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# Changes in Financial Competence by Different Generations as the Aftermath of the Pandemic



## *Summary*

Financial awareness and financial literacy is one of the key competences of our time. The accelerated digital world requires individuals to acquire a new set of skills and competences that are essential for success in everyday life. The acceleration of digitalisation has brought a new dimension to the concept of financial literacy and awareness. The emergence of new financial and banking products and services has created new challenges for individuals. A wide range of products and aggressive advertising campaigns are finding consumers, offering very favourable opportunities, generating countless market and financial bubbles. Digitalisation has received a further boost from the pandemic. In the face of this information dumping, we can only survive if we have a solid financial foundation and the proper financial socialisation. In this paper, we aim to explore deeper dimensions of the financial culture, competence, and awareness, based on the results of a primary research, pointing out changes and transformations in financial awareness.

**Journal of Economic Literature (JEL) codes:** G40;G51; G53

**Keywords:** financial culture, financial awareness, primary research, pandemic

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## LITERATURE REVIEW

Money, as a measure of the performance of the economy and as a means of accounting for performance, is one of the most important factors in capitalist society. A society heavily influenced by the media sees the importance of money everywhere, in the daily printed and electronic press, on television and on the World Web. Money can buy everything from electronic gadgets to dream trips, but we now feel that health and friendship are also included. The behavioural norms that characterise an individual are formed through individual experiential learning on the one hand, and through socialisation on the other, through the internalisation of existing moral and social norms, and of the wider culture. These can also have a very strong impact on our finances (Botos et al., 2012; Csernák, 2013). In fact, we can now discover a degree of interconnectedness that has led to the linking of the two ideas. Financial culture is not a recent concept, as it was used as early as the 1900s (Kovács et al., 2012). It is a financial term whose clear and universally accepted definition has not yet emerged.

Assessing financial culture for an economy and society is not an easy task, but it can be said that in the global financial world, measuring financial culture is a measure of the development of individuals in an economy and society. (Bárczi-Zéman, 2015).

Recent publications have not defined the meaning of this concept in the same way, and even today there is a debate about whether financial culture is a concept at all or whether it is more than a concept. In a study on the same subject, Béres and his co-author, argue that financial culture is more than a definition; it is a concept. According to this conceptual view, financial culture refers to financial knowledge (financial literacy), financial skills and experience, and financial awareness, all of which are present together and simultaneously (Béres-Huzdik, 2012).

Many experts agree that financial literacy is almost always related to financial knowledge. Moreover, it is not only knowledge but also the use of knowledge that leads to responsible behaviour. Harnessing financial knowledge can lead to responsible and informed decisions that can reduce future risks, household financial vulnerability, or make personal finances more predictable.

The ongoing and intense coronavirus pandemic, the financial, economic, and psychological impact it is having on us are changing our thinking and habits. Today's fast-paced life, digitalisation, new financial systems, and a robotised world have introduced new dimensions for us (Matolcsy et al., 2020), yet the world and the economy are still lagging behind in the challenges posed by the Covid pandemic. Events not seen since the 2008 crisis have made us realise the fragility of the welfare society and the volatility of unlimited abundance. We have also been made aware of the extent to which the hedonistic acquisition of wealth cannot be financed solely and exclusively by credit, while ignoring all aspects of financial awareness (Kolozi-Lentner, 2020). More than ten years after the economic crisis, the knowledge of finance, money and related knowledge has become more and more important, almost a part of our lives, and this is only reinforced by the crisis situations (Németh et al., 2016; GaraiFodor-Csiszárík-Kocsir, 2018; Deutsch-Pintér, 2018; Pintér, 2016). The so far visible effects of the crisis are the more than a 5% drop in the GDP, which is even higher in some regions.

This inevitably has an impact on consumption and changes in consumer habits. This will also bring about a change in financial thinking, with a focus on savings. But is this true for all generations?

The importance of financial socialisation and awareness first became clear to society in the period following the change of the regime, when we were confronted with the expectations of the market economy, and we did not have the basic information needed to cope with it (Schüttler, 1998). We have slowly recovered from the shock of the regime change, but in the meantime, we have done little to educate the next generation in financial matters. Later we were hit by the 2008 crisis, bringing the lack of financial literacy into an even sharper focus. There were certain ignorance's of the workings of the economy, sloppy management of finances, plunged scores of families into poverty, and destroying their existence. For the time being the myth of free money and quick riches was lost in this series of events (Marsi, 2008; Ács, 2009). The crisis and subsequent events have drawn attention to the gaps in financial literacy (Klapper et al., 2012; Bélyácz–Pintér, 2011). Because of the general prosperity and unlimited liquidity before the crisis, certain age groups were socialised in such a way that they did not learn to handle money and did not develop the necessary awareness to correct the cyclical movements of the economy. After the crisis, the importance of financial education (Sági et.al, 2020a; 2020b) was stressed. Noteworthy initiatives have been launched to deepen financial literacy, targeting the young and old alike. The importance of addressing financial education for the younger generations, covering all aspects of life, from family budgeting to conscious purchases was recognised. The cyclical nature of the economy means that downturns are always followed by upturns, as was the case in the post-crisis period following the Mediterranean crisis. The boom brought about by the fourth industrial revolution was interrupted by the coronavirus crisis. However, these effects have come more readily to us in terms of financial culture. Active financial education and awareness-raising competitions have raised awareness of the importance of financial thinking, but the effects of this will only become apparent years later, when knowledge will be at a theoretical level. Atkinson and Messy (2015) identify three dimensions of financial awareness: conscious planning, money management and conscious financial product selection. Increased practical implementation of these three dimensions would have been needed during the pandemic.

## MATERIAL AND METHOD

In this paper, we present a systematic review of the relevant national and international literature and present partial results of our primary research. We conducted a quantitative research in the form of a pre-tested, standardised online questionnaire survey. Subjects were recruited using a snowball sampling procedure, which resulted in 6,873 evaluable questionnaires. The research tool consisted exclusively of closed questions at nominal measurement level (single-choice and multiple-choice questions) and metric scales (the Likert scale and the semantic differential scale) to analyse consumer attitudes and values. The themes of the research tool were developed due to the relevant secondary data analysis in the form of the following themes: financial awareness, perception of the value of money, changes in financial

management caused by the pandemic situation. In this paper we focus on the partial results of the quantitative phase of our research project. Within that, we have also given priority to the perception of the value of money and the analysis of financial awareness.

To process the quantitative results, we applied descriptive statistics, bivariate and multivariate analyses using SPSS 22.0 software. In this paper, the results of multivariate correlation analysis of descriptive statistics are presented. The factor analysis used in this study was based on the KMO value, total variance value and professional explanatory power, and the final factor structure was chosen. For the segmentation, a K-means clustering procedure was implemented, which is a statistically appropriate method due to the number of sample elements exceeding one thousand. For the characterisation of each segment, Pearson's Chi-square significance values were used to establish statistical correlations, while the absolute values of the Adjusted Residual (Adj.R) were used to establish and analyse internal correlations (Sajtos, Mitev, 2007).

During the quantitative research phase, our main objective was to analyse the following hypotheses:

- H1: Consumer segments can be distinguished according to dimensions of financial awareness.
- H2: A correlation can be established between financial awareness and financial and economic studies.

The logical framework for the presentation of the partial results presented in this paper is the evaluation of the above hypotheses. The main socio-demographic characteristics of the sample are as follows: 50.6% of the 6873 respondents were male and 49.4% female. Only 7.2% of the respondents have a bachelor's degree, 57.2% have a secondary degree, 26.3% have a bachelor's degree and 9.3% have a master's degree. In terms of age, the largest proportion of the sample (39.4%) is from Generation Z (18-25 years). They were followed by 21.8% of respondents aged 26-35 and 17% of respondents aged 36-45. Respondents aged 46-55 years represented 13.1% of the sample, while respondents aged 55 years and over, represented only 8.5% of the sample. Given that the hypothesis of our research is that there is a statistically verifiable correlation between financial and economic education and perceptions of the crisis, we consider it important to characterise our sample along these lines. More than half of our respondents (57.1%) have no previous economic-financial education, such knowledge being characteristic of 57.1% of our respondents.

## RESULTS

Our research aimed to segment our sample based on financial awareness. First, we conducted a factor analysis on the elements of the financial awareness that we investigated. As a result, we chose the 4-item factor structure that statistically and professionally provided the best solution: Factors of conscious financial management, which included being well informed, monitoring prices and promotions, and a thrifty approach. Risk-taking and profit, the most dominant elements of which were a preference for the current value of money and risk-taking for higher profits. Promotions and discounts, which included a preference for

promotions and cheaper products, as well as a price preference at the expense of quality. The loyalty factor included factors such as staying in the bank and parental role modelling in financial awareness.

*Table 1: Factors of financial awareness*

<b>Factors</b>	<b>Factors of conscious management</b>	<b>Risk taking and profit</b>	<b>Promotions and discounts</b>	<b>Loyalty factor</b>
I try not to spend all my money, but also save some of it.	0.700	-0.070	0.131	0.090
Whenever I make a financial decision, I always do my research.	0.700	-0.021	-0.059	0.152
When I buy, I check the prices.	0.694	-0.107	0.139	0.149
I always monitor my finances.	0.611	0.167	-0.012	0.069
As a family, we discuss our joint purchasing decisions.	0.554	0.062	0.259	0.061
When I shop, we always pay attention to special offers.	0.533	-0.084	0.502	0.081
I prefer buying more expensive but durable things.	0.531	0.326	-0.259	0.163
For financial matters, I try to rely on external sources of information (consultants, economic news portals, etc.).	0.522	0.364	-0.002	-0.065
My parents are always saving money too.	0.502	-0.012	0.246	0.274
I would rather spend my money than save it.	-0.125	0.709	0.145	0.131
I am willing to risk some of my money if it is an investment that provides a high income.	0.199	0.678	0.052	-0.220
I trust advertising that promotes financial products.	-0.098	0.662	0.296	0.083
My current money is always worth more than the money I will save in the future.	0.136	0.619	0.111	0.063

<b>Factors</b>	<b>Factors of conscious management</b>	<b>Risk taking and profit</b>	<b>Promotions and discounts</b>	<b>Loyalty factor</b>
I would not tie up my money for the long term because I do not trust banks.	0.024	0.513	0.247	0.190
I think the right thing to do in a family is to let the one who earns the money decide on spending.	0.055	0.401	0.354	0.255
I buy something when it is on sale.	0.099	0.238	0.709	0.075
If I can, I save money by buying lower quality and cheaper things.	-0.024	0.305	0.648	0.101
I tend to buy more than one item on sale.	0.194	0.251	0.585	0.057
I always do my finances at the same bank.	0.267	0.087	0.051	0.733
When making financial decisions, my parents/close friends' opinions are my primary guide.	0.209	0.122	0.169	0.700

*Source: authors' own research, N=6873, Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization, total variance: 58,5%; KMO= 0,894*

In a second step, we performed K-means clustering on the factors to validate the hypothesis.

As a result, we were able to characterise four distinct target groups (H1 confirmed):

- Conscious financial decision maker.
- Action and information risk takers.
- Preference-averse.
- Frugal Loyalists.

Knowledgeable financial decision-makers are characterised by the fact that they thoroughly inform themselves about prices and information before making financial decisions, prioritising the opinions of advisors and external experts for the latter. They tend to make financial decisions together as a family. They are the ones who strive not to spend all their money, but to save it. They are also the main buyers of more expensive but better quality and durable goods.

Action- and information-oriented risk-takers are particularly likely to value their current money more than a future saving. They would not deposit their money for the long term because they do not trust banks. On the contrary, they are willing to take greater risks for a higher future return. Their shopping is characterised by a preference for bargains and a willingness to sacrifice quality if it means saving money. They are consumers who are not long-term thinkers when it comes to money, but rather want to maximise the amount of money they can spend today.

Thrifty Loyalists are also financially conscious, thinking and considering the long term when it comes to their finances. This segment is characterised by listening to their parents when making financial decisions and are loyal consumers who always manage their finances with the same bank. They tend to follow their parents' example when making financial decisions. They also tend to be thrifty as a result of following their parents' example.

Non-preference respondents are the group who do not rate any factor as more important than average. They are the consumers who are the most easily influenced because of uncertainty and an unformed preference system. In the case of this segment, information, examples, and behaviours provided by external sources of information play a particularly important role, since, unlike the Thrifty Loyalists, they do not take examples from within the home or family. Thus, for this group, financial education has a great responsibility to convey the importance and example of conscious management in a credible way.

Table 2: The Link Between Financial Awareness and Financial-economic Literacy

The link between financial awareness clusters and financial-economic literacy			Have you studied economic-financial subjects before?		
			yes	no	total
Financial awareness clusters	Conscious Financial Decision Makers	persons	629	453	1082
		in % of the financial awareness clusters	58.1%	41.9%	100.0%
		adjusted st. res. (Ad.R)	11.2	-11.2	
	Action and Information Risk Takers	persons	714	1256	1970
		in % of the financial awareness clusters	36.2%	63.8%	100.0%
		adjusted st. res. (Ad.R)	-6.8	6.8	
	No Preference	persons	903	1315	2218
		in % of the financial awareness clusters	40.7%	59.3%	100.0%
		adjusted st. res. (Ad.R)	-2.3	2.3	
	Thrifty Loyalists	persons	688	915	1603
		in % of the financial awareness clusters	42.9%	57.1%	100.0%
		adjusted st. res. (Ad.R)	0.2	-0.2	
Total in % of the financial awareness clusters		persons	2934	3939	6873
		42.7%	57.3%	100.0%	

Source: authors' own research, N= N=6873; Pearson's Chi-square test, sig=0.000

To analyse our second hypothesis, we examined whether, for segments based on the financial awareness factors, a correlation could be detected with whether the individual had learned these financial and economic skills. Based on the results of the Pearson Chi-square test of significance for the cross-tabulation, H2 was confirmed. (sig=0.000). The analysis of the internal correlations showed that, according to the absolute values of the adjusted standardised residuals, the group of knowledgeable financial decision-makers included a much higher proportion of respondents with financial and economic knowledge than expected. For Action and Information Risk Takers, it is precisely this lack of knowledge that characterises the members of this group, similarly to the No Preference group.

The results provide unequivocal evidence that financial and economic knowledge plays a crucial role in determining the dimensions of financial awareness that characterise an individual. The results underline the crucial importance of financial and economic literacy education, which is related to the financial decisions of individuals, and that those with financial literacy are more likely to make informed, frugal, and economically sound decisions.

## CONCLUSIONS

One of the main aims of our research was to demonstrate that financial awareness can be used to segment the sample. Based on the results, we were able to create (H1 confirmed) and characterise well-differentiated segments, such as the group of Conscious Financial Decision Makers, characterised by the intention to save and the ability to make informed financial decisions. Furthermore, the segment of “Risk takers who are not averse to risk and who put action and cheapness criteria before quality”. A cluster of “Preference-free” individuals with immature values and “Thrifty loyalists” who follow their parents’ example and are loyal to their chosen financial service provider.

The segments based on financial awareness were characterised according to the economic and financial background of their subjects. After establishing the correlation between the two variables (H2 confirmed), we can also say that financial awareness is reinforced by the existence of financial, economic knowledge. This confirms to a large extent the importance of educating and teaching young people about finance and economic issues, and of adequately integrating this kind of knowledge into the curricula. The results of the research clearly show that in the absence of such knowledge, individuals are much more willing to take risks in financial matters and investments without due consideration and justification. If more people are to be able to make well-informed financial decisions based on sound information, there is a need for education and targeted transfer of financially literate knowledge.



REFERENCES

- Atkinson, A. – Messy, F. (2012): Measuring Financial Literacy: Results of the OECD / International Network on Financial Education (INFE) Pilot Study. OECD Working Papers on Finance, *Insurance and Private Pensions*. No. 15, OECD Publishing, Paris, <https://doi.org/10.1787/5k9cfs90fr4-en>. (Accessed 12 August 2020)
- Ács, A. (2009): Út a válsághoz, [The Road to Crisis]. *Hitelintézet Szemle* VIII. évfolyam, 4. szám, 278-291. p.
- Bélyácz, I. – Pintér, É. (2011) Egy különös pénzügyi válság rendhagyó tanulságai [Unusual Lessons from a Strange Financial Crisis]. *Hitelintézet Szemle* 10:5 pp. 465-480., 16 p. (2011)
- Bárczi J. – Zéman Z. (2015): A pénzügyi kultúra és annak anomáliái [Financial Culture and its Anomalies]. *Polgári Szemle: Gazdasági és társadalmi folyóirat* 11:(1-3) pp. 101-108.
- Béres, D. – Huzdik, K. (2012): A pénzügyi kultúra megjelenése makrogazdasági szinten [The Emergence of Financial Culture at Macroeconomic Level], *Pénzügyi Szemle*, 2012/2., pp. 322-336.,
- Botos K. – Botos J. – Béres D. – Csernák J. – Németh E. (2012): Pénzügyi kultúra és kockázatvállalás a közép-alföldi háztartásokban [Financial Culture and Risk Taking in Households in the Central Great Plain]. *Pénzügyi Szemle*, 2012/3., pp. 291-309.
- Csernák J. (2013): *A vidéki háztartások megtakarítási hajlandóságát befolyásoló tényezők a Dél-alföldi régióban* [Factors Affecting the Propensity of Rural Households to Save in the Southern Great Plain region] In: Troján Sz, Teschner Gergely (szerk.) Hensch Árpád nyomdokain - A Gazdálkodásban publikált PhD hallgatók és kutatók III. Országos Tudományos Konferenciája. 83 p., Nyugat-magyarországi Egyetem Mezőgazdaság- és Élelmiszertudományi Kar, pp. 1-9.
- Deutsch, N. – Pintér, É. (2018) A társadalmi felelősségvállalás és a pénzügyi teljesítmény közötti kapcsolat a magyar bankszektorban a globális válságot követő években [The Relationship Between Social Responsibility and Financial Performance in the Hungarian Banking Sector in the Years Following the Global Crisis]. *Hitelintézet Szemle* 17: 2 pp. 124-145., 22 p. (2018)
- Garai-Fodor, M. – Csiszárík-Kocsir, Á. (2018): Értékkendalapú fogyasztói magatartásmodellek érvényessége a Z- és Y-generáció pénzügyi tudatossága esetén [The Validity of Value-based Consumer Behaviour Models for the Financial Awareness of Generation Z and Y]. *Pénzügyi Szemle*, 2018/4 szám, 518-536. p.
- Klapper, L. – Lusardi, A. – Panos, G.A. (2012): *Financial Literacy and the Financial Crisis*. Policy Research Working Paper. Washington, The World Bank,
- Kolozsi, PP – Lentner, Cs. (2020): Consolidation and Legacy of Foreign Currency Household Lending in Central and Eastern Europe: The Case of Hungary, *Contemporary Economics*, Vol 14, No. 3, 366-378. p.
- Matolcsy, Gy. – Nagy, M. – Palotai, D. – Virág, B. (2020): Infláció a digitális korban – Az infláció mérése és torzítása a 21. században [Inflation in the Digital Age - Measuring Inflation and Distortions in the 21<sup>st</sup> Century]. *Hitelintézet Szemle*, XIX. évfolyam, 1. szám, 5-36. p.
- Marsi, E (2008): Elmélkedés a subprime egyes jelenségeiről, [Reflections on Some Subprime Phenomena]. *Hitelintézet Szemle* VII. évfolyam, 5. szám, 483-490. p.
- Németh, E. – Jakovác, K. – Mészáros, A. – Kollár, P. – Várpalotai, V. (2016): Körkép és körkép a pénzügyi kultúra fejlesztését célzó képzésekről [Overview and Charts of the Trainings for the Development of the Financial Culture] *Pénzügyi Szemle*, vol. 61, no. 2., 407.-428. p.
- Pintér, É. (2016): Pénzügyi válság és a banki instabilitás okai és stratégiai kérdései – a CoCo (Contingent Convertible) kötvények bevezetésének veszélyei [Financial Crisis the Causes and the Strategic Issues of Banking Instability - The Dangers of Introducing CoCo (Contingent Convertible) Bonds]. *Acta Szekesziardiensium Scientifific Publications* 18:1 pp. 163-175., 13 p.
- Sági, J. – Vasa, L. – Lentner, Cs. (2020a): Innovative Solutions in the Development of Households' Financial Awareness: A Hungarian Example, *Economics and Sociology*, Vol. 13, No. 3, 27-45. p.
- Sági, J. – Chandler, N. – Lentner, Cs. (2020b): Family Businesses and Predictability of Financial Strength: a Hungarian Study, *Problems and Perspectives in Management*, Vol. 18, No. 2, 476-489 p.
- Schüttler, T. (1998): A gazdasági kultúra nem ismeretek rendszere, hanem szemléletmód [Economic Culture is Not a System of Knowledge, but an Attitude]. *Új Pedagógiai Szemle*, 48. évfolyam, 7–8. szám, 5-14. p.