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Validity of Value-based Consumer Behaviour Models in Terms of the Financial Awareness of Generations Z and Y

SUMMARY: The purpose of our research was to investigate whether theories on value-based consumer behaviour – i.e. the correlation between individual value orientation and specific consumer choices – are also relevant with regard to money-related decisions. 91 percent of our sample of 3,736 people belonged to Generations Y and Z (a ratio of 17:74). Based on the results obtained, it can be stated that the values and mindset of the selected generations exhibit differences compared to previous generations, and because of their malleable value judgements, their purchase and consumer choices, including financial decisions, can be influenced by appropriate means. In the primary study, we analysed the value orientation of young people in relation to money and found that they considered the sense of security provided by money and its long-term value dimension as the most important aspects. We have also examined how young people manage money and how their financial decisions are taken. In this respect, we established that the most characteristic features were price-awareness and information collection before making financial decisions, which demonstrated the strength of the cognitive part of the attitude. As a result of the research, based on the perceptions of the value of money, four consumer groups could be characterised among young people, while based on money management, seven consumer groups. The analysis of the relationship between individual consumer segments confirmed that there is a correlation between the perception of the value of money and the way in which financial decisions are made. When characterising the individual segments, it became clear in which groups financial knowledge needs to be improved, and the members of which groups may serve as reference people and opinion leaders in the promotion of conscious spending.

KEYWORDS: Financial literacy, value-based behavioural models, financial awareness, generation gap
JEL CODES: I22, G41, G01

The theoretical background of the study has three pillars: the first one is the value-based consumer behaviour models, the second one is generational marketing, and the third one is financial culture, financial competence. The relevant literature is reviewed systematically following this logic and focusing on these three pillars.

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LITERATURE REVIEW

A value-based approach to consumer behaviour

In the longer term, consumer behaviour is determined by value trends; it can also be interpreted as an external projection of the values underlying an individual's purchase and consumer choice. In examining consumers' purchasing habits, therefore, changes in lifestyle and values cannot be ignored. It is not by chance that sociological and anthropological theories are the starting point for many marketing researches, quasi providing a basis for exploring the internal correlations between the factors underlying consumer behaviour. Value analysis plays a decisive role in the exploration of the internal correlations of consumer behaviour; it is no coincidence that the methods used in the 1960s were already built the analysis of consumer behaviour on the basic correlations between lifestyle and values, think of AIO ('Activities, Interests Opinions') or even the VALS ('Values and Lifestyles') and VALS2 methodologies (Veres, 2004).

According to the interdisciplinary approach to consumer behaviour, values are related to two environmental elements, namely cultural and social factors. Within its own framework, each society develops the values and standards that reflect its culture, which, within certain limits, define the behaviour to be followed by its members. Values can be linked to social factors through the way of life, lifestyle and status dimensions. Sociological and consumption sociological approaches, however, present variations depending on whether they attach importance to the cultural, social or individual determinism of values (Hofmeister-Tóth, 2003; Andorka, 2003; Giddens, 2003; Hawkins-Best-Coney, 1992).

In our view, overall, it can be concluded based on these theories that values are created by the culture of a specific group, but group values are influenced by the conditions and circumstances that determine everyday life. Out of the methodologies used to measure values in psychology, the Rokeach Value Survey (RVS) (1973 in Horváth, 1996) and Mitchell's Values and Lifestyles (1983 in Horváth, 1996) are the best-known in marketing science. Kahle's List of Values (Kahle, 1985) is a methodology that is already adapted to the particularities of marketing research and well-suited for behaviour research (Hofmeister-Tóth, 2003). By expanding the toolkit of marketing research, value measurement methodologies play an important role in the informed analysis of individual characteristics that explain consumer preferences and how customer decisions are made. As a further improvement of value measurement methodologies, value-based consumer behaviour models were developed, which were based on the value measurements enabled by the above-mentioned methods. These models were designed to explain the motives behind consumers' product and service choices based on value measurements.

A common characteristic of value-based consumer behaviour theories (Horváth, 1996, Grunert, 1996 in Lehota 2001) is that they assume a relationship between the reasons for the consumer's product and service choice and their values. The essence of these theories is that consumers' general core values, such as peace, security and time, are located on the first level. Values determining consumer habits, such as quality-awareness, hedonism, time-awareness, are located on the second level. Finally, the values of a specific product or service, i.e. the reasons for the product or service choice, are located on the third level. The basic concept of these theories inspired us to extend the analysis of the correlations between values and consumer behaviour to money-related decisions with regard to financial competences, and to validate the existence of a relationship between individual value orientation and financial decisions (awareness) in Generations Z and Y.

The importance of generation marketing and characteristics of Generations Y and Z

Generation gap can be successfully used in many areas of marketing as a segmentation criterion. The reason for this is that generations can be described very well along the common values that particularly characterise them. Values and common experiences are the similarities that enable us to characterise a specific generation, since these attributes connect people and provide a sort of organising principle among several individual fates, stories and characteristics. Similarities identified within a specific generation frame the decisions of the people belonging to that generation, and also distinguish them from other generations (Törőcsik, 2003).

An important aspect of the behavioural assessment of generations is the evaluation of value orientation and definition of the inherent differences (Schewe, Noble 2000). The essence of the concept is that besides a strict separation based on age, it must be taken into account that people belonging to specific generations have significantly different group experiences. According to *Howe and Strauss* (2000), besides age, three factors can be highlighted that define generations:

- perceived membership – the self-perception of membership within a generation beginning in adolescence and completed in adulthood,
- common beliefs and behaviors – the attitudes related to family, career, private life, politics, religion, etc. and behaviors,
- a common location – the turning points found in historical events and trends that occur during a generation's formative years.

The starting point of the marketing approach based on the generational theory is that the major and decisive events experienced during socialisation and the 'spirit of the times' will stay with people and have an impact on their choices for the rest of their lives. In our study, we focus on consumers belonging to Generations Y and Z, and therefore now we provide a brief description of these generations.

Generation Y (Millennials)

They represent the first wave of the Digital Generation; the Internet is present day by day in their private lives. Millennials pose a serious challenge to the job market because they represent a qualitative leap compared to the preceding generation. They confidently stand up against obsolete rules and have different skills than previous generations. According to esoteric literature, they have a mission: this generation needs to open the spiritual eye of mankind and create a critical mass that will trigger the necessary changes. Millennials grew up with computers; they are very pragmatic and can navigate the Internet confidently. The Generation Y remake and shape their workplaces in their own image. Millennials wants to feel good at work: they want the workplace to be modern and non-traditional, with large spaces and a kitchen that can serve as a venue for common dining and conversation.

Generation Z

Generation Z, who were the target group of our primary research project, have already born into a world increasingly determined by the various digital technologies: they are the so-called IT or Digital X (DX) generation. Generation Z, which entered the world of work in the early years of the 21^{st} century, are characterised by swift changes. It is no coincidence that they are named 'zappers' (referring to the action of switching channels fast on a television with a remote control). They live at a much faster pace than their predecessors, and if they do not like something, e.g. their job, they are ready to make a change immediately. Compared to the preceding generation, they represent a completely different world: they were born or brought up during the age of modern techniques, information technology and the online world, which have become a part of their personality ('digital natives'). They live their social relationships in the real and the virtual world simultaneously. For them it is natural to live their emotional and social lives, display their creativity and playfulness and communicate daily through the Internet, mobile phones and other digital devices, sharing information with one another and with the widest possible public (on Facebook, Twitter, Instagram, etc.). Members of the generation labelled as 'Digital X' have basically never lived in a world without Internet, telecommunication and television. Perhaps this is why they suffer from the lack of interpersonal skills and are unable to listen actively?

Relationship between financial literacy and Generation Z

Nearly a decade after the financial crisis, finance, money and possessing related knowledge are becoming increasingly important – practically a part of our lives –, which is of utmost importance for all economic actors (Németh et al., 2016). The banking and lending practices before the outbreak of the crisis in 2008 were the complete opposite by suggesting that, in contrast with the classic definition of demand, willingness in itself is enough to consume, and banks would provide people with the required resources. These practices benefitted from the fact that people were not financially literate and did not possess the financial knowledge that would have been necessary to make informed financial decisions. Based on the foregoing, the root cause of the 2008 crisis can be described continuing along this train of thought (Huzdik et al., 2014). However, as regards financial literacy, we must mention the ethical and moral issues – or rather the total disregard for ethical and moral principles – that made possible the exploitation of economic actors with a poor financial culture (Csiszárik-Kocsir, 2016). The crisis and subsequent events have drawn attention to the deficiencies in people's financial knowledge (Klapper, Lusardi and Panos, 2012). Because of the general material prosperity and unlimited liquidity before the crisis, certain age groups were socialised without learning how to manage their personal finances and how to control their spending, since they heard everywhere that liquidity problems could be resolved by taking out a loan or even several loans. *Johnson and Sherraden* (2007) pointed out already before the outbreak of the crisis that it would be advisable to involve the younger generation in the preparation of financial processes by including financial education as part of the school curriculum or even by involving young people in their families' financial decisions. *Osana, Tucker and Bennett* (2003) were of the same opinion earlier, as these actions could lead to greater financial responsibility. Irresponsible borrowing, advanced and reckless consumption can be associated, either directly or indirectly, with the lack of financial culture and literacy. The examination of financial literacy is becoming an increasingly fashionable concept and research area. Several scientific publications, research, theses and dissertations deal with this subject; however, no specific and tangible steps have been taken to make an improvement. Every major bank mentions the development of financial culture as part of its CSR activities, but there are no notable results yet.

To this day, no single definition of financial literacy has been accepted. In a narrower sense, financial literacy is actually the ability to read and write financial information, which requires special professional knowledge. According to the generally accepted definition, it is '*a level of financial knowledge and skills that enables individuals to obtain the essential financial information necessary for them to make* *informed and prudent decisions, and then, after obtaining such information, to interpret it and decide on this basis, assessing the possible future financial other consequences of their decision.*' (National Bank of Hungary (MNB), Hungarian Financial Supervisory Authority, 2008). According to *Atkinson and Messy* (2012), financial literacy is 'a combination of financial awareness, knowledge, skills, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being'. Well-being can be improved in possession of financial literacy, which would be felt not only at the micro but also at the macro level. According to *Luksander et al.* (2014), financial literacy is the ability to process information and make the right financial decisions. *Suganya, Sakthivelrani and Durai* (2013) define the essence of financial literacy as a set of knowledge by which an individual can maximise his or her life-long financial well-being. It can be concluded that financial literacy in all cases is described as a combination of skills and competences that can be used to improve individual and social well-being. This is unimaginable in lack of specific professional knowledge, and thus it can be stated that, in this regard, the role of financial education is indispensable and unavoidable.

In today's globalised world, it is indispensable to have knowledge and understanding of modern financial processes and to be able to adapt to changes. This is why *Grifoni and Messy* (2012) describe the essence of the concept as 'skills that are essential in today's world'. Financial literacy can be divided into parts, as there are levels that can be developed and those that cannot. Levels that can be developed include the elements of financial literacy that can be modified easily and in a relatively short time by education and training. These include financial knowledge, skills and competences. The elements of financial literacy that are hard to develop are rooted in traditions, habits, and various norms, views and values seen and internalised by people (Balázsné, 2013). The latter, which are learned from the parents, family members and friends, are the most difficult to shape, since they are internalised during socialisation, are integrated into people's own identity, and therefore stay with them for the rest of their lives (Koh, Lee, 2010). This process, in which the principles of money management are passed down from one generation to the next, and the attitudes that will later on basically determine an individual's success or failure in the financial world are acquired, is called 'economic socialisation'. Family plays a prominent role in this process by teaching the money management and use principles that are decisive for them (Zsótér, Nagy, 2012). All this is related to the opinions that we have presented earlier in this study, namely that financial awareness-raising should start at school age so that any negative habits can be somewhat corrected.

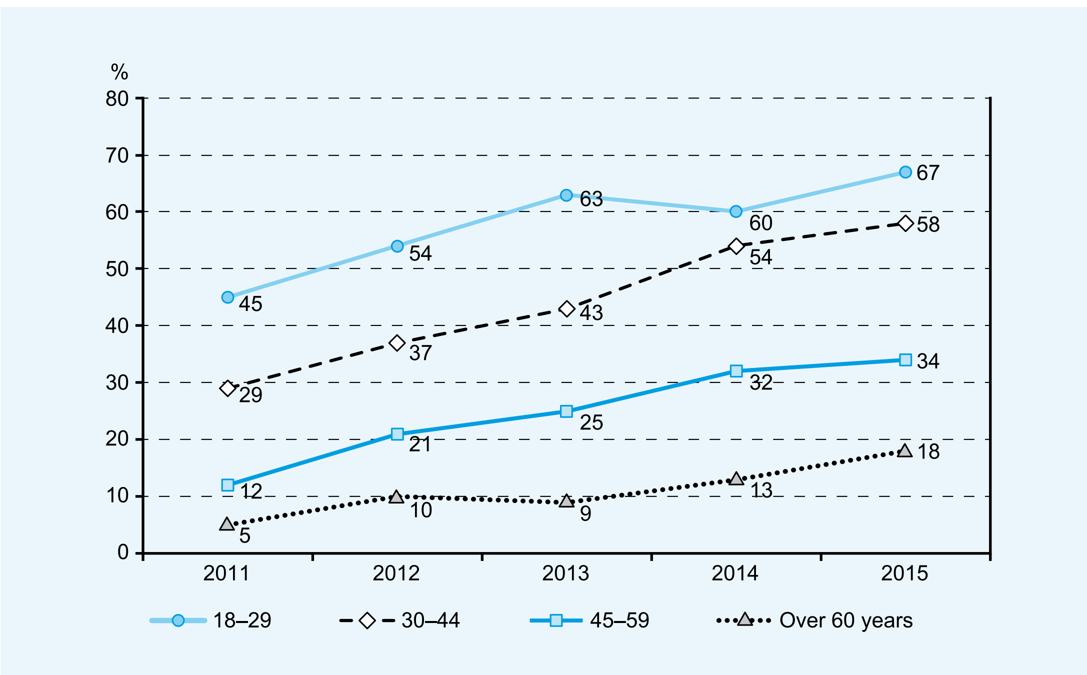
It is no easy task to assess the financial literacy of an economy and society as a whole; however, it can be established that, in the global financial world, it is measured as a total of the literacy of individuals being part of the given economy and society. (Bárczi, Zéman, 2015). There are researches that link financial literacy with financial knowledge, while others understand financial literacy as financial attitudes and skills and the possession of financial knowledge. There is also no single view of who is responsible for developing this area. Some argue that the development of financial literacy should start during primary education, while others say that this is the responsibility of secondary schools. Financial literacy, or financial awareness, involves an appropriate and applicable level of financial knowledge, that is, knowledge of the subject-matter supplemented with specific calculation and arithmetical problems.

Developing the financial literacy of students currently entering higher education is of utmost importance. They are members of Generation Z and live most of their lives virtually, on the Internet. Traditional education and administration tasks are a burden for them; instead of printed information sources, they prefer electronic channels. These young people are also the main target groups of the increasingly digital banking system and of fintech innovations. As we can see, there is a paradigm shift in the financial sector at the customers' level as well (Kerényi, Molnár, 2017). With the increasing digitisation, the growing importance of the Internet and the widespread use of mobile communication, due to the constant time pressure, young people are no longer willing to queue in a bank to handle simple administrative affairs. They are thinking in apps and want to handle things electronically. The Generation Z were already born 'with a mobile phone in their hands', they want to bank electronically (through their mobile phones) (Menon, 2016). As the adverse effects of this process on traditional human communication are already evident, the effects on banking communication will also become visible. The latter can only be avoided by granting them access to basic financial knowledge, since an application will not explain the basic features of financial products. A 2016 research by FED (Federal Reserve System) confirms the above based on the age structure of mobile banking users, which is shown in *Figure 1*. As you can see, young people aged 18 to 29 are significantly overrepresented among mobile banking customers.

It is not easy to understand the rapidly developing banking industry; education is not

Figure 1

RATIO OF MOBILE BANKING CUSTOMERS (%) AMONG THE RESPONDENTS



Source: Edited by the authors based on 2016 data from FED able – and perhaps is not even supposed – to keep pace with so many innovations and developments. The most important mission of the education system would be to provide school children and higher education students with sound financial basics in order to avoid sending them out to the real world unprepared.

In addition to the education system, financial institutions are also responsible for the improvement of financial literacy and knowledge, as they often deal with this subject as part of their CSR activities (Lentner et al., 2015). The development of financial literacy, as a key word, always has a positive connotation, and actually there are positive examples and initiatives (competitions for primary and secondary school students organised by banks, information publications, series of lectures, etc.). What matters is that the development of young people's financial literacy is of key importance and cannot be done without a prior assessment of their basic knowledge. After such an assessment, a strategy should be developed with the involvement of all stakeholders (banks, educational institutions, government) so that those coming out of the education system can be well-prepared – and not financially illiterate – economic actors.

METHODOLOGICAL BACKGROUND OF THE RESEARCH

This study presents the results of a quantitative research focusing on Generations Z and Y. During the data collection in 2016, we conducted a pre-tested standardised questionnaire survey using the CAPI (Computer-Assisted Personal Interviewing) method. During the recruiting of subjects, snowball (chain-referral) sampling was used applying a single filtering criterion (age). The sampling yielded 3,736 evaluable questionnaires which were analysed using descriptive statistics, factor analysis and cluster analysis. One of the primary objectives of the research was to test the hypothesis (H1) that the perception of the value of money (H1a), and similarly, the manner in which they manage money (purchases, savings, financial decisions) (H1b) can be used as a segmentation criterion for young people. According to our assumption, the population of young people can be differentiated, and clearly distinguishable groups can be defined along these two descriptive variables. Our second objective was to test our hypothesis that there is a detectable relationship between the clusters created based on these two descriptive variables (H2). Following the basic concept of value-based consumer behavior models, we assumed that there is a correlation between the perception of the value of money and the management of money, i.e. the basic assumption of value-based consumer behavior models is also valid for financial competencies, namely that the value orientation in relation to money has an influence on specific decisions regarding money.

RESEARCH RESULTS

In order to test the first hypothesis, we first analysed the value orientation of the respondents in relation to money using the average value of their answers on a Likert scale. In the light of the results we found that young people considered the security provided by money, on the one hand, and its long-term value dimension, on the other hand, as the most important aspects. Contrarily, they did not attach great importance to the tangible property that money can buy or the value of money as social/relationship capital. Perceptions of the value of money are shown in *Table 1*.

Table 1

PERCEPTION OF THE VALUE OF MONEY
(AVERAGE, WHERE 1 = STRONGLY DISAGREE, 4 = STRONGLY AGREE)

Statements	Average
Money is important to me because it helps me achieve my goals	2.92
Money is important to me because it enables me to help and support others	2.71
The more money I have, the happier I am	2.07
It is better to spend money than save it	1.95
Money is important to be able to buy things that are necessary for my happiness	2.61
If I have no money, I am less happy	2.37
Money gives a sense of security	**3.24**
Money is not as important as leisure time	2.75
Money is important to be able to make friends with people whom I like	1.37
Money is valuable	2.68
It is important to save money	**3.17**
I appreciate money better if I have to earn it	**3.23**
If I have money, I have more friends	1.47
If I have money, I am more valuable	1.44
I am more respectable if I have a lot of money	1.77
Those who have money are always happy	1.44
Money can buy anything	1.73

Source: own research, 2016, N = 3,736 persons

To test our first hypothesis, a factor analysis was performed, as a result of which we analysed numerous factor structures with different number of factors. In addition to the statistics indices (Kaiser-Meyer-Olkin (KMO) index and total variance), based on the technical explanation of factor distributions, factor distributions the four-factor structure was considered a definitive version.

In the light of the above, the following factor groups could be defined:

- THE RELATIONSHIP CAPITAL VALUE OF MONEY FACTOR included the social relationships that can be built through money, the objectives that can be achieved through the possession of money;
- THE MEANS AND HAPPINESS VALUE OF MONEY FACTOR included factors indicative of the benefits and the sense of happiness gained through the possession of money;
- THE LONG-TERM GOAL VALUE OF MONEY was the group of factors in which the importance of savings was clearly dominant. Thus, not at all surprisingly, long-term goal orientation had a strong negative relationship with the factor preferring the present value of money;
- THE SOCIAL AND ALTERNATIVE BENEFITS GROUP included social gains that can be achieved and realised through money, together with alternatives value that are preferable to money.

The factors created based on the perceptions of the value of money are shown in *Table 2*.

Table 2

THE FACTORS CREATED BASED ON THE PERCEPTIONS OF THE VALUE OF MONEY

Statements	The relationship capital value of money	The 'means of reaching goals' and happiness factor of money	The long-term goal value of money	Social and alternative benefits
If I have money, I am more valuable	**0.8448**	0.1101	0.0006	0.0062
If I have money, I have more friends	**0.8008**	0.0237	0.0026	0.1002
Those who have money are always happy	**0.7423**	0.1836	–0.0500	–0.0704
Money is important to be able to make friends with people whom I like	**0.7272**	0.0615	–0.0646	0.1454
I am more respectable if I have a lot of money	**0.7063**	0.2301	0.0905	0.0020
Money can buy anything	**0.5586**	0.2238	–0.1229	–0.1824
Money is important to be able to buy things that are necessary for my happiness	0.1749	**0.7215**	–0.0747	–0.0570
Money gives a sense of security	–0.0646	**0.6814**	0.1269	0.1017
If I have no money, I am less happy	0.2535	**0.6775**	–0.0178	–0.0869
The more money I have, the happier I am	0.4109	**0.6296**	–0.0530	–0.0613
Money is important to me because it helps me achieve my goals	0.0806	**0.5751**	0.0705	0.2539
Money is valuable	0.2546	**0.4195**	0.3780	–0.1403
It is important to save money	0.0245	0.1357	**0.8294**	0.1051
It is better to spend money than save it	0.2543	0.2742	**–0.7006**	0.1716
I appreciate money better if I have to earn it	–0.0131	0.1212	0.3726	**0.3320**
Money is important to me because it enables me to help and support others	0.0331	0.0781	0.1534	**0.6866**
Money is not as important as leisure time	–0.0009	–0.0722	–0.1632	**0.6769**

Source: own research, 2016, N = 3,736 persons, KMO = 0.853; total variance = 53.5%

A cluster analysis was also performed for each factor, as a result of which the following groups were distinguished. As a result, four groups could be defined.

▸The segment of 'Undervaluers' (962 people) who considered every single factor less relevant than the others.

▸The segment of 'Money Buys Happiness' (1,109 people), i.e. those who overvalue the happiness factor of money, while undervalue its alternative utility (its social gains or time which is a qualifying factor that is more important than money).

▸*The* 'Preferring relationships and savings'

(534 people) are those respondents for whom the value of money is equivalent to the relationships that can be built through money and the savings that can be achieved.

▸ *The segment of* 'Wanting to Have a Good Life While Doing Good' (1,131 people) includes respondents who prefer the most the social utility of money, and at the same time, also considered the happiness factor of money important. That is, they are the ones who, besides working towards achieving their own goals and being happy, seek to help others and have a kind of social sensitivity.

The segments created based on the perceptions of the value of money are shown in *Table 3*.

In order to examine whether the population can be grouped into different financial segments based on money-related decisions, we have also analysed the results of the relevant question in several phases. At first, also based on the average value, we examined the nature of financial decisions and the management of money by young people. Based on the results, we established that the most characteristic feature of the respondents was price awareness, on the one hand, and the gathering of information before financial decisions, which prove the strength of the cognitive part of attitudes. As regards money management, the pursuit of security dominated, with a strong determination to save money, which is a behavioral pattern they had learned at home for most of them. Neither overestimation of the present value of money, nor trust in external sources of information on financial products and advertisements are characteristic of this sample.

Overall, we found that the sample was generally characterised by the pursuit of security, long-term value orientation, the importance of price as well as the endeavour to make informed financial decisions.

Views on financial decisions and money management are shown in *Table 4*.

Performing a factor analysis as a second step, we were curious about how the individual factors are related in young people's opinion. Again, we analysed several factor structures with different factor numbers, and in addition to statistical indices (KMO index and total variance), the technical explanation of factor distributions helped us select the final structure, which resulted in the definition of seven factors:

- information collection and security factor, which includes factors such as price tracking, making purchase decision

Table 3

SEGMENTS CREATED BASED ON THE PERCEPTIONS OF THE VALUE OF MONEY

Factors	Clusters			
	Undervaluers	Money buys happiness	Preferring relationships and savings	Wanting to Have a Good Life While Doing Good
The relationship capital value of money	–0.7276	–0.0165	**1.6238**	–0.1316
The happiness factor of money	–0.8838	**0.5652**	–0.8731	**0.6097**
The long-term value orientation of money	–0.3745	0.0587	**0.6234**	–0.0334
Alternative utility value	0.0395	**–0.9396**	0.1182	**0.8318**

Source: own research, 2016, N = 3,736 persons

Table 4

VIEWS ON FINANCIAL DECISIONS AND MONEY MANAGEMENT IN THE SAMPLE (AVERAGE, 1 = NOT AT ALL CHARACTERISTIC, 4 = TOTALLY CHARACTERISTIC)

Statements	Average
I always make informed financial decisions.	3.33
When making financial decisions, the opinions of my parents/close friends are my priority.	2.81
I try to rely on external sources of information (consultants, business news portals, etc.) regarding financial matters.	2.59
I use the same bank to take care of all my financial needs.	2.93
I trust in advertisements promoting financial products.	**1.52**
I always keep track of my finances.	**3.07**
I would rather spend my money than save it.	**1.98**
My present money is worth more than the future one (which I save).	2.17
I am willing to risk a part of my money for a high-yield investment.	2.26
I would not place my money in a term deposit for the long run because I do not trust banks.	2.37
Whenever I buy something, I check the prices	**3.56**
Whenever I can, I save money by buying lower quality but cheaper things.	2.32
I rather buy more expensive but more durable things.	2.95
I try not to spend all my money, but to put some of it aside.	**3.31**
My parents always save money too.	**3.14**
We discuss joint purchasing decisions in the family.	2.89
I think it is right if the one who is earning the money in the family is in charge of spending it.	2.51
Whenever I by things, I/we always actively look for promotions.	3.13
I buy things when there is a promotion.	2.13
I usually buy more than one of promotional items.	2.39

Source: own research, 2016, N = 3,736 persons

primarily based on the price and making savings in pursuit of security;

- promotions and discounts factor, under which buying behaviours favoring promotions and discounts have been grouped;
- 'carpe diem' factor, i.e. preference of the present value of money, which group is characterised by behaviours favoring the present value of money instead of long-term financial commitments and savings;
- price sensitivity factor ('cheaper things even if they are of lower quality'), which has a strong negative correlation with the decision-making type favouring more expensive but better-quality products. This group of factors is characterised by the preference of lower prices, even at the expense of quality;
- social background and security factor included factors in which financial behaviour patterns learned in the family dominated and simultaneously had a strong negative correlation with the financial risk taking behaviour;

Table 5

FACTORS ASSOCIATED WITH MONEY-RELATED DECISIONS

Statements	Information collection and security factor	Promotions and discounts factor	'Carpe diem' , i.E. Preference to present value of money factor	Price sensitivity factor	Social background and security factor	Risk mitigation solutions factor	Advertising and external information factor
I always make informed financial decisions.	**0.6873**	–0.0219	–0.0235	–0.0513	0.2114	–0.0637	0.1105
I always keep track of my finances.	**0.6628**	0.0540	0.0384	–0.0507	–0.1029	0.0174	0.0664
I try not to spend all my money, but to put some of it aside.	**0.6062**	0.0693	–0.2495	–0.0342	0.1786	0.1912	–0.0899
Whenever I buy something, I check the prices.	**0.4995**	0.2396	0.0193	0.1796	0.1996	0.0941	–0.3913
I buy things when there is a promotion.	–0.0341	**0.7836**	0.0853	0.1342	0.0803	–0.0009	0.1441
I usually buy more than one of promotional items.	0.0285	**0.7751**	0.0422	0.0380	–0.0185	0.0429	0.0765
Whenever I by things, I/we always actively look for promotions.	0.2774	**0.6449**	–0.0458	0.1303	0.2500	0.1387	–0.1616
I would not place my money in a term deposit for the long run because I do not trust banks.	0.1260	–0.0092	**0.7150**	0.0207	0.0281	–0.0317	–0.2082
My present money is worth more than the future one (which I save).	–0.0575	0.0589	**0.6714**	0.0095	0.0098	0.0326	0.2076
I would rather spend my money than save it.	–0.3588	0.0797	**0.6258**	–0.0476	–0.1040	0.0344	0.1937
I rather buy more expensive but more durable things.	0.1453	–0.0275	0.1153	**–0.8604**	0.0354	0.1027	0.0276
Whenever I can, I save money by buying lower quality but cheaper things.	0.0656	0.2668	0.1287	**0.8166**	0.0173	0.1406	0.0259
We discuss joint purchasing decisions in the family.	0.2520	0.1653	0.0620	–0.0809	**0.6689**	0.0019	0.1101
I am willing to risk a part of my money for a high-yield investment.	0.3075	0.0381	0.3289	–0.0765	**–0.5807**	0.1379	0.1848
My parents always save money too.	0.2892	0.1477	0.0552	–0.0470	**0.4644**	0.2490	–0.0848
I use the same bank to take care of all my financial needs.	0.0173	–0.0450	–0.0396	0.0166	0.1452	**0.6936**	0.0921
I think it is right if the one who is earning the money in the family is in charge of spending it.	0.0137	0.2297	0.0794	–0.0736	–0.2139	**0.6424**	–0.0693
When making financial decisions, the opinions of my parents/close friends are my priority.	0.1278	–0.0247	–0.0047	0.1794	0.4407	**0.5100**	0.1365
I trust in advertisements promoting financial products.	–0.1213	0.1916	0.1673	0.0495	–0.0435	0.2860	**0.6836**
I try to rely on external sources of information (consultants, business news portals, etc.) regarding financial matters.	0.4247	0.0212	0.0227	–0.0179	0.1043	–0.1198	**0.6190**

Source: own research, 2016, N = 3,736 persons, KMO = 0.727, total variance private = 57.8%

- RISK MITIGATION SOLUTIONS FACTOR included factors intended to mitigate the risks associated with financial decisions, such as following the parents' advice or behaviours, brand loyalty and customer loyalty (choosing the same bank);
- ADVERTISING AND EXTERNAL INFORMATION FACTOR in which decision types based on external sources of information and external reference persons dominate.

The factors associated with money-related decisions are shown in *Table 5*.

For the hypothesis testing, a cluster analysis was performed for the factors to see how the sample could be segmented based on how the financial decisions were made. Using the K-means clustering method, we could characterise seven target groups:

▸'Price Sensitive Customers' (648 people) for whom the criterion of cheapness is the most important when making a decision, even if the preference to low price results in poorer quality.

▸'Promotion Hunters' (572 people) who overvalued the promotions and discounts factor.

▸'Conscious Information Seekers' (644 people) who are characterised by the collection of relevant information, price monitoring and the importance of price in purchase decisions; at the same time, they are seeking to save money to increase their sense of security. It is interesting, though, that the use of risk mitigation solutions (such as brand loyalty or the following of parental patterns) was not at all typical to them. They are likely to be consumers that can be characterised by individually decisions, and in the absence of family behaviour patterns, rely on themselves and the information they collect themselves.

▸'Without Preference' (443 people) who did not overvalue any factor compared to the other groups. Presumably, this uncertain behavior – namely that they do not attribute significance to any factor group – is a result of the fact that they do not yet have an established system of values or a clear system of preferences.

▸'Influenced by Advertising and Living the Moment' (379 people) who make financial decisions relying on external sources of information instead of following social patterns, and as regards their value orientation, attribute more value to the benefits that can be acquired with money in the present than investments and savings.

▸'Risk Mitigating Consumers' (557 people) are loyal to a brand to reduce the risk of financial decisions (choosing the same financial institution) and listen to their parents' opinions. Thus, the primary reference people are the parents for this segment, which is very important information in terms of communication. Their other advantage – from the viewpoint of financial service providers – is loyalty, that is, they are willing to be loyal to a financial institution, which is a particularly valuable consumer characteristic in Generations Y and Z who, as we know well, are extremely difficult to win over.

▸'Traditionalists Seeking Security' (493 people) are people characterised by joint decision-making with the family on financial matters, and considering the saving of money as a parental pattern to be followed. They reject any risky financial decision even if the potential financial gain is higher.

Consumer segments created based on money-related decisions are shown in *Table 6*.

Based on both descriptive variables (perception of the value of money and money-related decisions), segments could be characterised, i.e. the two variables could be used as segmentation criteria for characterising consumer groups. Based on the results, hypothesis H1 (H1a and H1b) was accepted.

Our second hypothesis was that value orientation is reflected in specific financial decisions. Our intention was to prove this hy-

Table 6

CONSUMER SEGMENTS CREATED BASED ON MONEY-RELATED DECISIONS

Factors	Clusters						
	Price Sensitive Customers	Promotion Hunters	Conscious Information Seekers	Without Preference	Influenced by Advertising and Living the Moment	Risk Mitigating Consumers	Traditionalists Seeking Security
Information collection and security factor	0.3741	–0.2984	**0.7307**	–1.4202	–0.1924	0.4494	–0.1837
Promotions and discounts factor	–0.1662	**0.9700**	0.0899	–0.3841	0.5784	–0.5109	–0.5467
'Carpe diem', i.E. Preference to present value of money factor	–0.4993	–0.3691	–0.4258	–0.5004	**0.9968**	0.2262	1.0685
'Cheaper things even if they are of lower quality', price sensitivity factor	**1.0339**	–0.4219	–0.4181	–0.0292	0.1412	–0.4684	0.1236
Social background and security factor	0.3749	0.3741	0.0371	–0.4366	–0.2163	–1.0235	**0.7398**
Risk mitigation solutions factor	0.4998	0.4461	**–1.0661**	–0.3391	0.4731	**0.5757**	–0.4913
Advertising and external information factor	0.0015	–0.4969	0.2157	0.3403	**1.5008**	–0.5565	–0.5380

Source: own research, 2016, N = 3,736 persons

pothesis by testing the relationship between the segments created using the two descriptive variables.

The Pearson's chi-squared test performed on the clusters yielded a significance level of 0,000, which proved that the two variables were not unrelated (hypothesis H2 confirmed).

For the analysis of internal correlations, adjusted standardised residuals were used.

In view of this, we made the following findings.

Among those who are 'Price Sensitive Consumers' when making financial decisions (i.e. check and decide based on prices even if this results in poorer quality) those who, based on their values, think that money buys happiness are overrepresented compared to the expected value. Compared to the expected value, those 'Preferring Relationships and Savings' and 'Undervaluers' are underrepresented.

Also among the 'Promotion Hunters', the 'Money Buys Happiness' segment was present in a larger proportion than expected. This means that for these two groups ('Price Sensitive Customers' and 'Promotion Hunters'), the ultimate benefit is saving money when purchasing a cheaper product, because money, as a target value, means happiness for them.

'Conscious Information Seekers' are consumers that, in the absence of family behaviour patterns, rely on themselves and the information they collect themselves when making financial decisions. Thus, it is not surprising that those 'Preferring Relationships and Savings' are represented in a smaller proportion than we have expected. However, the segment of 'Wanting to Have a Good Life While Doing Good' is represented in a higher proportion than we expected, which shows that these individuals, who trust their own decisions, are also very sensitive socially. Therefore, they do not follow family behavior patterns or rely on the opinions of their family members because of individualism or the over-preference of individual target values. Based on their values, they are sensitive to social issues and it is important for them to help others. From the aspect of communicative, it is also an important attribute that they are consumers who are likely to follow credible opinion leaders that are in line with their values, where they could not find such a person in their own social environment.

It is interesting to note that those 'Without Preference' and 'Undervaluators' were over-represented compared to our expectations, which shows that they are consumers who make decisions without having an established system of values or a clear system of preferences, and therefore are easily influenced. Among these people, financial awareness-raising and shaping of the attitude to money should be mainly focused on the cognitive part. The higher-than-expected proportion of 'Undervaluers' in the 'Traditionalists Seeking Security' group also shows that the pursuit of

Table 7

CORRELATION BETWEEN THE SEGMENTS CREATED BASED ON THE PERCEPTION OF THE VALUE OF MONEY AND THE CONSUMER SEGMENTS CREATED BASED ON MONEY-RELATED DECISIONS

Segments		Price Sensitive Customers	Promotion Hunters	Conscious Security Oriented	Without Preference	Influenced by Advertising and Living the Moment	Risk Mitigating Consumers	Traditionalists Seeking Security
Undervaluers	expected value	166.8565	147.2869	165.8266	114.0701	97.5905	143.4245	126.9449
	line %	12.9938	13.7214	16.9439	18.0873	5.4054	14.1372	18.7110
	adjusted standardised residuals	**–4.1362**	–1.5885	–0.2800	**6.9361**	**–5.6500**	–0.7799	**5.8654**
Money buys happiness	expected value	192.3533	169.7934	191.1660	131.5008	112.5029	165.3407	146.3429
	line %	23.4445	18.7556	18.3048	8.8368	4.2381	16.2308	10.1894
	adjusted standardised residuals	**6.3979**	**3.7996**	1.1220	**–3.7108**	**–7.7693**	1.4739	**–3.5279**
Preferring relationships and savings	expected value	92.6210	81.7580	92.0493	63.3196	54.1718	79.6140	70.4663
	line %	7.3034	9.7378	10.2996	16.2921	38.9513	9.9251	7.4906
	adjusted standardised residuals	**–6.6197**	**–3.8629**	**–4.5851**	**3.4239**	**2.8160**	**–3.4927**	**–4.2078**
Wanting to Have a Good Life While Doing Good	expected value	196.1692	173.1617	194.9582	134.1095	114.7347	168.6207	149.2460
	line %	19.8055	15.9151	19.7171	7.4271	6.3660	16.6225	14.1468
	adjusted standardised residuals	**2.6174**	0.6763	**2.6437**	**–5.5195**	**–5.0404**	1.9375	1.1315

Source: own research, 2016, N = 3,736 persons, sig = 0.000

security and the obeying of tradition can be explained by the absence of clear individual preferences in their case. Shaping and developing financial literacy could be a priority also for this group.

Among the 'Influenced by Advertising and Living the Moment', i.e. those who prefer to spend money than save it and based their financial decisions on external information and advertising, all segments created based on the perception of the value of money were underrepresented compared to the expected ratios, except for those Preferring Relationships and Savings. They are the consumers for whom the value of money is equivalent to the human relationships that can be built and the assets that can be purchased with it. Against this backdrop, this segment is specifically characterised by show-off purchases and the display of goods that money can buy in order to realise social gains.

The correlation between the segments created based on the perception of the value of money and the consumer segments created based on money-related decisions are shown in *Table 7.*

CONCLUSIONS AND SUMMARY

In this present study, building on the basic assumptions of theories on value-based consumer behavior and using the generation marketing approach, we examine the values of young people regarding the perception of money and how their money-related decisions are made, as well as the relationship between the two descriptive variables.

One of the key objectives of our research was to demonstrate that the perception of the value of money and money management can be used as a segmentation criterion for young people (H1a; H1b). According to our assumption, the population of young people can be differentiated along these two descriptive variables, and clearly distinguishable clusters can be defined. In the light of the results, it can be established that the perception of the value of money, which also includes the management of personal financial resources, can be used as a segmentation criterion among young people.

The second objective was to demonstrate that there is a correlation between the perception of the value of money, the management of money and how decisions are made (H2). In other words, we wanted to investigate whether the basic assumptions of theories on value-based consumer behaviour is also relevant with regard to money-related decisions. Quantitative research was used to test our hypotheses, in which 3,736 evaluable questionnaires were analysed. During the sampling, snowball sampling was used to recruit subjects.

In order to examine whether the population can be grouped into different financial segments based on money-related decisions as well (besides the perception of the value of money), we have analysed the relevant questions in several phases. A factor analysis and then K-means clustering was performed. As a result of the research, consumer groups could be characterised based on both descriptive variables.

Based on the perceptions of the value of money, four segments could be defined: 'Undervaluers' who did not consider any factor to be more relevant than other segments. The 'Money Buys Happiness' segment, which includes people for whom the possession of money brings happiness. The segment of those 'Preferring Relationships and Savings', who overvalued the social gains achievable with money and ultimately the segment of those 'Wanting to Have a Good Life While Doing Good' who also would like to help others with the money they possess.

Based on money management and how

financial decisions are made, seven groups were created: 'Price Sensitive Consumers', for whom the criterion of cheapness is the most important; 'Promotion Hunters' who overvalued the promotions and discounts factor; 'Conscious Information Seekers' who were characterised by information collection, price monitoring, and financial decisions made primarily based on the price; those 'Without Preference' who did not prefer any factor over the rest of the groups. Furthermore, we identified the group of those 'Influenced by Advertising and Living the Moment' who make their financial decisions relying on external sources of information instead of following social patterns; 'Risk Mitigating Consumers' who mitigate the risks of their financial decisions by following parental opinions and choosing the same financial institution; and finally 'Traditionalists Seeking Security' who are characterised by joint decision-making with the family and following of the parental behaviour patterns.

In the second phase of our research, we analysed the correlations between the above-mentioned segments.

The Pearson's chi-squared test performed on the clusters yielded a significance level of 0,000, which proved that the two variables were not unrelated. This confirmed our hypothesis H2.

Internal correlations between segments were examined using adjusted standardised residuals. During the technical analysis of the relationship between the groups created based on values and how financial decisions are made, we found segments ('Without Preference', 'Undervaluers') that are characterised by the lack of an established system of values and clear preferences. For these consumers, the focus must be placed on the cognitive phase when shaping their attitude towards money; their financial awareness can and should be raised by means of educational campaigns.

We could also define segments ('Conscious Security Oriented', 'Wanting to Have a Good Life While Doing Good') who make informed decisions and at the same time have a strong social sensitivity; they could be used as reference persons in communications aimed to improve financial literacy. In addition, we were able to characterise a segment ('Traditionalists Seeking Security') the members of which predominantly follow the behaviour patterns learned from their social background, parents and family. In their case, parents should be the target group in communications, as their views are relevant to young people when making their financial decisions. In our view, these results can help financial service providers in familiarising with their potential target groups and for educational professionals involved in the development of financial literacy. In the continuation of our research, we plan to perform a socio-demographic characterisation of each segment to get a more nuanced picture of individual target groups, supporting more accurate and target group oriented strategic planning.

References

Ali B., Szikora P. (2017). *Az Y generáció és az internet kapcsolata .Vállalkozásfejlesztés a XXI. században* VII. tanulmánykötet. Budapest, Óbudai Egyetem, pp. 11–24

Andorka R. (2003). *Bevezetés a szociológiába*. Budapest: Osiris Kiadó, p. 648

Atkinson, A., Messy, F. A. (2012). Measuring Financial Literacy, OECD Working Papers on Finance, Insurance and Private Pensions No. 15, http://www.oecd-ilibrary.org/docserver/download/5k9csfs90fr4-en.pdf?expires=1498684984&id=id&accname=guest&checksum=C5B34DF2381775999E9EFC9A4A5B956D, Available: 04/08/2016

Balázsné Lendvai, M. (2013). A bankmarketing szerepe a pénzügyi kultúra fejlesztésében. Doktori Ph.D. értekezés, Nyugat-Magyarországi Egyetem, Sopron, http://ilex.efe.hu/PhD/ktk/balazsnelendvai/disszertacio.pdf, Available: 05/10/2016

Bárczi J., Zéman Z. (2015). A pénzügyi kultúra és annak anomáliái. *Polgári Szemle*, 11 (1–3), pp. 101–108

Béres D., Huzdik K. (2012). A pénzügyi kultúra megjelenése makrogazdasági szinten. (Financial Literacy and Macro-economics.) *Pénzügyi Szemle/Public Finance Quarterly*, 2012/3, pp. 322–336

Csiszárik-Kocsir Á. (2016). Etikus pénzügyek, avagy a pénzügyek etikája – Vélemények egy kutatás eredményei alapján. *Polgári Szemle*, 12 (4–6), 32–44

Grifoni, A., Messy, F. A. (2012). Current Status of national Strategies for Financial Education; a comparative analysis and relevant practices. OECD Working Papers on Finance, Insurance and Private Pensions, No. 16

Giddens, A. (1990). The Consequences of Modernity. Cambridge, Polity Press

Hawkins, D., Best, R., Coney, K. (1992). Consumer Behavior 5th ed. Irwin. Boston M. A.

Hofmeister-Tóth Á. (2003). *Fogyasztói magatartás.* Budapest: Aula Kiadó, p. 325

Horváth Á. (1996). A fogyasztói magatartás és az élelmiszerfogyasztás jellemzői. (PhD) Doktori értekezés, GATE, Gödöllő

Huzdik K., Béres D., Németh E. (2014). Pénzügyi kultúra versus kockázatvállalás empirikus vizsgálata a felsőoktatásban tanulóknál. (An Empirical Study of Financial Literacy versus Risk Tolerance among Higher Education Students.) *Pénzügyi Szemle/Public Finance Quarterly,* 2014/4, pp. 444–456

Johnson, E., Sherraden, M. S. (2007). From financial literacy to financial capability amog youth. *Journal of Sociology and Social Welfare*, vol. 34, no. 3., pp. 119–145

Kahle, L.R., Beatty, S.E., Homer, P. E. (1986). Alternative Measurement Approaches to Consumer Values: The List of Values (LOV) and Values and Lifestyles (VALS). *Journal of Consumer Research*. vol 13, no. 3., pp. 40–409

Kerényi Á., Molnár J. (2017). A FinTech-jelenség hatása – Radikális változás zajlik a pénzügyi szektorban? (The Impact of the Fintech Phenomenon – Radical Change Occurs in the Financial Sector?), *Hitelintézeti Szemle/Financial and Economic Review*, 16 (3), pp. 32–50

Klapper, L., Lusardi, A., Panos, G.A. (2012). Financial Literacy and the Financial Crisis. Policy Research. Working Paper. Washington, The World Bank

Koh, N. K., Lee, C. B. (2010). 'Because My Parents Say So' – Children's monetary decision making. *Procedia Social and Behavioral Sciences*, 9, pp. 48–52

Lehota J. (szerk.) (2001). *Élelmiszergazdasági marketing*. Budapest: Műszaki Kiadó, pp. 323

Lentner Cs., Szegedi K., Tatay T. (2015). Társadalmi felelősségvállalás a bankszektorban. (Corporate Social Responsibility in the Banking Sector) *Pénzügyi Szemle/Public Finance Quarterly,* 2015/1, pp. 95–103

Luksander A., Béres D., Huzdik K., Németh E. (2014). A felsőoktatásban tanuló fiatalok pénzügyi kultúráját befolyásoló tényezők vizsgálata. (Analysis of the Factors that Infl uence the Financial Literacy of Young People Studying in Higher Education.) *Pénzügyi Szemle/Public Finance Quarterly,* 2014/2, pp. 220–241

Menon, Ravi (2016). Singapore's FinTech journey – where we are, what is next, FinTech Conference, Singapore, 16 November, 2016.
http://www.bis.org/review/r161118a.htm. Available: 24/11/2017

Németh E., Jakovác K., Mészáros A., Kollár P., Várpalotai V. (2016). Körkép és kórkép a pénzügyi kultúra fejlesztését célzó képzésekről. (Insight and Blight – Initiatives on Enhancing Financial Literacy in Hungary.) *Pénzügyi Szemle/Public Finance Quarterly,* 2016/3, pp. 401–422

Osana, H. P., Tucker, B. J., Bennett, T. (2003). Exploring adolescent decision making about equity: Ill-structured problem solving in social studies. *Contemporary Educational Psychology*, Vol. 28, pp. 357–383

Schewe, C. D., Noble, S. M. (2000). Market Segmentation by Cohorts: The Value and Validity of Cohorts in America and Abroad. *Journal of Marketing Management,* 16 (1–3), pp. 129–142

Strauss, W., Howe, N. (1992). Generations: The History of America'sFuture, 1584 to 2006. New York: Harper Perennial

Suganya, S., Sakthivelrani, S., Durai, K. (2013). Development and validation of financial literacy scale. *International Journal of Research in Commerce and Management*, 4 (1), pp. 99–104

Törőcsik M., Szűcs K., Kehl, D. (2014). Generációs gondolkodás – A Z és az Y generáció életstílus csoportjai. *Marketing & Menedzsment*, II. különszám, pp. 3–15

Veres Z. (2004). Marketingkutatási eredmények a fogyasztásszociológiában A Szociális identitás, az információ és a piac. SZTE Gazdaságtudományi Kar Közleményei, Szeged, *Jatepress*, pp. 282–296

Zsótér B., Nagy P. (2012). Mindennapi érzelmeink és pénzügyeink. (Our Everyday Emotions and Finances. The role money-related attitudes and materialistic orientation play in developing financial culture.) *Pénzügyi Szemle/Public Finance Quarterly,* 2012/3, pp. 286–297

Federal Reserve /FED/ (2016). Consumers and Mobile Financial Services 2016,
https://www.federalreserve.gov/econresdata/consumers-and-mobile-financial-services-report-201603.pdf, Available: 02/01/2018

Magyar Nemzeti Bank – Pénzügyi Szervezetek Állami Felügyelete (2008). Együttműködési megállapodás a pénzügyi kultúra fejlesztés területén,
https://www.mnb.hu/letoltes/0415mnbpszafmegallpodas-penzugyi-kultura-fejleszte.pdf, Available: 12/04/2012

OECD (2016). OECD/INFE International Survey of Adult Financial Literacy Competencies