

Analysing the financial landscape of European households: Insights from panel data

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Abstract. This article makes a significant contribution to the existing body of research concerning the subjective evaluations of household financial conditions and the objective analysis of economic circumstances and savings potential within households. The study elucidates the intricate relationships between subjective assessments of household financial situations, broader economic conditions, price trends, and savings potential. Drawing upon data pertaining to households' self-assessments of their current and future financial outlook, this paper undertakes a comprehensive examination of disparities across several European nations. The initial cross-sectional survey study encompassed all member countries of the European Union and Great Britain. The study spanned a timeframe of 32 months, from January 2018 to August 2020, divided into two distinct sub-periods: one preceding the onset of the pandemic and the other during its occurrence. Employing panel models, this research identifies factors significantly influencing subjective evaluations of household financial well-being. The estimations of model parameters during the pandemic period revealed noteworthy trends: assessments of household finances exhibited considerably greater consistency than those observed in the pre-pandemic era. Across both sub-periods, the findings consistently underscored a significant and positive correlation between the evaluation of the overall economic situation within the country and the potential for savings and the subjective assessment of household financial conditions. However, the findings from the pandemic period failed to corroborate a substantial link between assessments of past and future price trends and their impact on household financial evaluations. Furthermore, the regression coefficients within the models describing future financial evaluations demonstrated a pronounced increase when considering the dependent variable as

Received:
October, 2022
1st Revision:
July, 2023
Accepted:
September, 2023

DOI:
10.14254/2071-
8330.2023/16-3/2

the financial assessment of the preceding year. Given that household opinions hold paramount importance as target variables for economic policies, the investigation into the ramifications of subjective evaluations of household financial situations remains particularly pertinent. These evaluations can exert both direct influence, such as on household welfare, and indirect effects by guiding the formulation of pertinent financial instruments by institutions within the financial sector.

Keywords: household finances, subjective assessments, panel models, European countries

JEL Classification: C22, C33, D14, E21, G50

1. INTRODUCTION

The household sector plays a pivotal role in the economy as it contributes significantly to the overall economic landscape. Notably, the influence of households extends to the financial sector, encompassing activities such as borrowing and investing their savings (Santoso & Sukada, 2009; Kozak et al., 2022). Evaluating the financial well-being of households holds substantial importance, as it directly relates to their financial stability – a fundamental objective for every household. Despite being occasionally overlooked in economic development studies, the financial security of households profoundly impacts not only their individual well-being but also the economic stability of the nation. This stability forms the foundation for the growth of economic entities and the sustainable progress of any given country. Some researchers note that changes in subjective assessments of well-being are primarily related to changes in household income. The relationship between income and subjective assessments of household finances is more evident because improvement in the material well-being of the average person is accompanied by rising income. If households are satisfied with their finances, they are more optimistic about the future. The financial situation of households, and more specifically, their satisfaction with financial resources, can also be the subject of macroeconomic research since social phenomena and processes depend on the circumstances of households (Kata et al., 2021).

The financial situation of households is a complex phenomenon consisting of many elements, such as income, amount and structure of expenses, and thus the amount of savings and other components that are the result of household activity accumulated over time, such as the value of assets or debt (Mazurek-Krasnodomska, 2011). Each of these components is influenced by a blend of internal and external determinants. While the initial factors, such as income levels, saving habits, and risk preferences, are part of this framework, the article places its focus on elements that delineate the household's surroundings – namely, the social and market conditions in which it operates. Within the context of their subjective evaluations encompassing the overall economic climate, price trends, and their current financial situation vis-à-vis propensity to save, households consider a spectrum of factors, including: tax policies, shifts in national income, alterations in pricing and inflation rates, fluctuations in interest rates, evolutions within the financial and stock markets, and broader economic indicators, including exchange rate variations. Irrespective of which aspect of the household they impact, the factors mentioned above remain external to any specific household. The validated models in this paper consider the external nature of these factors, establishing the desired causal links between the studied variables. This research primarily aims to identify the determinants of household financial assessments based on their subjective evaluations of present and future situations. The study examines whether subjective assessments of the general economic state and

households' savings potential positively impact their financial evaluations while also investigating if assessments of price trends influence a reduction in these financial evaluations.

Leveraging panel modelling, this study accommodates both cross-sectional differences across countries and temporal variations within time series. Furthermore, an additional objective is to contribute to the existing literature by conducting a comparative analysis of these relationships during the early phase of the COVID-19 pandemic, juxtaposed with the periods prior to and during the pandemic.

2. LITERATURE REVIEW

When analysing household contentment regarding their financial situation, it is imperative to consider all objective income sources, encompassing both current and owned household earnings. Certain objective analysts also factor in financial income derived from prior investments. However, the nature of these investments varies from one country to another, contingent not only on the financial entity's capabilities but also on the spectrum of available investment instruments.

Studies on savings levels (Chang, 1994; Hefferan, 1982; Rha, Montalto, & Hanna, 2006; Minibas-Poussard, Bingol, & Roland-Levy, 2018; Joseph, 2019) have primarily aimed to objectively determine factors influencing financial holding decisions. Research conducted by Baek, Zhou, and Hong (2000) underscores that the most influential objective predictors of household financial situations are the levels of savings and debt. These authors dissected household finance attributes like the age, education of the household head, and family structure (Chang, 1994; Riitsalu & Murakas, 2019).

Monetary debt levels also significantly impact households' subjective perceptions, as evidenced by various studies (Godwin, 1998; Mahapatra, Raveendran & De, 2019; Loibl, 2019; Keese, 2012; Dunn & Mirzaie, 2016; Cinnamon & Fazzari, 2008).

Broadly speaking, an assessment of financial status comprises both objective and subjective indicators. While objective indicators encompass quantifiable metrics, subjective indicators stem from survey inquiries regarding respondents' perceived financial well-being. Nonetheless, a comprehensive understanding of a household's financial state cannot solely rely on objective indicators. The subjective viewpoints of households also play a pertinent role in shaping financial decision-making processes (Baek, DeVaney, 2004).

Household decisions related to consumption behaviour are determined not only by objective financial conditions but also by subjective assessments of economic conditions (Podolec et al., 2008; Woloszyn et al., 2019; Grzywińska-Rapca, 2019). Available literature in this area (e.g. Róbert, 2019) suggests that a subjective assessment of the financial situation is determined by socio-economic factors. The work of economists focuses on analyses of the material situation of households, taking into account various dependencies. Elevated subjective assessments often correlate with factors like income, savings, debt management, the pursuit of social advancement, and wealth accumulation, which in turn influence health, mental well-being, and overall satisfaction. The literature on this subject is replete with numerous studies concerning the subjective perception of personal financial situations (Van Praag, 1978; Sweet et al., 2013; Podolec et al., 2008; Xiao et al., 2006; Sass et al., 2015; Headey & Wooden, 2004).

The assessment of household contentment with their financial circumstances serves as a subjective financial analysis, encompassing various aspects in the relevant literature, guided by the defined research objectives. Parrotta (1996) delved into exploring the interplay between subjective evaluations of households' financial situations and demographic attributes in the context of budget management. Hayhoe & Wilhelm (1998) examined how gender influences perceptions of economic prosperity within households. Hira and Mugenda (1998) identified variations in the factors predictive of satisfaction among groups and retirees, illuminating their beliefs and behaviours. Titus, Fanslow & Hira (1989) highlighted that households exhibited higher satisfaction with their finances when the responsibility for budget management was

entrusted to a senior family member. These households typically enjoyed greater income and possessed expertise and experience in financial management.

To sum up, investigations into subjective financial conditions underscore the significance of socio-economic variables and financial attitudes in shaping overall well-being. Evaluations and analyses of subjective assessments pertaining to various household financial decisions often deviate from the objective state of the phenomenon. This discrepancy implies that subjective and objective indicators provide distinct insights into future financial developments. Within the realm of this subject's literature, other authors have delved into the study of subjective assessments of situations and concentrated on household contentment (Joo & Grable, 2004; Joo, Grable & Bagwell, 2005; Zhao, 2016; Çera, Khan, Belas & Ribeiro, 2020). Previous research has also examined subjective evaluations of farm finances within specific regions, such as Baek and DeVaney (2004) and Tay, Batz, Parrigon & Kuykendall (2017).

Based on the literature, it can be inferred that assessments reflecting contentment (or discontent) with financial situations, when combined with objective factors, provide a reasonable measure of households' financial well-being. It is important to highlight that subjective assessments not only gauge a household's ability to sustain its progress but can also act as a motivator for improvement (Hira & Mugenda, 1999; Joo & Grable, 2004; Totenhagen et al., 2019; Mahdzan et al., 2019). The essence of this assessment lies in augmenting the existing literature by synthesising diverse author perspectives, culminating in the formulation of decisions grounded in household financial assessments that shape individual beliefs. An examination of sub-selective appraisals of financial states across European Union nations over two distinct periods—pre-COVID-19 and post-COVID-19—reveals that during the pandemic, numerous households experienced periodic fluctuations in their present and anticipated financial conditions. The pandemic period underscored that those who underwent unprecedented crises, especially within the economic context of a pandemic, displayed a heightened sense of pessimism about their financial future. This aligns with findings in the literature suggesting that individuals who weather exceptional crises tend to be less optimistic about their future financial prospects.

The current study contributes to the growing body of research focusing on household financial dynamics, utilising econometric panel models. Several authors have delved into household financial behaviour using similar panel models. For instance, some have explored the influence of psychological factors and unwanted events on farm savings behaviour (Plagnol & Macchia, 2018; Kapounek, Korab & Deltuvaite, 2016), while others have investigated how cognitive abilities impact household financial challenges (Paris, Peijnenburg, 2019).

The analyses presented within the current study underscore the link between subjective assessments of overall economic circumstances in European nations and the financial evaluations of households. Notably, this connection is accentuated when considering varying timeframes, emphasising the significant influence of the economic context on financial appraisals.

3. MEASUREMENT AND DESCRIPTION OF THE HOUSEHOLD ASSESSMENT

The data underpinning the panel modelling originated from resources provided by Eurostat, encompassing an extensive survey conducted across all European Union (EU) countries. The monthly surveys involved a nominal sample size of approximately 32,000 consumers. The selection process involved a random assortment of private households, encompassing residents aged 15 and above. Group housing entities like dormitories, military facilities, retirement homes, and prisons were intentionally excluded from the sampling frame.

To gather data, the research methodology employed face-to-face interviews facilitated through the utilization of laptops (Computer-Assisted Personal Interviewing, or CAPI). The data collection process

spanned seven days, specifically spanning the initial 16 days of each month. The collected data was weighted to align with the overall population structure.

The purpose of the consumer survey was twofold: firstly, to collect information on household spending and saving intentions, and secondly, to assess their perception of the factors influencing these decisions. For this purpose, the questions were grouped around four topics: household financial situation, general economic situation, savings, and intentions to make larger purchases. Additionally, the survey included a question about perceived economic uncertainty. The consumer survey comprised monthly inquiries regarding financial situations, perceived economic uncertainty, general economic conditions, price trends, unemployment, significant purchases, and savings. Respondents in the consumer survey were categorised according to five criteria: income, occupation, level of education, age, and gender.

The survey study was designed in compliance with business climate survey methods. Each survey question had a distinct balance, calculated as the difference between positive and negative responses, with weights assigned to individual response options. The option “very positive” carried a weight of 1, “positive” – a weight of 0.5, “negative” – a weight of (-0.5), while “very negative” – carried a weight of (-1.0). All other options held a weight of 0. Depending on the age and education of the respondent, the weight of responses was further adjusted to ensure the findings were representative on a national scale. As part of the procedure, the resulting indicators encompass values that span the range of -100 to 100. These indicators, known as balances, are derived by calculating the difference between the percentages of positive and negative response options, expressed as a percentage of the total responses. In the case of a question featuring three alternatives—positive (P) (up, more, more than enough, good, too much, increase, improve, etc.), neutral (N) (no change, same, sufficient, satisfactory, adequate, etc.), and negative (M) (smaller, insufficient, too small, decline, etc.)—if P, N, and M (where $P + N + M = 100$) represent the proportion of respondents opting for positive, neutral, and negative responses respectively, the balance is computed as $B = P - M$. A negative balance indicates predominantly negative feedback on the phenomenon, while a positive balance suggests prevailing favourable opinions.

Significantly, public sentiment surveys aim not just to gauge the sign and level of balance at a given moment but also to interpret shifts in balance over examined periods. This approach takes into account the psychological and sociological nuances of society, such as tendencies toward excessive optimism or pessimism. This aspect was taken into consideration during the method selection stage of the study, enabling the research to capture not only cross-sectional variations but also a dynamic exploration of prevailing sentiments. Survey questions asked in the examined countries examine (1) current opinions on the studied phenomena in contrast to the situation 12 months ago and (2) prognoses for the future 12 months.

In accordance with the purpose of the study, the response (dependent) variable under analysis is the households’ self-assessment of their financial situation (*FS*). Regardless of the selected period (the situation 12 months ago or the future 12 months), the indicator is calculated as:

$$FS = 1 * p_1 + 0.5 * p_2 + 0 * p_3 - 0.5 * p_4 - 1 * p_5 \quad (1)$$

where p_i ($i = 1, 2, \dots, 5$) denote fractions of the following response options that the situation: 1. Got (get) a lot better; 2. Got (get) a little better; 3. Stayed (stay) the same; 4. Got (get) a little worse, and 5. Got (get) a lot worse.

The assessment of household finances may be the product of fluctuations in the level of multiple macro- and micro-economic factors, which are reflected in the assessments of these factors expressed in the survey. One of the most important variables is the country’s economic situation, whose subjective assessment may result from the levels of GDP per capita, unemployment rate, budget deficit or the number of new companies, which are favourable for the country's economy. It can therefore be expected that the good economic situation of a given country will have a stimulating effect on the financial situation of

households. The indicator of the assessment of the general economic situation (GES) at present and in the future has been formulated as:

$$GES = 1 * p_1 + 0.5 * p_2 + 0 * p_3 - 0,5 * p_4 - 1 * p_5 \quad (2)$$

where p_i ($i = 1, 2, \dots, 5$) denote fractions of the following response options that the situation: 1. Got (get) a lot better; 2. Got (get) a little better; 3. Stayed (stay) the same; 4. Got (get) a little worse, and 5. Got (get) a lot worse.

Potentially, household finances may also be affected by another variable, i.e., the assessment of past price trends and their prognoses for the next 12 months. Inflation-related price shifts often carry the risk of reducing the purchase value of fixed assets, cars, or real estate, particularly in the future. Therefore, this variable may adversely affect the financial situation of households. The price trends (*PT*) assessment is calculated as:

$$PT = 1 * p_1 + 0.5 * p_2 + 0 * p_3 - 0,5 * p_4 - 1 * p_5 \quad (3)$$

where p_i ($i = 1, 2, \dots, 5$) denote fractions of the following response options: 1. There was (will be) a more rapid increase in prices; 2. Prices increased (will increase) at the same rate; 3. Prices increased (will increase) at a slower rate; 4. Prices stayed (will stay) about the same 5. Prices fell (will fall) slightly.

The last indicators proposed in the study are the assessments regarding the adequacy of the current and future period for savings. The first indicator refers to the current economic conditions and the inclination to savings (*CES_adeq_S*), expressed in the following formula:

$$CES_adeq_S = 1 * p_1 + 0.5 * p_2 - 0,5 * p_3 - 1 * p_4 \quad (4)$$

where p_i ($i = 1, 2, 3, 4$) denote fractions of the following response options that this is: 1. A very good time to save; 2. Quite a good time to save; 3. Rather an unfavourable time to save; 4. A very unfavourable time to save.

The other indicator reflects the assessed probability of making savings in the next 12 months (*S_o_the next*), expressed in the following formula:

$$S_o_the_next = 1 * p_1 + 0.5 * p_2 - 0,5 * p_3 - 1 * p_4 \quad (5)$$

where p_i ($i = 1, 2, 3, 4$) denote fractions of the following response options how likely the household is able to save: 1. Very likely; 2. Fairly likely; 3. Fairly unlikely; 4. Very unlikely.

The increase in the value of both above indicators, which means an increase in the possibility of saving, should positively affect the assessment of the financial situation of households.

4. METHODOLOGY

The financial assessment rooted in households' subjective viewpoints on variables pertaining to economic conditions has been explored through the application of panel data models. The amalgamation of cross-sectional data and time series data allows for the identification of additional effects tied to dynamics and object-specific traits, which contrasts with insights gleaned from classical regression conducted solely on either cross-sectional or time series observations (Baltagi, 2001). Econometric modelling facilitates the depiction of relationships for objects spanning both macro and microeconomic scales.

The behaviour of a specific object is shaped by both individual, distinct factors that exclusively impact that particular object, as well as factors that exert a uniform influence on all objects in the same manner and to the same extent. The presence of these so-called common factors validates amalgamating observations from various objects into a single series and conducting analyses grounded in pooled data. This amalgamation of time series and cross-sectional observations is feasible, provided we possess data

encompassing the entire study population. Mixed samples furnish statistical insights about each study unit across a defined time span. Consequently, these models enable a dynamic exploration of economic phenomena.

Panel data forms a distinct subset of data, effectively combining time and cross-sectional dimensions. It sets itself apart from conventional time-series and cross-section data by having a relatively large number of observed objects in relation to the number of time-based observations. The models estimated based on panel data, particularly within designated subgroups, closely adhere to the definition of panel models as presented in this article.

The use of panel data in the specification and estimation of econometric models provides benefits in four main aspects. First, it increases the number of degrees of freedom and reduces the problem of data collinearity. Thus, it provides more information on the studied phenomena, and this makes it easier to determine the existing relationships between them and their assessment. Combining cross-sectional and time series observations allows for the identification and measurement of effects that cannot be observed only in cross-sectional data or only in time series. Secondly, the estimation of panel models makes it possible to eliminate or reduce the bias of the estimators. Generating data by similar processes, described by the same model, allows one to merge this data for all objects. The estimation is then more effective than estimating each unit separately. A larger number of observations allows for the estimation of a larger number of structural parameters of the model and also contributes to increasing the accuracy of the obtained estimates. An increase in the number of degrees of freedom of the model facilitates its statistical verification (Muszyńska, 2016).

It may be supposed that subjective assessments of households are driven by similar economic processes. The combination of data for all objects (countries) in a single model increases the efficiency of the estimation as compared to the estimation for each object separately (Dańska-Borsiak, 2011).

Panel models may be estimated with the use of Ordinary Least Squares (OLS), which has the following linear model:

$$y_{it} = \alpha + X_{it}\beta + v_{it} \quad (6)$$

where $i = 1, 2, \dots, N$; $t = 1, 2, \dots, T$ – respectively the number of objects and periods, y_{it} – the response (dependent) variable, X_{it} – matrix of observed values on explanatory variables X_k for i -th object with dimensions $(T \times K)$, K – number of explanatory variables $k=1, 2, \dots, K$, α – intercept, β – $(K \times 1)$ – dimensional vector of structural parameters of the model, $v_{it} = \mu_i + \varepsilon_{it}$ – error term of the model, which is composed of the idiosyncratic error ε_{it} and individual effect μ_i .

Estimation with the use of OLS means that there are no individual effects, and the model is a set of cross-sectional data. In line with equation (6), the following model for the assessment of household finances was proposed:

$$FS_{it} = \alpha + \beta_1 GES_{it} + \beta_2 PT_{it} + \beta_3 S_{it} + v_{it} \quad (7)$$

where individual variables refer to the assessment of *FS* - Financial situation, *GES* - General economic situation, *PT* - Price trends, *S*- Situation for savings. The model defined by equation (7) is a general expression for appraisals regarding the past and the future 12 months.

Individual effects may be regarded as random or non-random values. Consequently, one may distinguish between fixed-effect (FE) models and random-effect (RE) models. FE models apply to studies on a selected group of objects. Meanwhile, RE models rely on randomly selected objects and provide findings relating to the entire population (Baltagi, 2001).

A fixed-effect model takes the following expression:

$$FS_{it} = \alpha + \beta_1 GES_{it} + \beta_2 PT_{it} + \beta_3 S_{it} + \mu_i + \varepsilon_{it} \quad (8)$$

For the estimation of the model given by formula (8), i.e. assuming that μ_i are non-random, treated as N -independent parameters subject to estimation, the following assumptions should be made for the i -th object:

1. The expected value of the error term is zero, i.e. $E(\varepsilon_{it}) = 0$,
2. The vector values ε_{it} and the matrix X_{it} are independent, i.e. $E(\varepsilon_{it}, x_{itk}) = 0$,
3. The error term variance σ_ε^2 is finite and constant in time, and the covariances are zero, and we assume that $\varepsilon_{it} \sim N(0, \sigma_\varepsilon^2)$.

In the FE model, these effects are eliminated by the calculation of means for objects relative to time. Due to the use of dummy variables necessary to grasp the differences in the absolute term of individual objects (arising from the diversity of the objects), the Least Squares Dummy Variables (LSDV) estimator was applied.

A random effect estimator treats individual effects μ_i as random variables, which become a part of the error term. The aggregate random error $v_{it} = \mu_i + \varepsilon_{it}$ characteristically correlates at the same object, and no correlation is assumed for different objects. It is assumed that individual effects are independent of the idiosyncratic error ε_{it} or explanatory values X_{it} . Due to the connection of individual effects with the idiosyncratic error, which implies an autocorrelation of the error term, the OLS method is replaced with the generalised least squares (GLS) method. Accordingly, the RE estimator is formulated as:

$$\beta_{RE} = (X' \Omega^{-1} X)^{-1} X' \Omega^{-1} y \quad (9)$$

where X – matrix of independent variables, y – observation vector at the dependent variable, Ω^{-1} – a block diagonal matrix of the variance and covariance of the aggregate random error.

The determination of the appropriate estimation method, including the choice between fixed or random individual effects, hinged on the outcomes of the Breusch-Pagan test and the Hausman test. The former, based on the Lagrange multiplier, facilitates the assessment of whether a model incorporating individual effects offers a superior fit compared to a model without them. Rejecting the null hypothesis in this test leans toward opting for a model employing a Random Effect (RE) estimator (Halunga et al., 2017).

Meanwhile, the Hausman test is deployed to examine the null hypothesis assumption regarding the correlation between group effects and the independent variables of the model. Rejecting the null hypothesis in this test suggests a bias in the RE estimator and advocates for the applicability of the Fixed Effect (FE) estimator.

The selection of an appropriate estimator may be conditioned by both the size of the time-section sample and the specificity of the examined objects. With a relatively long time series in relation to the number of objects, it is advisable to use the FE model. Otherwise, it is recommended to take into account the differences between the objects by differentiating part of the random component and thus selecting the RE estimator (Dańska-Borsiak, 2011). Moreover, if objects of the same type are studied, and it is important to estimate individual effects that are fixed, the FE estimator is more appropriate, and the random effects panel data modelling method will result in an inconsistent estimator. If the considered objects are randomly selected from a certain population, the estimation of specific individual effects for these objects is less important, and the RE model makes it possible. The fixed effects panel data modelling method will still result in a consistent estimator, although an inefficient one. It follows that the modelling of panel data using the FE estimator is more robust than modelling using the RM estimator. The choice between both estimators has always been a key methodological problem (Baltagi, 2013; Hu et al., 2014).

5. DATA

Factor analysis for the self-assessment of household finances was based on a survey study regarding the current and future situation of the households. The study encompassed all countries of the European Union (a total of 28 countries, including Great Britain). The period of the study was 32 months, from January 2018 to August 2020. The time sample is not excessively long, in line with the assumption that panel models are used for cross-sectional analyses with a focus on the diversity of objects (Greene, 2000). A sufficiently large and diversified sample of objects provides congruent parameter estimators, which may not be true for relatively small cross-sectional samples. (Dougherty, 2016). Note that an excessively long sample would undermine the currentness of the data (Sucheckı, 2000). In addition, to complete one of the research aims, the sample was divided into two subsamples: the first subsample concerned the period preceding the pandemic (January 2018 – December 2019), whereas the other was the period of the pandemic (January 2020 – August 2020).

Initially, the descriptive statistics pertaining to the analysed variables over the span of the past and forthcoming 12 months were presented. The outcomes are showcased in Tables 1 and 2. Regarding the assessments of the financial situation over the last year, it is noteworthy that the mean and median values for the second subset were significantly lower than those for the other time frames. This divergence suggests that during the pandemic, the count of unfavourable opinions surged in comparison to favourable ones. Nonetheless, the distribution's left-skewed nature indicates that a majority of opinions remained above the average.

Comparable trends are evident in the general evaluation of economic conditions and price trends. Similarly, the observed results for average assessments of the economic situation's suitability for savings align with expectations. The average values for this variable during the pandemic surpassed those from other periods, suggesting that the prevailing circumstances prompted a heightened inclination towards savings, as opposed to indicating an opportune time for such. Statistics for the examined variables for the future 12 months further reveal value differences in subsequent subperiods. The average assessment of the future financial situation during the pandemic was negative in comparison with the positive appraisal for the time preceding the pandemic. Moreover, there was a drop in the economic sentiment and a slight drop in the assessment of price trends for the future 12 months. The results for the *S_o_the next* variable indicate an even greater inclination for savings than in the case of the *CES_adeq_S* variable, which is related to the concerns inspired by COVID-19.

Table 1
Summary statistics of the assessment of the current financial situation of households

Variable	Mean	Median	Min	Max	S.D.	Skewness
Sample I 2018 — VIII 2020						
FS_o_the last	-2.64	-1.60	-54.10	22.20	10.17	-1.39
GES_o_the last	-10.01	-7.50	-76.30	41.50	22.28	-0.34
PT_o_the last	20.21	20.50	-28.00	70.40	17.98	0.13
CES_adeq_S	-3.90	-6.10	-64.50	76.20	29.92	0.54
Subsample I 2018 — XII 2019						
FS_o_the last	-1.90	-0.90	-54.60	22.20	10.52	-1.63
GES_o_the last	-4.20	-2.20	-57.20	41.50	18.76	-0.12
PT_o_the last	20.48	21.55	-28.00	70.40	17.68	0.23
CES_adeq_S	-4.15	-6.00	-64.50	76.20	30.03	0.51
Subsample I 2020 — VIII 2020						
FS_o_the last	-4.86	-3.90	-31.20	13.80	8.70	-0.58
GES_o_the last	-27.42	-27.45	-76.30	28.80	22.98	0.10

PT_o_the last	16.39	18.10	-22.30	55.20	18.36	-0.07
CES_adeq_S	-3.14	-6.75	-52.10	71.50	29.62	0.63

Notes: FS_o_the last- Financial situation over the last 12 months; GES_o_the last- General economic situation over the last 12 months; PT_o_the last- Price trends over the last 12 months; CES_adeq_S- The current economic situation is adequate for savings.

Source: Authors' calculation.

Table 2

Summary statistics of the assessment of the future financial situation of households

Variable	Mean	Median	Min	Max	S.D.	Skewness
Sample I 2018 — VIII 2020						
FS_o_the next	1.33	3.40	-50.70	23.30	10.17	-1.67
GES_o_the next	-9.88	-8.30	-63.50	34.20	17.73	-0.39
PT_o_the next	25.06	26.70	-21.800	67.50	14.48	-0.48
S_o_the next	-3.71	-10.70	-77.40	58.20	30.04	0.08
Subsample I 2018 — XII 2019						
FS_o_the next	2.94	4.25	-50.70	23.30	9.68	-2.26
GES_o_the next	-4.61	-4.60	-52.60	34.20	14.52	-0.19
PT_o_the next	25.00	26.70	-21.80	67.50	13.65	-0.50
S_o_the next	-4.07	-11.25	-77.40	58.20	30.34	0.07
Subsample I 2020 — VIII 2020						
FS_o_the next	-3.48	-1.65	-32.80	14.80	10.09	-0.64
GES_o_the next	-25.69	-25.20	-63.50	19.18	17.09	0.06
PT_o_the next	25.22	26.65	-16.60	62.90	16.76	-0.44
S_o_the next	-2.60	-8.50	-67.50	50.70	29.14	0.15

Notes: FS_o_the next- Financial situation over the next 12 months; GES_o_the next- General economic situation over the next 12 months; PT_o_the next- Price trends over the next 12 months; S_o_the next- Savings over the next 12 months.

Source: Authors' calculation.

The presentation of data is supplemented with a correlation analysis (Tables 3–4) between all the examined variables. Estimates of correlation coefficients indicate a statistically significant positive correlation between the current and future assessment of the financial situation and an assessment of the current and future economic situation in the country and the adequacy of that time for savings. The values presented in the tables indicate a negative correlation between the appraisal of price trends and an assessment of the financial situation. Observed spikes in price trends find a reflection in the declining financial situation of households. Analogous relations in the opinions regarding the coming 12 months indicate a positive and insignificant correlation between the examined variables.

Table 3

Correlation coefficients between variables of the current situation of households in the whole sample
I 2018 — VIII 2020

	FS_o_the last	GES_o_the last	PT_o_the last	CES_adeq_S
FS_o_the last	1	(0.599)	(-0.152)	(0.440)
GES_o_the last		1	(-0.023)	(0.196)
PT_o_the last			1	(-0.456)
CES_adeq_S				1

Notes: Critical value of the correlation coefficient at a 5% significance level is (0.0655).

Source: Authors' calculation.

Table 4

Correlation coefficients between variables of the future situation of households in the whole sample
I 2018 — VIII 2020

	FS_o_the next	GES_o_the next	PT_o_the next	S_o_the next
FS_o_the next	1	(0.673)	(0.065)	(0.595)
GES_o_the next		1	(-0.150)	(0.198)
PT_o_the next			1	(0.209)
S_o_the next				1

Notes: Critical value of the correlation coefficient at a 5% significance level is (0.0655).

Source: Authors' calculation.

Furthermore, the analysis of correlation coefficients indicates a strong, significant, and negative correlation between the assessment of price trends and the adequacy of savings. The observation of rapid price spikes over the last 12 months negatively affects the assessment of this period as adequate for savings. A positive and statistically significant correlation between these variables as a prognosis for the next 12 months is explicable as the pandemic inclined households to save money, despite an expectation for price spikes.

6. EMPIRICAL RESULTS

Panel models explaining the financial situation of households in relation to the general appraisal of the national economy, price trends and the adequacy of the economic situation for savings were estimated using the assessment of the economic situation for the past 12 months and the future 12 months. The estimation concerned the entire examined period and involved the robustness of the findings to the changed period. For this purpose, the period of the sample was divided into two subperiods. The former encompassed the time preceding the pandemic (I 2018-XII 2019), whereas the latter encompassed the COVID-19 period. All models were calculated with the use of the following estimators: Ordinary Least Squares (OLS), Fixed Effects (FE), and Random Effects (RE).

Table 5 shows estimation results concerning the assessment of household finances for the last 12 months. The results of the Wald test point to the rejection of the hypothesis on the uniform character of the examined objects and suggest the use of a panel data model estimator – in practice, the FE estimator. Furthermore, high values of the Lagrange and Breusch-Pagan multipliers indicate a large variance of the

individual effects (a component of the error term), which is an argument for rejecting the pooled OLS model in favour of the random effect model. However, a Hausman test confirmed the fixed nature of the individual effect and thus the use of the fixed-effect model, which involves a decomposition of absolute terms. The Hausman test result signifies that the variability of the assessment of household finances stems from the origin (place or residence) of household members. The model, which reflects the individual effects of different countries, explains the variation of the response variable (LSDV R-Sq=0.902) to a significant extent. The within R-Sq coefficient (within R-Sq=0.539) elucidates the variance in the evaluation of the financial situation, accounting for the absence of individual effects across diverse countries. This outcome underscores distinct household financial perspectives across the surveyed nations, highlighting the relatively minor impact of time in comparison to individual effects. The parameter estimates reveal a significant and positive impact of evaluating the general economic situation within a country over the past 12 months on the household financial assessment. In evaluating their own financial standing, household members factor in economic variables that characterise the country on micro-, meso-, and macro-economic scales. Similarly, a significant and positive connection is evident between the household financial assessment and the appraisal of economic conditions being suitable for savings. This correlation may mirror the overall household income level and prevailing interest rates. Furthermore, a significant correlation emerges between the assessment of household finances and the evaluation of price fluctuations over the preceding 12 months. An escalation in this value, indicative of prices rising in tandem with inflation rates, detrimentally affects the household financial assessment.

Table 5

Association of the assessments of current macroeconomic variables with the current financial situation of households over the whole sample period (I 2018-VIII 2020)

Independent variables	Dependent variable FS_o_the last		
	Panel OLS estimates	Fixed effects estimates	Random effects estimates
Constant	0.0582 (0.14) [0.887]	2.6646 (8.20) [0.000]	2.5607 (1.91) [0.055]
GES_o_the last	0.2434 (21.35) [0.000]	0.1893 (28.44) [0.000]	0.1899 (28.52) [0.000]
PT_o_the last	0.0093 (0.60) [0.551]	-0.1440 (-9.52) [0.000]	-0.1396 (-9.33) [0.000]
CES_adeq_S	0.1167 (12.23) [0.000]	0.1288 (6.97) [0.000]	0.1240 (7.17) [0.000]
Diagnosics			
F-Stat./LSDV F-Stat.	261.84 [0.000]	265.59 [0.000]	-
R-Sq. / LSDV R-Sq.	0.468	0.902	-
Adj. R-Sq. / Within R-Sq.	0.466	0.539	-
Wald test	-	141.91 [0.000]	-
Breusch-Pagan test	-	-	8075,96 [0.000]
Hausman test	-	-	8.25 [0.041]

Notes: FS_o_the last- Financial situation over the last 12 months; GES_o_the last- General economic situation over the last 12 months; PT_o_the last- Price trends over the last 12 months; CES_adeq_S- The current economic situation is adequate for savings. After the coefficients of explanatory variables, the parenthesis depicts t-statistics, and a square bracket shows the probability value.

Source: Authors' calculation.

The results presented in Table 6 show the proposed relations from the perspective of a 12-month prognostic horizon. As in the previous model, diagnostic tests for the description and estimation have revealed the utility of the fixed-effects model. All estimates in this model are statistically significant. The relationship between the dependent variable and the regressors has a direction equivalent to that observed in the model for the assessment of household finances in the past. However, the general assessment of the economic situation and the adequacy of savings in the next 12 months has a stronger effect on the financial situation of households for the future period than for the previous period, as signified by the relatively higher estimates calculated with the use of the analysed variables. In terms of individual effects of countries, this model explains 90.5% of the variability in the financial assessment of households. The lower value of the within R-Sq coefficient indicates that more than 74% of the variance in the future financial assessment for individual countries has been explained with the variables employed in the model. This points to the smaller impact of the time factor in comparison to the individual character of the country, even though the difference between both types of coefficients is far smaller in the model presenting the predicted relationships for the future 12 months than for the past 12 months.

Table 6

Association of the assessments of future macroeconomic variables with the future financial situation of households in the whole sample period (I 2018-VIII 2020)

Independent variables	Dependent variable FS_o_the next		
	Panel OLS estimates	Fixed effects estimates	Random effects estimates
Constant	4.2890 (10.75) [0.000]	7.8366 (18.93) [0.000]	7.7131 (7.42) [0.000]
GES_o_the next	0.3385 (29.87) [0.000]	0.3276 (43.93) [0.000]	0.3286 (43.95) [0.000]
PT_o_the next	0.0391 (2.81) [0.005]	-0.0881 (-5.29) [0.000]	-0.0886 (-5.48) [0.000]
S_o_the next	0.1581 (23.38) [0.000]	0.2841 (11.99) [0.000]	0.2450 (12.82) [0.000]
Diagnostics			
F-Stat./LSDV F-Stat.	629.13 [0.000]	277.0 [0.000]	-
R-Sq. / LSDV R-Sq.	0.680	0.905	-
Adj. R-Sq. / Within R-Sq.	0.678	0.743	-
Wald test	-	77.04 [0.000]	-
Breusch-Pagan test	-	-	6028.02 [0.000]
Hausman test	-	-	13.27 [0.004]

Notes: FS_o_the next- Financial situation over the next 12 months; GES_o_the next- General economic situation over the next 12 months; PT_o_the next- Price trends over the next 12 months; S_o_the next- Savings over the next 12 months. After the coefficients of explanatory variables, the parenthesis depicts t-statistics, and a square bracket shows the probability value.

Source: Authors' calculation.

The proposed panel models assume a stable structure of links between subjective assessments of the financial situation of households and assessments of macroeconomic changes in given countries. The above relations may be disrupted by socio-economic shocks such as the occurrence of the COVID-19 pandemic. A viable approach for conducting a dependable and dynamically informed analysis of the explored

relationships is to carry it out within sub-periods that encompass occurrences detached from a country's economic state. The temporal scope of these shocks is often brief, leading to relatively concise time series samples. Nevertheless, employing an apt estimator in panel modelling facilitates robust estimations of the designated models. Further analysis aimed to examine the robustness of the results in a different period of the sample. The relationships between variables, in the perspective of both the past and the future periods, were determined in the period preceding the pandemic (till the end of 2019) and in the period of the COVID-19 pandemic (the first eight months of 2020). The results are presented in Tables 7–10, respectively.

The models estimated in the first subsample period for statistical significance and the direction of the relationship between variables are equal to those of the models estimated for the entire time sample. Diagnostic tests suggest the introduction of individual effects to the model and the choice of the fixed effects estimator as the better option. Explanation of the variance in the assessment of household finances is at the level of 95% and 93% for the past and the future, respectively. Estimates of the within R-Sq coefficient are far lower than LSDV R-Sq, which implies that the variation in the assessment of household finances is explained to a smaller extent by the explanatory values when individual effects are omitted. The values of variance between groups are far higher than their internal (within) variance, which signifies that the model better explains the dispersion of financial situation assessments over time than between various countries (variance results are not presented in the tables).

Table 7

Association of the assessments of current macroeconomic variables with the current financial situation of households in the first sample period (I 2018-XII 2019)

Independent variables	Dependent variable FS_o_the last		
	Panel OLS Estimates	Fixed effects estimates	Random effects estimates
Constant	-0.7637 (-1.58) [0.114]	3.6463 (9.78) [0.000]	3.3966 (2.31) [0.021]
GES_o_the last	0.3122 (18.85) [0.000]	0.1406 (10.97) [0.000]	0.1487 (11.68) [0.000]
PT_o_the last	0.0277 (1.48) [0.138]	-0.1947 (-11.13) [0.000]	-0.1852 (-10.67) [0.000]
CES_adeq_S	0.1020 (8.79) [0.000]	0.1872 (8.34) [0.000]	0.1677 (8.08) [0.000]
Diagnostics			
F-Stat./LSDV F-Stat.	214.16 [0.000]	404.38 [0.000]	-
R-Sq. / LSDV R-Sq.	0.490	0.949	-
Adj. R-Sq. / Within R-Sq.	0.488	0.471	-
Wald test	-	217.39 [0.000]	-
Breusch-Pagan test	-	-	5590.38 [0.000]
Hausman test	-	-	16.07 [0.001]

Notes: FS_o_the last- Financial situation over the last 12 months; GES_o_the last- General economic situation over the last 12 months; PT_o_the last- Price trends over the last 12 months; CES_adeq_S- The current economic situation is adequate for savings. After the coefficients of explanatory variables, the parenthesis depicts t-statistics, and a square bracket shows the probability value.

Source: Authors' calculation.

Table 8

Association of the assessments of future macroeconomic variables with the future financial situation of households in the first sample period (I 2018-XII 2019)

Independent variables	Dependent variable FS_o_the next		
	Panel OLS estimates	Fixed effects estimates	Random effects estimates
Constant	3.8908 (7.58) [0.000]	10.2957 (18.50) [0.000]	9.9108 (8.06) [0.000]
GES_o_the next	0.3179 (18.24) [0.000]	0.2433 (19.35) [0.000]	0.2499 (19.93) [0.000]
PT_o_the next	0.0461 (2.52) [0.012]	-0.1974 (-8.77) [0.000]	-0.1881 (-8.57) [0.000]
S_o_the next	0.1556 (18.39) [0.000]	0.3171 (11.84) [0.000]	0.2723 (12.44) [0.000]
Diagnostics			
F-Stat./LSDV F-Stat.	335.87 [0.000]	278.91 [0.000]	-
R-Sq. / LSDV R-Sq.	0.601	0.929	-
Adj. R-Sq. / Within R-Sq.	0.599	0.610	-
Wald test	-	109.27 [0.000]	-
Breusch-Pagan test	-	-	4527.97 [0.000]
Hausman test	-	-	17.99 [0.000]

Notes: FS_o_the next- Financial situation over the next 12 months; GES_o_the next- General economic situation over the next 12 months; PT_o_the next- Price trends over the next 12 months; S_o_the next- Savings over the next 12 months. After the coefficients of explanatory variables, the parenthesis depicts t-statistics, and a square bracket shows the probability value.

Source: Authors' calculation.

Panel model estimates for the pandemic period (Tables 9–10) showed significant differences from the first subsample. Results of the Breusch-Pagan test and the Hausman test indicate that individual effects are independent of the explanatory variables. Due to the association of individual effects with the error term, the fixed nature of individual effects cannot be confirmed. The estimates produced with the help of both estimators are not significantly different, but the RE estimator shows greater efficiency. Considering the estimates calculated with the use of the FE estimator, the explanation of the variance in the assessment of household finances, both for the past and the future 12 months, is at the level of models included in the first subsample. However, the differences between the two types of coefficients – LSDV R-Sq and within R-Sq – are far lower, particularly for the forecasts regarding the assessment of household finances. The foregoing is also reflected by the similar values between and within variances. The findings indicate the greater role of time and smaller individual effects of countries than in the case of the first subsample estimates. Consequently, the assessment of household finances in the panel countries is far more similar. During the pandemic, households across the examined countries – diverse in terms of both economy and culture – give a similar assessment of their finances, especially in the perspective of the future 12 months. Such an appraisal follows from the economic situation of the country, its price trends, and/or the potential for savings made in the face of the economic threats posed by the pandemic.

Table 9

Association of the assessments of current macroeconomic variables with the current financial situation of households in the second sample period (I 2020-VIII 2020)

Independent variables	Dependent variable FS_o_the last		
	Panel OLS estimates	Fixed effects estimates	Random effects estimates
Constant	1.5123 (1.88) [0.061]	1.877 (2.74) [0.007]	1.8699 (1.43) [0.153]
GES_o_the last	0.2162 (11.49) [0.000]	0.2279 (19.71) [0.000]	0.2278 (20.15) [0.000]
PT_o_the last	-0.0038 (-0.15) [0.880]	-0.0120 (-0.37) [0.712]	-0.0096 (-0.32) [0.745]
CES_adeq_S	0.1234 (7.77) [0.000]	0.0944 (2.92) [0.004]	0.1055 (4.08) [0.000]
Diagnostics			
F-Stat./LSDV F-Stat.	63.21 [0.000]	57.49 [0.000]	-
R-Sq. / LSDV R-Sq.	0.463	0.899	-
Adj. R-Sq. / Within R-Sq.	0.456	0.675	-
Wald test	-	31.00 [0.000]	-
Breusch-Pagan test	-	-	481.21 [0.000]
Hausman test	-	-	0.50 [0.918]

Notes: FS_o_the last- Financial situation over the last 12 months; GES_o_the last- General economic situation over the last 12 months; PT_o_the last- Price trends over the last 12 months; CES_adeq_S- The current economic situation is adequate for savings. After the coefficients of explanatory variables, the parenthesis depicts t-statistics, and a square bracket shows the probability value.

Source: Authors' calculation.

Table 10

Association of the assessments of future macroeconomic variables with the future financial situation of households in the second sample period (I 2020-VIII 2020)

Independent variables	Dependent variable FS_o_the next		
	Panel OLS estimates	Fixed effects estimates	Random effects estimates
Constant	6.6656 (10.54) [0.000]	8.1668 (10.66) [0.000]	7.9556 (8.53) [0.000]
GES_o_the next	0.4109 (23.22) [0.000]	0.4234 (31.82) [0.000]	0.4243 (32.39) [0.000]
PT_o_the next	0.0334 (1.85) [0.066]	-0.0051 (-0.17) [0.863]	-0.0022 (-0.09) [0.925]
S_o_the next	0.1658 (16.09) [0.000]	0.2463 (4.98) [0.000]	0.1836 (8.62) [0.000]
Diagnosics			
F-Stat./LSDV F-Stat.	331.03 [0.000]	91.23 [0.000]	-
R-Sq. / LSDV R-Sq.	0.818	0.934	-
Adj. R-Sq. / Within R-Sq.	0.816	0.858	-
Wald test	-	12.53 [0.000]	-
Breusch-Pagan test	-	-	250.77 [0.000]
Hausman test	-	-	4.52 [0.210]

Notes: FS_o_the next- Financial situation over the next 12 months; GES_o_the next- General economic situation over the next 12 months; PT_o_the next- Price trends over the next 12 months; S_o_the next- Savings over the next 12 months. After the coefficients of explanatory variables, the parenthesis depicts t-statistics, and a square bracket shows the probability value.

Source: Authors' calculation.

The estimates of model parameters in the pandemic period have revealed a statistically significant and positive impact of the general assessment of the economic situation in the country and the potential for savings on the households' financial assessment. Furthermore, the findings indicate that the assessment of the past and future inflation rates does not constitute a major factor in the description of the response (dependent) variable. Absolute values of regression coefficients in the model presenting the future financial assessment were higher than the estimates in the model where the dependent variable under analysis was the financial assessment of the previous year, which bears similarity to the models produced in other time periods.

6. DISCUSSION

Contrary to most economic studies, in which the analysed dependencies are based on hard data concerning the measurement of the economy, the presented study uses subjective assessments of households regarding their financial situation as well as the assessment of external conditions surrounding the household. In the literature, researchers focus on studying economic well-being or happiness (Hayo & Seifert, 2003). Data from Eurostat resources provide an opportunity for a detailed analysis of the subjective

feeling related to the financial situation of households. With the help of these studies, a much deeper understanding of the financial situation of households can be obtained than, for example, with data from the World Bank, which focuses on objective financial dimensions. Jing (2022), in an ordered logit model, re-analysed the determinants of subjective economic well-being and showed that higher values of the material wealth index and income quartiles improve economic well-being while being unemployed, working part-time or on benefits lowers it. In addition, the results obtained by Jing (2022) indicate that people with higher education are more satisfied with their economic situation, even after taking into account income and wealth effects. Researchers also point to the lack of a clear relationship between economic development (described by GDP) and subjective assessments of the financial situation of households. They also indicate that objective and subjective assessments of the financial situation of households may differ significantly.

The basic research questions concerned the identification of significant subjective economic factors that have a potential impact on households. The paper describes the subjective assessment of the level of these factors and analyses their impact on the perception of the level of financial development of one's household. The presented research analysed not only the current relationships between the proposed variables but also showed the prospect of shaping these relationships in the future. In addition, the factor related to the outbreak of the COVID-19 pandemic was taken into account as one that may affect the relationship between macroeconomic variables and their perception by households. The hypotheses put forward suggested the positive impact of the general economic situation in the country and favourable conditions for saving, as well as a reverse impact of price trends on the assessment of the financial situation of a household.

Expectations regarding the level of all variables were related to the decrease in the average level of these variables during the pandemic compared to the period before the pandemic. The results for all variables, except for the factor describing the conditions for saving, are in line with expectations. Average assessments of the future financial situation during the pandemic were negative compared to positive assessments before the pandemic. Public sentiment regarding the general economic situation in the next 12 months and the perception of price trends has also clearly deteriorated. For the variables CES_adeq_S and S_o_the next, an upsurge in the subjective assessments of households was documented, which, in a sense, constituted an unforeseen outcome. This indicated that households viewed the pandemic as a period of constrained consumption and heightened inclination to save. Comparable trends were noted in the US economy (Baker et al., 2020). These dynamics might have encompassed alterations in investment patterns as well (Yue et al., 2020). The modelling of self-assessment of household finances was based on panel data models. The research results confirmed the hypotheses regarding all variables. Parameter estimates obtained for the entire sample and the two years preceding the pandemic showed that the differences in the assessment were due to the place of origin of the household. This conclusion confirmed the different perceptions of the financial situation of households in the surveyed countries, thus indicating that time played a lesser role than individual effects. The analysis of goodness-of-fit coefficients and diagnostic tests of models estimated for the pandemic period showed an inverse relationship, i.e. time played a greater role than the effects of individual countries. In other words, households in many countries, differing in economic terms, similarly assessed their financial situation during the pandemic, especially in the perspective of the next 12 months. This is a consequence of the deteriorating economic situation in all surveyed countries and the related reduced potential for savings. The threat to the impaired finances of households has a common cause, i.e., the pandemic. Emerging risks – or even uncertainty – are related to not only one's health but also economic factors such as the possibility of losing one's job, reduced income, lack of perspectives for growth and investments and national debt.

A global, homogeneous approach to the subjects of research, which were individual EU countries, may result in certain limitations regarding the research carried out in the context of the results obtained. First,

the study did not consider the distinction of households into socio-economic groups such as those of employees, self-employed farmers and pensioners. Secondly, the study did not take into account other socio-demographic variables, such as the biological type of the family or place of residence. Studies analysing the subjective assessment of households using such variables indicate significant differences in its assessment due to some of these variables (Genge, Trzęsiok, 2017). Thirdly, the study did not analyse social and cultural differences or financial knowledge among the surveyed countries.

It should be noted that the international nature of the study, covering so many nationalities, did not allow for increasing the detail of the study, if only due to the lack of relevant data for some countries. However, despite the above limitations, the study certainly reflected the level and scope of the financial assessment of households to a high degree and correctly identified external economic factors influencing this assessment. Remarks regarding the limitations may certainly be the subject of future research, both the financial situation of households and a number of factors shaping this situation.

According to the authors, empirical research is needed to test the usefulness of subjective assessments of the financial situation of households in forecasting key macroeconomic indicators. The current study also has clear implications for future research. Firstly, subjective assessments of the financial situation of households may be helpful in forecasting changes in household behaviours in the financial markets. Some researchers emphasise the important role of their subjective assessment of the financial situation in crisis situations (economic, health, etc.) because the resulting uncertainty affects the assessment of the economic and economic situation of households.

7. CONCLUDING REMARKS

The main aim of the study was to analyse the time- and space-related differences in the subjective self-assessment of household finances in the past and at present across selected European countries. Other than the proposed economic differentiation factors concerning the financial assessment, the study considered factors related to the COVID-19 pandemic. The original cross-sectional survey study covered all countries of the European Union and Great Britain (28 countries). The research period encompassed 32 months, from January 2018 to August 2020. Furthermore, the study analysed the robustness of findings at the time of the pandemic.

The average level of the studied variables was much lower during the pandemic than before its outbreak. During the pandemic, the number of unfavourable assessments of the financial situation increased. Assessments of the general economic situation and price trends showed a similar tendency. Meanwhile, the findings on the average opinions on the economic situation's potential for saving, especially in the future, revealed an inverse relationship, i.e. the average values of the variable during the pandemic were higher than in other periods.

The correlation analysis carried out for past and future periods showed that the assessment of the financial situation showed the greatest positive correlation with the current and future assessment of the general economic situation of the country and, to a slightly lesser extent, with the assessment of savings opportunities. Irrespective of the estimator, households base their self-assessment and prognosis of their finances chiefly on the general situation in the country and the potential for savings. These factors have a positive effect on the condition of households, which finds a reflection in their subjective self-appraisal. Conversely, the assessment of price trends has a negative effect on their subjective self-appraisal. The growing inflation, which reflects the rising prices, is viewed unfavourably. However, that latter relationship is statistically insignificant in the pandemic, which may imply that an inclination for savings trumps the concerns for currency devaluation over time. Heterogeneity within countries was not considered in this study due to the lack of publicly available data. Potential differences in income, education and occupation

in individual countries could have influenced the self-assessment of household finances. This issue also sets the direction for further research.

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