance
Descriptive statistics of focus 1				
Belgium, Bulgaria. Estonia, Croatia, Slovenia, Slovakia, Poland	Consumer readiness	-34.44	12.46	155.25
	The ability of consumer	-23.24	8.42	70.97
Descriptive statistics of focus 2				
Greece, Cyprus, Latvia, Hungary, Portugal, Estonia	Consumer readiness	-80.35	14.50	210.32
	The ability of consumer	-41.50	19.03	362.45
Descriptive statistics of focus 3				
Czech Republic, Lithuania, Malta, Romania, United Kingdom, France, Netherlands	Consumer readiness	5.17	12.63	159.54
	The ability of consumer	-29.10	16.23	263.45
Descriptive statistics of focus 4				

Denmark, Ireland, Luxembourg, Austria, Finland, Sweden, Germany, Italy	Consumer readiness	49.47	13.45	180.93
	The ability of consumer	-42.47	11.01	121.16

Source: *Own study (Statistica 13.3).*

Figure 8. *Average values of readiness and consumption capacity for clusters*



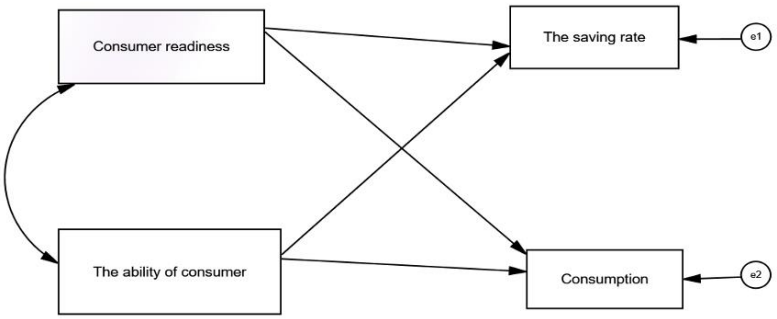
Source: *Own study (Statistica 13.3).*

The second concentration is mainly concentrated in western and southern European areas, namely Greece, Cyprus, Latvia, Hungary, Portugal, and Spain. These countries have the lowest subjective assessments of variables represented by the component consumer readiness. The differentiation of this characteristic is relatively high (SD = 14,50), but more variation in the component defined for this work as consumers' ability can be observed. The first focus is on seven countries: Belgium, Bulgaria, Estonia, Croatia, Slovenia, Slovakia, and Poland. The standard deviation values obtained and the coefficient of variation for both components (The ability of a consumer, consumer readiness) indicate significant regional variation among these countries. On the other hand, the fourth focus is the group of countries with the highest average values of subjective consumer readiness assessments (Table 8). European countries such as Denmark, Ireland, Luxembourg, Austria, Finland, Sweden, Germany, Italy are focused.

One of the research objectives formulated earlier was to build a model of links between the ability of a consumer, consumer readiness (expressed in subjective household assessments), and the level of consumption and household savings in European countries. One of the so-called Structural Equation Models (SEM) group methods was used for this purpose.

While the key factors determining consumption and savings are the inability to meet their needs using only current income, it is essential to define the relationship between assessments and consumption and savings. A PCA analysis was used to determine possible relationships between preparedness and consumers' ability and consumption and savings and possible links between components. The confirmation factor analysis path diagram of the proposed model is shown in Figure 9.

Figure 9. *Confirmation Factor analysis path diagram*



Source: *Own study (IBM SPSS AMOS 26).*

Table 8. *Characteristics of selected model matching indexes*

Index Name	Achieved values	Interpret model fit	Results from the analysis
CMIN/DF	The level of statistical significance of the test shall be interpreted; should not be higher than 5.		Cluster 1 -0.262 Cluster 2 – 1,079 Cluster 3 – 2,362 Cluster 4 – 2,607
Nfi	0 -1	Over 0.90 – acceptable match	Cluster 1 -0.982 Cluster 2 – 0.785 Cluster 3 – 0.823 Cluster 4 – 0.827
CFI	0 – 1	CFI values close to 1 indicate a very good fit. Above 0.95 – adequate fit. The threshold value at which the model is accepted is 0.9.	Cluster 1 -1,000 Cluster 2 – 0.000 Cluster 3 – 0.814 Cluster 4 – 0.824
Tli	0 – 1 (sometimes over 1)	Over 0.90 – acceptable match	Cluster 1 -1,498 Cluster 2 – 1,489 Cluster 3 – 0.116 Cluster 4 – 0.059
Ifi	0 – 1 (sometimes over 1)	Over 0.95 – adequate fit	Cluster 1 -0.053 Cluster 2 – 0.980 Cluster 3 – 0.890 Cluster 4 – 0.886

RMSEA	0 – no maximum value	Under 0.05 – good fit; 0.05 – 0.08 – satisfactory; 0.08 – 0.10 mediocre; above 0.10 - unacceptable	Cluster 1 -0.000 Cluster 2 – 0.126 Cluster 3 – 0.476 Cluster 4 – 0.479

Source: *Zając-Lamparska et al., (2018)- columns 1-3; self-study – column 4.*

Because there is no single index that would allow a flawless evaluation of the model estimate, model matching was verified (Figure 9) based on several indexes (Table 8).

Based on the model match index values (Table 9), you can conclude that the model reflects a good but not perfect match. For first focus despite low RMSEA, CMIN/DF = 0.262, NFI=0.982, CFI=1.00, TLI= 1.498. In the model, the RMSEA = 0.126 index is obtained for the second focus. What the assumptions are (Table 9) is a mediocre match. The values of the remaining model indexes for the second focus indicate a good or acceptable match (CMIN/DF = 1.079, NFI=0.785, TLI= 1.489, IFI=0.980). Indices for the third and fourth focus do not indicate a good match. The parameter specification also included the configuration of the relationships between variables (Table 9).

Table 9. *Links between variables and their statistical parameters*

Specification			Estimate	S.E.	C.r.	Q
Cluster 1						
Consumption	<---	Consumer readiness	3890.957	2729.948	1.425	0.154
The saving rate	<---	Consumer readiness	0.095	0.024	3.976	***
Consumption	<---	The ability of consumer	7023.789	4037.558	1.74	0.082
The saving rate	<---	The ability of consumer	-0.14	0.035	-3.97	***
Means:						
Consumer readiness			-34.442	4.71	-7.313	***
The ability of consumer			-23.247	3.184	-7.301	***
Cluster 2						
Consumption	<---	Consumer readiness	-1392.752	8349.414	-0.167	0.868
The saving rate	<---	Consumer readiness	0.075	0.13	0.581	0.561
Consumption	<---	The ability of consumer	-6315.994	6360.31	-0.993	0.321
The saving rate	<---	The ability of consumer	0.166	0.099	1.684	**
Means:						
Consumer readiness			-80.353	5.921	-13.572	***
The ability of consumer			-41.509	7.772	-5.341	***
Cluster 3						
Consumption	<---	Consumer readiness	34323.709	16337.228	2.101	**
The saving rate	<---	Consumer readiness	0.059	0.165	0.36	0.719
Consumption	<---	The ability of consumer	-41594.305	12713.49	-3.272	0.001
The saving rate	<---	The ability of consumer	-0.15	0.128	-1.168	0.243
Means:						
Consumer readiness			5.175	4.774	1.084	0.278
The ability of consumer			-29.11	6.135	-4.745	***
Cluster 4						

Consumption	<---	Consumer readiness	-53278.053	16827.114	-3.166	**
The saving rate	<---	Consumer readiness	-0.065	0.163	-0.397	0.691
Consumption	<---	The ability of consumer	44000.403	20562.338	2.14	0.032
The saving rate	<---	The ability of consumer	0.114	0.199	0.57	0.568
Means:						
Consumer readiness			49.475	4.756	10.403	***
The ability of consumer			-42.475	3.892	-10.914	***

Note: ***p = 0.05; *** p=0.001*
Source*: Own study (IBM SPSS AMOS 26).*

In the case of focus, statistically, significant links first occurred between Consumer readiness and the saving rate and between the consumer's ability and the saving rate. In Focus 2, a weaker relationship (p=0.05) was observed in the relationship between consumer and the saving rate. The third and fourth concentrations have important links (p=0.05) between Consumer readiness and Consumption. In the third and fourth concentrations, no statistically significant links were observed between consumer and Consumer readiness and the saving rate of households.

4. Final Remarks

Based on the available literature, we can conclude that household financial well-being is a complex, multidimensional phenomenon. Based only on objective monetary factors, we are not able to identify the key factors determining household behavior in their finances. Representatives of behavioral economics emphasize the role of subjective assessments and feelings. The results presented in this study indicate a statistically significant link between subjective assessments of household finances and actual consumption and savings. The balance of subjective assessments of household finances during a pandemic has deteriorated, reflecting their assessments.

Based on the dependency model presented, subjective assessments of financial well-being vary according to the place of origin of the household. An essential element of the study is the determination based on variables of two components: Consumers' ability and consumer readiness. Depending on the elements of focus, statistical dependency variation was observed. In the countries eligible for first focus (Belgium, Bulgaria, Estonia, Croatia, Slovenia, Slovakia, and Poland), a statistically significant link was observed between consumer and saving. In the third concentration (Czech Republic, Lithuania, Malta, Romania, United Kingdom, France, and Netherlands) and fourth (Denmark, Ireland, Luxembourg, Austria, Finland, Sweden, Germany, and Italy), a more substantial relationship was observed between consumers preparedness and consumption. In these concentrations, there is a higher average of consumers' ability than in the other two concentrations. In the first and second concentrations, however, we see a higher average consumer readiness. It can therefore be concluded that households have different perceptions of financial well-being in different countries. Analysis of match indices (RMSEA, CMIN/DF, NFI, CFI, TLI) indicates the acceptability of the proposed dependency model.

However, it should be emphasized that this is a proposed and certainly not ideal model of the relationship between subjective assessments of household finances and objective measures. The presented material is, therefore, one of the stages of research. Further studies may include other categories of subjective assessments and different research methods and techniques than presented.

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