



KAPITEL 5 / CHAPTER 5⁵
CULTURAL ASPECTS OF HOUSEHOLDS SAVING BEHAVIOR

DOI: 10.30890/2709-2313.2024-32-00-045

Introduction

The saving behavior of households is an important element of macroeconomic policy, because greater income growth follows from higher saving rates (Beckmann, E. & Salvatore, D. M. (2017) [1]. In addition, a high propensity of households to save has a positive effect on reducing personal financial shocks (Browning & Lusardi, 1996) [4]. In recent years, the study of households' financial behavior has been supplemented by a new area - the assessment of the relationship between the financial behavior of households and national cultural characteristics. This led to the emergence of a new branch of financial research - cultural finance - a branch of financial research that aims to explain why financial phenomena differ between nations by combining traditional financial theory with cultural theory. According to Breyer W. and Quinten B. (2009), such studies aim to include cultural factors in addition to financial ones [3].

Scholars pay little attention to the study of the relationship between culture and saving behavior. Beckmann, E. & Salvatore, D. M. (2017) note that household choice of saving instruments is not thoroughly investigated in the extant literature, particularly in developing countries [1].

For the most part, modern research on the peculiarities of the choice of savings instruments is carried out taking into account the classical model of savings. According to the standard economic model, households save more when their income is high, their needs are minimal, or their expected returns are large. Within cultural finance, the financial behavior of individuals is examined depending on their national cultures.

Carpenter, S. B., & Jensen, R. T. (2002) argue that the choice of savings instrument has important micro- and macroeconomic implications [5]. However, empirical data on the patterns of use of these tools or the factors that influence households' decisions or their ability to use them remain understudied. Beckmann E. (2019), after analyzing the forms of savings of poorer households in the countries of

⁵*Authors: Shkvarchuk Lyudmyla, Slav 'yuk Rostyslav*



Central, Eastern and South-Eastern Europe, came to the conclusion that the level of savings in these countries is low, and a significant part of savings is informal. Formal savings are mainly carried out through banks, while the participation in capital markets and contractual savings (life insurance, pension funds) is very low [2].

Thus, the study of the peculiarities of the influence of cultural aspects on the saving behavior of households is an important element of modern scientific research, which is designed to enrich not only financial theory, but also have significant practical usefulness for policymakers of all levels.

In this research, we investigate whether cultural aspects in different countries influence the choice of saving instruments. For this purpose, we have analyzed the household saving behavior in different countries during the 27-years period (1995-2022), also we used some data till 2023. The study based on the data of 10 countries regarding the choice of savings instruments by households. The following OECD countries were included in the sample: 1) Czech Rep.; 2) Portugal; 3) France; 4) Germany; 5) Poland; 6) Slovak Republic; 7) Sweden; 8) Italy; 9) Greece; 10) Lithuania.

5.1. Gross saving trends

Figure 1 present the trends of gross savings (current LCU) during 1995-2022 in ten countries of OECD.

During the analyzed period, the volume of gross savings in all countries of the analysis grew, however, at different rates. Gross savings grew the fastest in Lithuania (the average growth rate for the analyzed period was 12.63%). Savings grew the slowest in Italy - with an average rate of 2.67%. In general, since 1995, the amount of savings has increased the most in Lithuania - by 16.94 times (1694.4%). It is worth noting that, in general, the highest growth rates of savings are typical of the countries of Eastern Europe. The volumes of gross savings in Italy and Greece in 2023 were lower than similar indicators in 1995 (see data in Table 1).

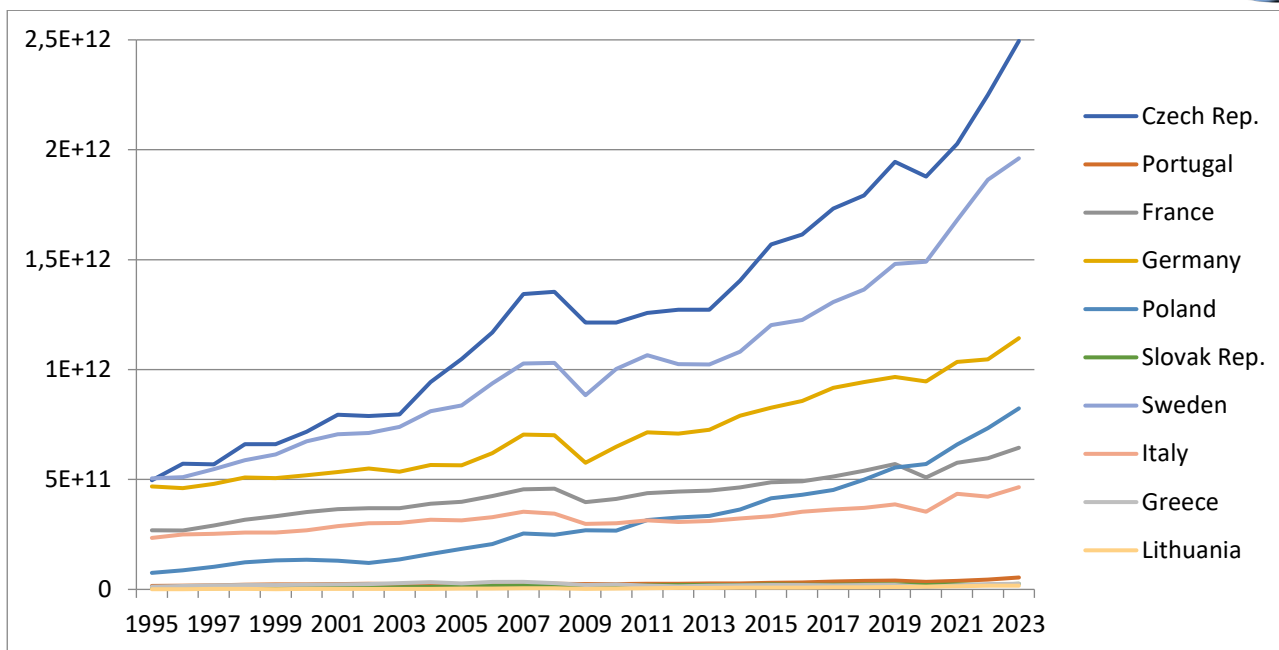


Figure 1 - Gross savings (current LCU) trends in 1995-2023 in some countries of OECD

A source: [7]

Table 1 - Indicators of rates of change in the volume of savings

	Czech Rep.	Portugal	France	Germany	Poland	Slovakia	Sweden	Italy	Greece	Lithuania
Average rate, %	6,2	4,8	3,3	3,4	9,2	7,2	5,1	2,7	4,6	12,6
Growth, %	402,5	241,8	139,2	143,9	993,9	467,6	288,2	98,5	98,2	1694,4

Authoring

For comparative analysis, it is important to understand the synchronicity over time of changes in the volume of gross savings in different countries. To this end, we calculated the pairwise correlation coefficients of fluctuations in the volume of gross savings. The calculation results are presented in the matrix (see Figure 2).

According to the data presented in the matrix, it can be argued that in general, the change in the volume of gross savings in different countries occurred quite synchronously, as evidenced by the high correlation coefficients r . In particular, almost perfect trends were revealed in Sweden with the Czech Rep. and Slovakia; Lithuania - with Poland; France with the Czech Rep. (in all cases $r = 0.99$). Quite close to perfectly synchronous are the trends in Sweden with France and Germany ($r = 0.98$); Czech Rep. with Germany, Poland ($r = 0.98$) with Lithuania ($r = 0.97$).



	Czech Rep.	Portugal	France	Germany	Poland	Slovakia	Sweden	Italy	Greece	Lithuania
Portugal	0.94	x								
France	0.99	0.97	x							
Germany	0.98	0.94	0.97	x						
Poland	0.98	0.95	0.95	0.98	x					
Slovak Rep.	0.92	0.79	0.93	0.90	0.86	x				
Sweden	0.99	0.95	0.98	0.98	0.99	0.88	x			
Italy	0.95	0.94	0.97	0.93	0.92	0.85	0.96	x		
Greece	-0.01	0.06	0.07	-0.11	-0.14	-0.00	-0.02	0.20	x	
Lithuania	0.97	0.94	0.95	0.98	0.99	0.85	0.98	0.93	-0.11	x
Czech Rep.	x	0.94	0.99	0.98	0.98	0.92	0.99	0.95	-0.01	0.97

Figure 2 - Synchronization level matrix

Authoring

Absolutely in dissonance with the general trend, there was a change in the volume of gross savings in Greece: in some places the trends had the opposite direction ($r < 0$), or, moving in the same direction, significantly lagged behind in dynamics ($r \approx 0$). It is also necessary to pay attention to the low values of the correlation coefficients for the Slovakia.

The high level of the time synchronicity changes in different countries' gross savings indicates that households' national cultural habits slightly affect their decisions of savings. It is also impossible to assert the presence of certain regional features, since relatively low correlation dependencies are observed both in geographical neighbors (Poland - Slovakia and the Czech Republic - Slovakia) and in more geographically distant countries (Poland - Italy). The same conclusion is true for countries with high correlation coefficients: Lithuania's neighbors are Poland ($r = 0.99$) and Sweden's geographically distant Czech Republic.

5.2. Household savings choice

To identify the existence of national features of saving behavior of households, we have analyzed the structure of savings instruments. In general, households



distributed their savings among six main investment instruments: currency and deposits; securities other than shares; shares and other equity; mutual fund shares; life insurance reserves; pension funds.

Structure of household savings instruments in each of the ten selected countries in 2022 is shown in Figure 2.

There are certain common features in households a choice of savings instruments in 2022. Households keep the largest share of savings in the form of currency and deposits (80% of cases), with the exception of Sweden and Lithuania, for which the main savings tool is shared and other equity. The share of savings in the form of currency and deposits ranges from 14.4% in Sweden to 57.97% in Greece.

The second (50% of cases) most significant structural component of savings were shares and other equity - with a maximum value for Lithuania (37.34%) and a minimum value for Slovakia (10.6%). Overall, the average portfolio of savings instruments for the ten OECD countries outlined had the structure shown in Figure 3.

The distribution peculiar to the average portfolio coincides with the general distribution of savings instruments only for Poland. For other sample countries, the differences relate to the distribution of shares between pension funds, life insurance reserves and mutual fund shares. Significantly different from the average is the portfolio structure for Sweden, Germany and France.

We believe that significant differences in the structure of the portfolio of instruments in the sample countries are due to the national peculiarities of household saving behavior.

Assessing the stability of household savings allocation habits among different instruments was carried out by indicators of minimum (min), maximum (max) and standard deviation (σ) of the share of each instrument during the period 1995-2022. A standard deviation helps to quantify the spread of data points. The low standard deviation means that the data points are closely grouped around the average and a high standard deviation suggests that the data points are more spread out. When the standard deviation is close to zero, it means that the data points are very similar to the mean, while a larger standard deviation suggests that the data points are more spread out from

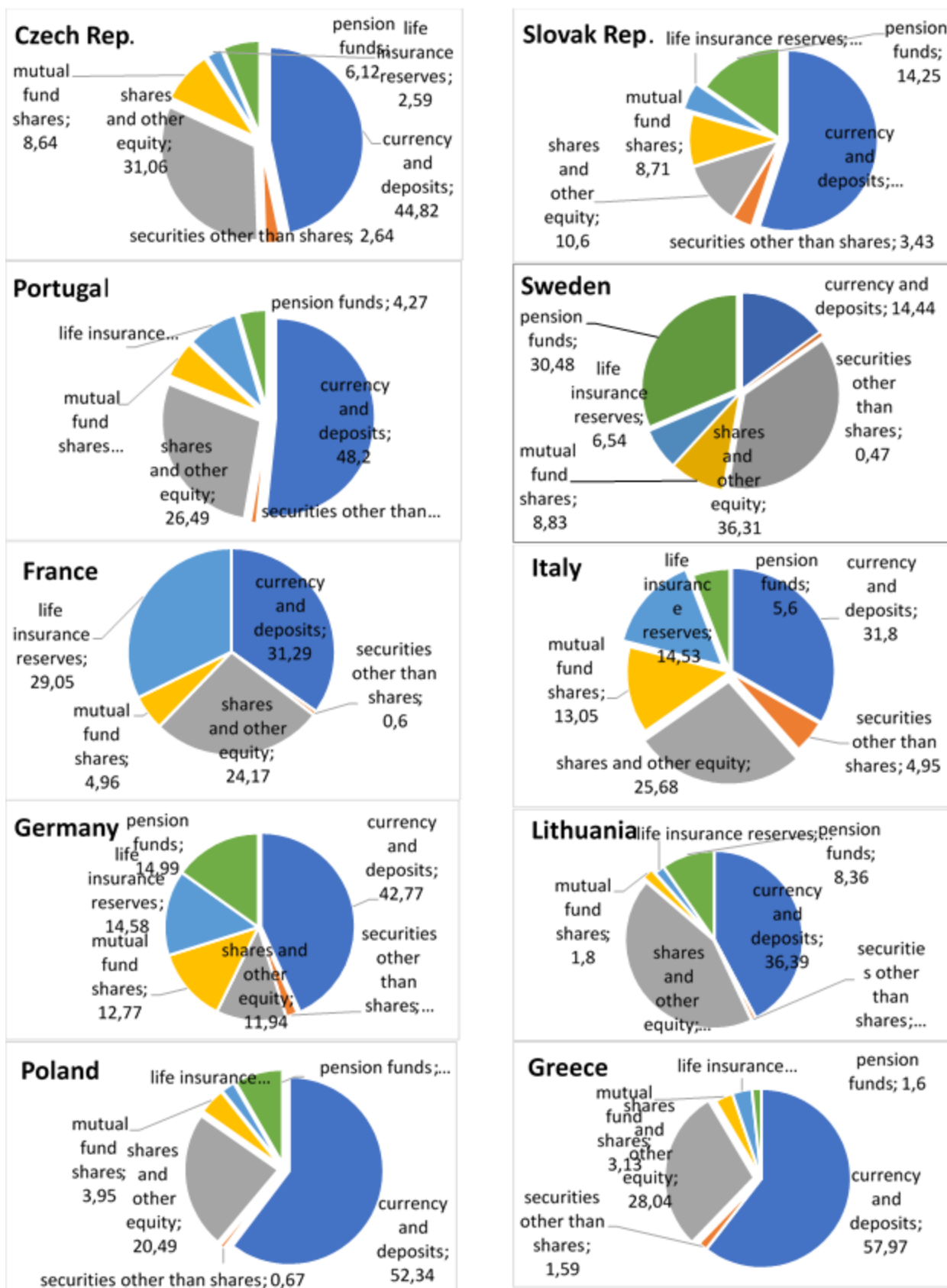


Figure 2 – Structure of household savings in 2022, %

Authoring



the mean. It provides a relatively simple and quick tool for comparing the stability of savings habits. The results of calculations of these indicators are presented in Table 3.

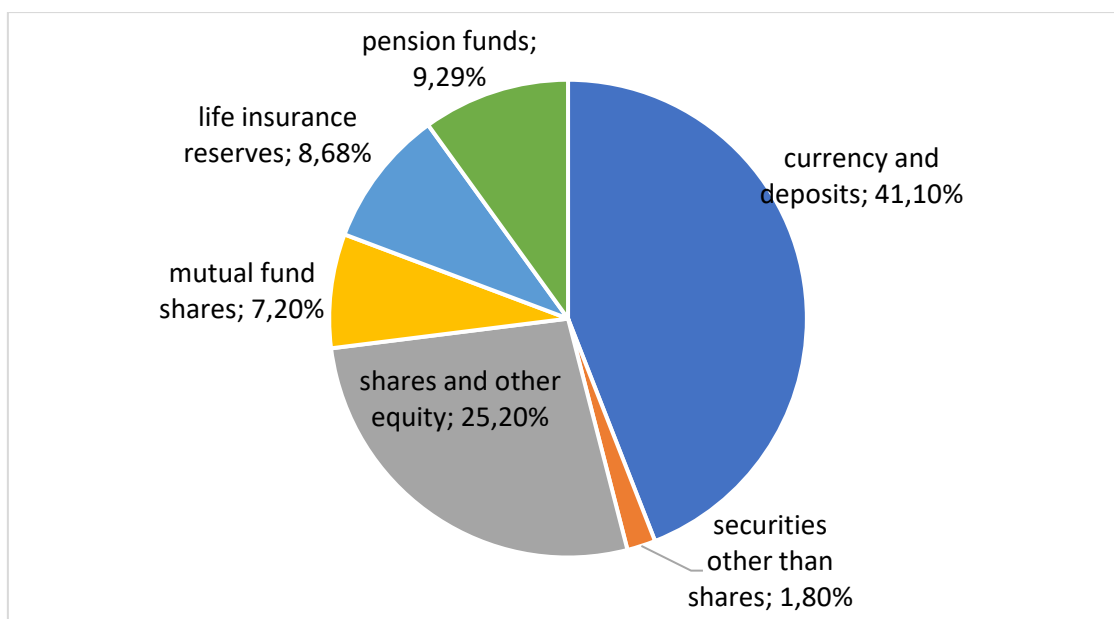


Figure 3 - OECD average savings portfolio in 2022

Authoring

Table 3 - Indicators of household saving behavior stability

	Currency and deposits			Securities other than shares			Shares and other equity			Mutual fund shares			Life insurance reserves			Pension funds		
	min	max	σ	min	max	σ	min	max	σ	min	max	σ	min	max	σ	min	max	σ
Czech Rep.	27.5	48.2	6.1	0.1	3.4	1.2	29.5	60.4	10.9	0.4	8.6	2.2	2.5	5.7	1.2	0.6	6.4	2.0
Portugal	36.3	57.9	5.5	0.9	6.6	1.8	14.5	26.5	3.0	3.3	10.0	2.4	3.4	13.8	2.8	4.3	8.0	1.0
France	27.0	38.5	2.6	0.5	6.4	1.4	16.2	28.2	2.9	4.6	11.9	1.9	18.9	36.8	5.5	0	0	0
Germany	35.2	44.2	2.4	1.8	8.6	2.3	8.9	17.3	2.3	7.4	13.2	1.6	13.6	16.8	1.0	10.0	15.0	1.5
Poland	34.8	69.9	9.2	0.3	10.1	1.9	13.3	34.3	5.7	0	10.7	2.9	1.5	6.9	1.5	0	20.3	6.7
Slovakia	50.7	65.3	3.1	0.2	3.7	1.3	9.3	26.9	5.6	3.5	11.0	1.9	3.3	7.4	1.4	0	14.3	5.7
Sweden	11.8	23.7	2.6	0.4	7.2	1.7	22.4	39.6	5.5	6.2	13.1	1.4	6.4	15.2	2.7	23.9	32.3	2.0
Italy	22.6	38.0	3.8	4.3	24.8	6.4	17.7	31.7	3.5	5.8	18.1	3.2	3.7	17.6	4.3	4.5	6.0	0.4
Greece	32.6	79.7	10.8	1.2	18.5	4.8	3.5	48.1	10.1	0.8	13.7	4.5	1.3	3.9	0.8	0.1	2.0	0.9
Lithuania	18.4	39.4	5.3	0.0	3.8	1.1	35.1	68.3	7.8	0	1.9	0.7	0.6	2.2	0.5	0	9.3	3.3

Authoring

The lower is the standard deviation coefficient (σ), the more stable is the habit of choosing the appropriate savings instrument. In turn, the more stable the habit is, the more the national cultural factor affects the saving behavior of households. Summing



up the indicators of the standard square deviation for each savings tool, we get a cumulative indicator of the stability of habit (σ_{Σ}). This indicator can be used as a basis for assessing the impact of culture on household saving behavior.

The results of σ_{Σ} calculations for different countries are presented in Table 4.

Table 4 - Ranking of countries by the level of influence of national cultural factors on household saving behavior

Country	σ_{Σ}	Impact type
Czech Rep.	23,42	medium
Portugal	16,39	high
France	14,15	high
Germany	11,01	high
Poland	27,94	low
Slovak Rep.	18,85	medium
Sweden	15,95	high
Italy	21,53	medium
Greece	31,60	low
Lithuania	18,73	medium

Authoring

According to the Table 4, it can be argued that the most dynamic were changes in the saving behavior of Greek households ($\sigma_{\Sigma}=31.60$). For the period 1995-2022, household saving behavior in Germany has changed to the least extent ($\sigma_{\Sigma}=11.01$).

Quantitative measurement of the stability of habits makes it possible to rank the sample countries into three groups depending on the level of influence of national cultural factors on the saving behavior of households:

- 1) countries with a significant influence. For these countries, the following condition is met:

$$11.00 > \sigma_{\Sigma} > 17.84$$

- 2) countries with an average influence. For these countries, the following condition is met:

$$17.85 > \sigma_{\Sigma} > 24.67$$

- 3) countries with low influence of national traditions and habits on financial



behavior of households. For these countries, the following condition is met:

$$24.88 > \sigma_{\Sigma} > 31.60$$

Summary and conclusions

Studies have shown that cultural aspects in different countries influences the household's choice of saving instruments. However, the power of such influence is different and manifests itself differently in different countries. In 40% of the countries we studied, such an impact is high, in another 40% - medium. And in only 20% of cases the power of cultural aspects on the household's choice of saving instruments was low.

The obtained distribution of impact types indicates the prevalence of high dependence of household saving behavior on national traditions and habits. However, specifying the conditions for the occurrence of a particular impact type requires more in-depth research.