DOI: 10.20472/EFC.2019.012.018

ERZSÉBET NÉMETH

Budapest Metropolitan University, Hungary

ALEXANDRA LUKSANDER

Sociologist, Survey Statistician, Hungary

CHILDREN AND CONSUMER TEMPTATIONS - FINANCIAL PERSONALITY TEST FOR CHILDREN

Abstract:

Goals: Our research aimed to explore the financial attitudes of teenagers (10-14 years old). Its goal is to compare the answers given by the children surveyed with the results of the Financial Personality Test addressing adults.

Methods: The survey consists of 20 questions and respondents (2067 upper secondary pupils) can assess on a scale from 1 to 5 how typical of them a certain finance-related quality, behaviour or attitude is.

Results: Results show that the upper secondary age-group possess higher level skills in handling money than previously presumed, they have well-established financial habits, they are willing to work for money while they know exactly how much money they have and how much things cost. They are much more exposed to temptations encouraging consumption than adults, therefore they are more likely to face financial difficulties, they do not always know what their money is spent on. At the same time, children are less likely to expect their parents to give them everything than the parents themselves. The study classifies respondent children into three clusters: 1. conscious savers, 2. spenders, 3. the passive, incompetent in their finances.

Recommendations: Spenders should learn about controlling shopping impulses, planning and economizing, while the financially fragile passive group should learn about financial strategy, coping skills and motivation as well.

Keywords:

financial personality, attitude, behavioural test, children

JEL Classification: D18, A14, G02

Introduction

In the activities of the Pénziránytű ('Money Compass') Foundation ¹ the digitalisation of textbooks and educational contents is of utmost importance, so is the preparation of education staff, by means of developing and testing 'user friendly' contents for them. The Foundation's wide-spread activities supporting financial literacy are based on scientific research. In that framework, in 2015 it published a financial personality survey addressing adults on its website (www.penziranytu.hu). Only two weeks after its introduction, the test had been completed by nearly 3000 users (Németh et al, 2016). The research gave an overview of the financial habits, attitudes, typical problems and coping strategies of the Hungarian population. The present research aims to explore the financial attitudes of teenagers (10-14 years old). The Pénziránytű Foundation entrusted Erzsébet Németh, the elaborator of the Financial Personality Test for adults, with the task of preparing the children's version thereof, thus providing an opportunity not only to explore the financial habits and attitudes of teenagers but also to compare them with those of the adults.

Review of literature

A limited number of researches deal with the financial attitudes and habits of teenagers. Most researches examine the age group in terms of financial literacy and calculation skills. However, several important researches draw attention to the fact that differences in the financial personality can be recognised at a rather early stage of life. The study conducted by the Stanford University known as the 'Marshmallow experiment' examined the ability of four-year-olds to think in perspective and delay gratification in preference for a later reward, as well as how all that had an impact on their future lives and well-being (Walter Mischel, 1989). Children were led into a room where a piece of delicious marshmallow was placed on a table in a bowl. The person leading the research told the children that they had to leave the room for a short time and upon their return the child would be rewarded with a second treat if they can resist the temptation to eat the one in the bowl. The children's behaviour was monitored by hidden cameras until the researcher came back in approximately 15 minutes. Some ate the candy without delay, some ate it following a struggle. Some exercised considerable restraint and, with an eye on the treat, resisted temptation to eat it. Moreover, there were children who distracted themselves and started to play, thus saving the treat. The researchers of Stanford University conducted the 'Marshmallow experiment' for the first time in the sixties and after that they followed up the lives of children participating in the test for 18 years and came to the conclusion that those children who had the ability to wait for the second candy were more successful at school, happier and more acknowledged in life. These children were better at saving, setting and reaching long-term objectives. According to the researchers the 'Marshmallow experiment' proved to be one of the best indicators of financial literacy and success. However, a recent study published in Psychological Science (Watts, Duncan, Quan, 2018) leads to a significant revision of this picture, as it indicates that social behaviour in the adolescence shows a much weaker correlation with the results of the marshmallow test as previously declared by those carrying out the original research. Besides, financial behaviour depends on the education of the parents and the cognitive skills of the examined children to at least the same extent.

Most national studies examine the age group of high school students. The results of Mészáros (2017) highlight that besides family patterns, education staff, the attitudes of important persons around a child and the child's own experience also shape the financial attitudes. Besides that, the studies of Imre and Hergár (2017) draw attention to the fact that high school

-

¹The authors wish to thank the Pénziránytű ('Money Compass') Foundation for their support with the completion of the study.

students possess a certain amount of financial competence: almost three-fourth of them are likely to manage their own pocket money or to have earned their own salary with some kind of work. Nearly every second student has a debit card or bank account. Most of them (86 per cent) make savings and put money aside for planned bigger investments. Only one third of them find it acceptable to finance their studies by means of loans, the rest of them are trying to avoid that situation. But what nearly all of them – nine out of ten children – agree upon is that financial studies should be added to the school curriculum.

According to Grinstein-Weiss et al. (2011) the enlargement of financial literacy, financial know-how and skills in the childhood results in more substantiated financial decisions and behaviour. The practice and approach regarding spending and saving are rooted in early childhood and accompany children even if there is a possibility to change them afterwards (Koh – Lee 2010).

Financial decisions are rooted in the socialisation process. Financial socialisation is a learning process throughout which young people acquire knowledge about money, ways to handle money and they develop skills and capabilities that are needed for everyday financial practices like preparing a budget, making use of bank and insurance services, making savings or using a credit card (Bowen, 2002).

Researches have found a very strong correlation between the socialisation impact of parents and financial literacy, for example the study of Norvilitis and MacLean (2010) that has revealed the effect of parents' instructions on university students' credit card debts. Soisson's (2018) study points out that it is not desirable for parents to buy everything on the Christmas wish list, as children who don't have to prioritise – for example their Christmas wishes – will not learn financial awareness.

A study examining the financial literacy of high school students from Sopron and Kapuvár has found that young people's financial culture follows that of their parents, which might result in the conservation of social disparities. According to the results, school and mass communication cannot counterbalance such disadvantages (Kulcsár – Kovácsné, 2011). Regarding young adults, instead of direct parental guidance Mandrik et al. (2005) have found that the observance of parents' behaviour is a more powerful factor in respect of consumer behaviour.

They way young people use their pocket money is also an important element of consumer socialisation (McNeal, 2007), which helps them master consumer behaviour patterns, while the role of pocket money – as one of the phenomena impacting financial socialisation – is doubtful (Zsótér, 2015).

As regards the financial literacy of young people, besides their family the school has also a significant role. Results of studies dealing with the topic (Shim et al. 2010; Lusardi et al. 2010; Borodich et al. 2010) show that classes related to finances enhance the students' financial literacy. Lusardi and Mitchell (2007) have revealed that adequate financial education has positive effect on self-financing and increases the ratio of retirement savings.

According to the results of a study carried out amongst young people attending institutions of higher education in Hungary, economic education in high schools has a positive impact on the theoretical aspects of financial knowledge only and not on the practical knowledge (Luksander et al., 2014). This result points out the necessity for a reform in the national economic education.

The results of a 2011-2012 research conducted in several institutions of secondary education in Budapest, Eastern Hungary (Miskolc, Debrecen, Nyíradony) and Western Hungary (Sopron) show that there are significant disparities between the financial literacy of those attending secondary grammar schools, secondary schools of economics and other secondary schools (Hornyák, 2013). Students of secondary vocational education have a more thorough understanding of finances than their peers, which is reflected also in their financial behaviour:

most of them refuse borrowing in the future and consider future savings important. Young people – irrespective of type of school – had the least information about student loans and credit cards.

The research of Bay et al. (2013) conducted amongst Swedish high school students draws attention to the fact that financial classes should rely upon young people's attitude towards money and not upon learning definitions related to finances. As young people of similar age differ in terms of financial attitudes, an effective programme of financial education should be able to satisfy the training needs of students possessing different financial skills, knowledge and capacities.

The adequate financial socialisation of children is also important because young people have to make important financial decisions already at a very early stage, which might have an impact on their whole life. In a significant part of the developed countries, a lot of young people have an enormous amount of credit card and students' loan debt. For example, according to a study conducted in Great Britain, 50 per cent of those surveyed in the age group 16-24 years had a bank overdraft and 34 per cent of them had a credit card. In the two years examined, the debts accumulated increased by 15 per cent (Samy et al. 2008). Moreover, the financial literacy of children has an impact on the future financial behaviour, which connection is also underlined by studies. William Elliott and his research fellows (Elliott et al., 2011) have found that the financial behaviours of people in their adolescence and young adulthood are interrelated, thus the amount of savings in one's adolescence forecasts the amount of savings in their young adulthood. As already stated at the beginning of the chapter, according to the study of Walter Michael (2014), professor of Stanford University in the USA, those kids who can delay the satisfaction of their needs at the age of four, can control themselves in the future as well and focus on long-term consequences.

A survey carried in 2012 has defined the segments of young people studying in the institutions of Hungarian higher education on the basis of their attitudes and opinions about credits (Zsótér et al., 2015), resulting in the following: 1. conservatives, 2. the easy-going, 3. the experienced. The group of conservatives can be described by a very low willingness to take risks, while they consider themselves as conscious and strongly take into consideration the moral values related to finances. The easy-going are less conscious and can be described by a high willingness to take risks, they consist of persons thinking in the short term. The experienced can be described by financial awareness, a very low willingness to take risks and high moral values. The study has revealed that young people studying in higher education cannot be considered as a homogenous population in terms of financial literacy.

Németh et al (2016) measured the financial attitudes, habits and personality traits of adults by means of a 36-item scale. They have identified the following nine personality types:

- 1. Short of cash, economizing
- 2. Money-devouring (the opposite of moderate)
- 3. Order creates value
- 4. Price-sensitive
- 5. Collector
- 6. Planner
- 7. Ups and downs
- 8. Diligent
- 9. Cannot control their finances.

The results of the latter research are used for the comparative analysis of the present study.

Questions, hypotheses

The present study is aimed to explore the financial attitudes of teenagers (10-14 years old). Also, its goal is to compare the answers given by the children surveyed with the results of the Financial Personality Test for adults (Németh et al, 2016).

Q1: What financial attitudes are typical for students of upper secondary education?

H1: It is difficult for the children surveyed to resist the temptations of consumer society, while in respect of their finances they are independent and competent.

Q2: What clusters can be formed on the basis of their financial attitudes?

H2: We presume that, based on the financial attitudes of the children surveyed, three groups can be identified: those who are competent in their finances, the spenders and the ignorant.

Q3: Which are the differences in the answers given by children and adults in terms of their financial attitudes?

H3: Adults and children differ in regard to their financial attitudes. It is more difficult for children to control their finances and to resist impulses to purchase.

Methods

The survey for children is a 20-question so called Likert scale. Respondents can assess from one to five, how typical of them a certain finance-related quality, behaviour or attitude is. Once the survey is filled, the computer shows the results immediately and outlines the financial personality profile of the child: economizing, diligent, conscious, modest; while on the basis of the results calculated, it also gives advice on how to improve their financial personality.

The present study concerns the statistical elaboration and presentation of the results of the personality test for children. The survey consisted of 20 statements to examine financial presumptions, habits and attitudes. Respondents had to assess their agreement with the statements on a 5-degree scale, where – following the coding procedure – the value 1 indicated strong disagreement and the value 5 indicated strong agreement. The database consists of the answers of 2067 pupils of the upper secondary age group (10-14 years old).

Statistical analysis

In order to analyse the data, we used descriptive statistical methods – computation of the average and deviation – cluster analysis and independent two-sample t-test. In the course of the two-sample t-test, we compared the average points of responses given by adults and children, so that we can examine the significant differences.

Cluster analysis is a dimension reduction process, by which observation units can be classified, arranged into rather homogenous groups. In the course of cluster analysis, first we carried out hierarchical clustering in order to identify the number of clusters, then – based on the results – by means of K-medians clustering we identified the specific groups.

Results

Break-down of responses

First, we examined the break-down of responses in case of 20 attitude statements, which is presented in the following table.

. υ	Strongly disagree (1)	Slightly agree	Undecided	Mostly agree	Strongly agree (5)
If I want to buy something, I save money for that.	119	173	401	531	843
I know what things cost.	94	161	471	618	723
I know exactly, how much money I have and how I want to spend it.	117	166	382	538	864

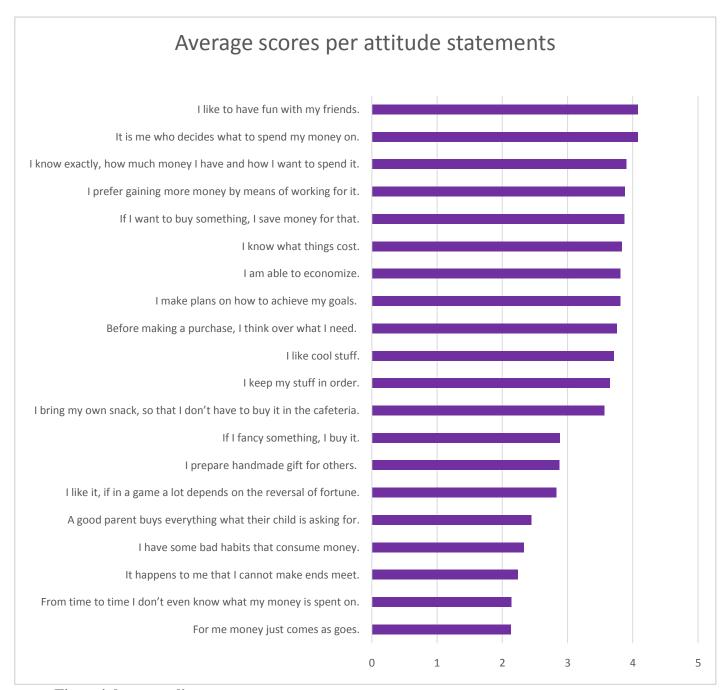
If I fancy something, I buy it.	226	672	595	274	300
From time to time I don't even know what my money is spent on.	1013	394	252	177	231
I like cool stuff.	145	233	458	470	761
I have some bad habits that consume money.	791	478	348	225	225
I bring my own snack, so that I don't have to buy it in the cafeteria.	300	237	369	320	841
I keep my stuff in order.	151	201	497	588	630
It happens to me that I cannot make ends meet.	762	560	386	209	150
I like to have fun with my friends.	114	147	285	436	1085
I prefer gaining more money by means of working for it.	133	152	409	509	864
I make plans on how to achieve my goals.	101	167	490	581	728
For me money just comes as goes	918	474	328	173	174
Before making a purchase, I carefully think over what I need.	133	185	448	592	709
It is me who decides what to spend my money on.	86	118	328	557	978
I prepare handmade gift for others.	363	477	590	322	315
I am able to economize.	118	151	449	637	712
A good parent buys everything what their child is asking for.	609	523	534	199	202
I like it, if in a game a lot depends on the reversal of fortune.	477	418	517	294	361

Table 1. Values of responses to questions

The statement that most of the children surveyed (52.5%) strongly agreed with was 'I like to have fun with my friends', followed by 'It is me who decides what to spend my money on' (47.3%), which might seem somewhat surprising, taken into account the young age of respondents. It may be considered a positive trend that more than two-fifth of children strongly agreed with such statements as 'If I want to buy something, I save money for that', 'I know exactly, how much money I have and how I want to spend it' and 'I prefer gaining more money by means of working for it', which all refer to financial awareness. Also a positive result is shown by the statements considered as not at all typical. These are 'From time to time I don't even know what my money is spent on', 'For me money just comes as goes', 'I have some bad habits that consume money' and 'It happens to me that I cannot make ends meet'. However, it can be presumed that disagreement with these statements is also influenced by the peculiarities of the age group (e.g. a low amount of own income, parental supervision, etc.), thus it can be questioned whether these attitudes prove to remain stable in the course of time.

If not only the two extreme options are taken into consideration, but we assign average scores to all attitude statements, a similar order of attitude statements can be observed. This is illustrated by Figure nr. 1.

Figure 1. Average scores



Financial personality types

Following that – on the basis of responses – we formed clusters aiming at the classification of children according to their financial attitudes. First we carried out hierarchical clustering in order to identify the number of clusters. Results seem to have outlined 3 clusters – following the 3rd cluster there is a significant increase in the value of the coefficient indicating the measure of distance –, then with the help of a non-hierarchical K-medians clustering we identified the specific groups. In order to characterise the clusters, we examined the average

values of the 20 attitude statements in each of the clusters. The values derived are illustrated by Table nr. 2.

	Cluster 1.	Cluster 2.	Cluster 3.
1. If I want to buy something, I save money for that.	4.28	3.93	2.88
2. I know what things cost.	4.08	4.02	3.01
3. I know exactly, how much money I have and how I want to spend it.	4.27	4.14	2.75
4. If I fancy something, I buy it.	2.38	3.67	2.99
5. From time to time I don't even know what my money is spent on.	1.47	3.14	2.36
6. I like cool stuff.	3.38	4.41	3.56
7. I have some bad habits that consume money.	1.64	3.47	2.43
8. I bring my own snack, so that I don't have to buy it in the cafeteria.	4.08	3.43	2.56
9. I keep my stuff in order.	4	3.74	2.74
10. It happens to me that I cannot make ends meet.	1.7	3.04	2.42
11. I like to have fun with my friends.	3.94	4.61	3.72
12. I prefer gaining more money by means of working for it.	4.33	4.03	2.66
13. I make plans on how to achieve my goals.	4.21	3.95	2.71
14. For me money just comes as goes.	1.36	3.1	2.65
15. Before making a purchase, I carefully think over what I need.	4.28	3.67	2.67
16. It is me who decides what to spend my money on.	4.11	4.28	3.72
17. I prepare handmade gift for others.	3.18	2.83	2.27
18. I am able to economize.	4.38	3.55	2.86
19. A good parent buys everything what their child is asking for.	2.09	3.04	2.51
20. I like it, if in a game a lot depends on the reversal of fortune.	2.57	3.54	2.5

Table 2. Average values of clusters

On the basis of Table nr. 2, it can be concluded that:

- The first cluster consists of the financially most aware respondents. Children in this group know how much money they have and how they wish to spend it, they are aware of the prices, before making a purchase they think over what to buy and they are able to economize. If they want to buy something, they put money aside and they prefer working for their money. They are modest in their spending, it is the least typical of them that they buy whatever they fancy or that they like cool stuff.
- In the second cluster there are those respondents who out of the three groups can be most described by the Carpe Diem attitude financially, that is, who like to spend money. Children in this group like cool stuff, they often buy what they fancy, sometimes they do not know what their money is spent on, it happens that they cannot make ends meet and they have some bad habits that consume money. It is most typical of this group that they like if in a game a lot depends on the reversal of fortune.
- *The third cluster* is rather incompetent when it comes to finances. Children in this group are not aware of prices or of the amount they possess and the way they wish to spend it. Financial deliberation is not their cup of tea, usually they do not think about what they need before making a purchase, they do not plan how they could achieve their objectives and they are not good at economization. As regards gaining money, they act passively: contrary to the other

two clusters they are not likely to make savings or to take efforts in order to work for their money.

Based on the above, we named the clusters as follows: 1. cluster – deliberate savers, 2. cluster – spenders, 3. cluster – the passive, incompetent in their finances.

The proportional distribution of those in each cluster is illustrated by Figure nr. 2

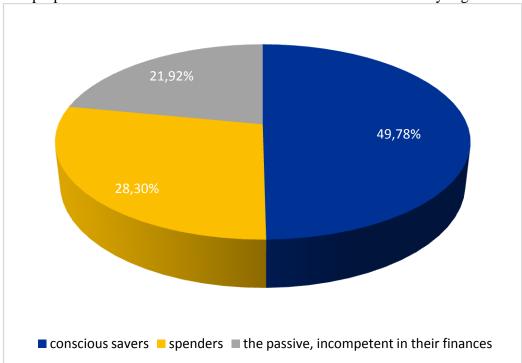


Figure 2. Financial personality types – 10-14 years old

As per figure 2, nearly half of the children belong to the group conscious savers whose attitudes can be considered as the most preferable from a financial point of view. Nearly one third of the children can be classified as spenders and a little more than a fifth of them as passive, incompetent in their finances.

The Pénziránytű Foundation had previously carried out a similar study concerning financial attitudes also among adults. When completing the survey, 36 financial attitude statements had to be assessed on a five-degree Likert scale. According to the results of the cluster analysis carried out on the basis of the 36 questions (Luksander et al., 2016) the adults surveyed could be classified under 7 groups in terms of their money-related presumptions and behaviour. The reason behind the larger number of clusters in case of adults might be the larger number of attitude statements in the first place, but this result may also indicate that adults are more diverse in terms of their financial attitudes. The clusters identified among adults were: economizing, diligent, fast-living, decent, cannot control their finances, planner, and ups and downs.

The clusters defined among children correspond to a certain extent with those revealed among adults. The group of conscious savers among children show similarities to the groups of adults classified as economizing, diligent, decent and planner; that is they are prudent when managing their finances: they do not buy everything they fancy, and they are conscious when it comes to finances: they know how much money they have, they think over what to buy, before making a purchase, etc. Among adults, 65.6% of the respondents belonged to this cluster, which is a higher proportion than the 49.8% measured among children in the conscious savers group. The group of children considered as spenders show similarities with the adult groups' fast living and ups and downs, for example they claim to be unable to economize, thus they do not really know what their money is spent on, they buy whatever

they fancy and they like cool stuff. In case of the adults 24.2% of the respondents belonged to this group, which is a slightly smaller proportion than the 28.3% measured in case of the spenders group among children. Lastly, the passive group of children who are incompetent in their finances bear the most resemblance to the cluster that cannot control their finances, that is even if they do not spend that much they face financial difficulties. In case of adults, 10.2% of the respondents belonged to this cluster which a significantly smaller ratio than the 21.9% of passive children who are incompetent in their finances. When comparing the clusters, it may seem that financial incompetency is more typical of children, while financially they are less conscious and they are less likely to economize, however these results have to be taken with a pinch of salt as the attitude statements serving as the base for cluster analysis and thus for the comparison, are not fully identical in case of the two researches.

Out of the attitude statements included in the surveys for adults and children, 5 were fully identical in both surveys, while further 11 questions correspond to each other in terms of their contents. Table nr. 3 illustrates the correspondence between attitude statements.

Survey for children	Survey for adults			
I have some bad habits that consume a lot of money.	I have some bad habits that consume money.			
If I fancy something, I buy it.	If I fancy something, I buy it.			
I like cool stuff.	I like cool stuff.			
I am able to economize.	I am able to economize.			
I like to have fun with my friends.	I like to have fun with my friends.			
I bring my own snack, so that I don't have to buy it in the cafeteria.	I prepare snacks, so that we don't buy it in the cafeteria.			
From time to time I don't even know what my money is spent on.	I simply don't know what my money is spent on.			
It happens to me that I cannot make ends meet.	At the end of the month, I often have to borrow.			
I like it, if in a game a lot depends on the reversal of fortune.	I like to try my luck.			
I prepare handmade gifts for others.	I prepare handmade gifts for my beloved ones.			
I keep my stuff in order.	I keep my household in order.			
Before making a purchase, I carefully think over what I need.	I always consider thoroughly what I need, before I make a purchase.			
I know what things cost.	I know exactly what things cost.			
If I want to buy something, I save money for that.	If I'm short of money, I economize.			
I prefer gaining more money by means of working for it.	If I need more money, I take on extra jobs.			
I know exactly, how much money I have and how I want to spend it.	I know exactly, how much money I have and how I want to spend it.			
A good parent gives everything to their children.	I want to give everything to my children.			

Table 3. Questions in the surveys for adults and children that are identical in their contents

Similar attitude statements make it possible to compare the financial attitudes of children and adults, which we examined by a two-sample t-test. However, when making a comparison, it must be taken into account that 11 statements are not fully identical, which might influence

the results. Such small differences between statements as 'I know what things cost' and 'I know exactly what things cost' might effect the answers of respondents. In the adults' sample 3088 people were involved, while in case of children 2067 respondents were counted, thus the two samples are large in size.

Table nr. 4 illustrates the average points per attitude statements and the empirical significance values.

	children	adults	p-value
I like to have fun with my friends.	4.08	2.79	< 0,001
I know exactly, how much money I have and how I want to spend it.	3.90	4.27	< 0,001
If I need more money, I take on extra jobs.	3.88	3.13	< 0,001
If I'm short of money, I economize.	3.87	3.98	0.002
I know exactly what things cost.	3.83	3.44	< 0,001
I am able to economize.	3.81	3.61	< 0,001
I always consider thoroughly what I need, before I make a purchase.	3.75	3.83	0.016
I like cool stuff.	3.71	2.58	< 0,001
I keep my household in order.	3.65	3.61	0.171
I prepare snacks, so that we don't buy it in the cafeteria.	3.56	3.20	< 0,001
If I fancy something, I buy it.	2.88	2.53	< 0,001
I prepare handmade gift for my beloved ones.	2.88	2.15	< 0,001
I like to try my luck.	2.83	2.08	< 0,001
I have some bad habits that consume money.	2.33	2.69	< 0,001
At the end of the month, I often have to borrow.	2.24	1.51	< 0,001
I simply don't know what my money is spent on.	2.14	1.94	< 0,001
A good parent buys everything what their child is asking for.	2.45	3.6	< 0,001

Table 4. Comparison of average values per attitude statements

Even if a rather small difference can be observed between the average points calculated for children and adults, on the basis of the two-sample t-test – with the exception of the statement I keep my household/stuff in order – the difference is significant is each case.

Hereinafter, we describe the differences revealed in the financial attitudes of children and adults.

1. It is more difficult for children to resist the temptations of consumer society. Therefore they face financial difficulties more often, they are not always aware of what their money is spent on. However, surprisingly enough, they are more likely to work in order to gain some extra money or they replace spending with work (preparing snacks and presents). It is also an unexpected result that in many areas they keep better

- control of their finances than adults do, for examples they are better at economizing, they are well aware of prizes.
- 2. On the other hand, adults are better at saving money: they do not spend it that easily on leisure activities or cool stuff, they know exactly how much money they have and what things cost, thus they need to borrow money less often.

When giving a thorough examination to the results, we can find that in case of children, the attitude titled 'I like to have fun with my friends' scored the highest (4.08 points), while – having regard to their age – adults rated higher a little more conscious attitude ('I know exactly, how much money I have in cash and on my bank account' – 4.27 points).

In case of children the attitude 'I simply do not know what my money is spent on' scored low on the average (2.14 points), while adults found the statement 'At the end of the month I often have to borrow money' as the least typical statement (1.51 points). It can be seen that – in comparison to those of the children – the answers given by adults cover a wider range. The most significant difference in averages is reflected in the statement 'I like to have fun with my friends', which attitude was given 1.29 points less by the adults.

The statistical deviations per attitudes (Figure 3) illustrate that adult respondents agreed the more on the statement 'I know exactly, how much money I have in cash and on my bank account', as deviation is the smallest here (1.031 points). Children agreed the most on the statement 'I know exactly what things cost' (1.127 points). The largest deviation concerning the adults' answers is shown in terms of the statement 'If I need more money, I take on extra jobs' (1.417 points), while with respect to children, in term of the statement 'I prepare snacks so that we do not have to buy it in the cafeteria' (1.47 points).

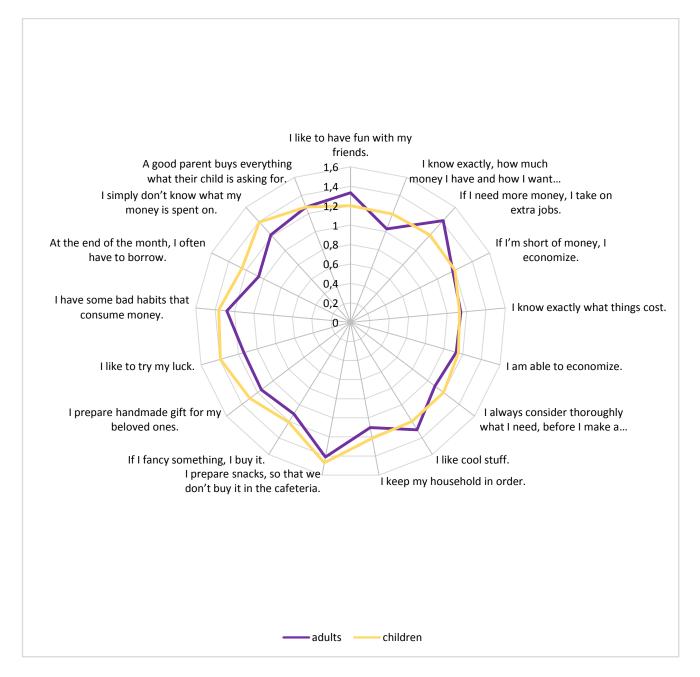


Figure 3. Deviations in the answers given by adults and children

There is another question on which the opinions of children and adults highly differ. For adults, the question was formulated as 'I want to give everything to my children'. The average score given was 3.6 points. As regards children, the average for 'A good parent buys everything what their child is asking for' was 2.45 points. This means that children expect their parents much less to give them everything than the parents themselves. It might give reassurance to parents if they knew that their children are reasonable and not as insistent as presumed.

Discussion

Based on a financial personality test consisting of 20 attitude statements, we examined the financial attitudes of children. According to the results, children are competent regarding finances from many points of view. More than two-fifth of children agreed with such

statements as 'If I want something, I save money for that', 'I know exactly, how much money I have and how I want to spend it' and 'I prefer gaining more money by working for it', which all indicate financial literacy. At the same time, results also point out, that it is difficult for children – also due to their age – to resist consumption, the temptations of consumer society. Results underline hypothesis nr. 1.

By means of cluster analysis, we identified three groups of children who differ significantly in terms of their financial attitudes: conscious savers, spenders and the passive, incompetent in their finances. This justifies the presumption of hypothesis nr. 2. It can be considered as a favourable result that nearly one half of the children belong to the deliberate savers' group. However, special attention has to be paid to the other two groups. Spenders should learn about controlling shopping impulses, planning and economizing, while the financially fragile passive group should learn about financial strategy, coping skills and motivation as well.

When comparing the answers of adults and children, it can be also observed that children do have financial issues and they seem to be competent therein, however it is difficult for them to resist temptation as in their group the statement 'I like to have fun with my friends' scored highest, while it did not ranked that high in the adults' group. The above result underlines hypothesis nr. 3. Moreover, the comparative study also draws attention to a peculiarity that does not follow from the hypothesis, that is, the adult generation agrees more than the children on the statement that a good parent gives everything to their children. The difference is significant.

Based on the results of the financial personality test for children, it can be concluded that the competencies of the upper secondary age-group in the field of handling money are better than presumed, these children have mature financial attitudes and habits. They are willing to work for money, they know exactly how much money they have and how much things cost. However, they are more exposed to temptations urging consumptions than the adults: they spend a lot on leisure, cool stuff or whatever they fancy. This must be paid special attention when it comes to financial education. From many points of view, upper secondary students lag behind adults in terms of conscious use of money, thus they have to borrow more often or they cannot tell what their money has been spent on. It seems that at this stage of socialisation they have to also learn that money is a scarce resource and it has to be used wisely.

In the long run, the study can be utilised at various levels. It can serve as a scientifically substantiated source of information for the planning of the Pénziránytű Foundation's future activities. Besides, it supports the elaboration of the national strategy for the improvement of financial culture, as well as the operational plans thereof.

References

Bay Charlotta; Catasús Bino and Johed Gustav (2010): Situating Financial Literacy. In: *Critical Perspectives on Accounting* (1) 36–45. p.

Borodich, Sergey; Deplazes, Svetlana; Kardash, Nadzeya and Kovzik, Aleaxander (2010): Comparative analysis of the levels of financial literacy among students in the U.S. Belarus, and Japan. *Journal of Economics and Economic Education Research*, (3) 71–86.

Bowen, Cathy F. (2002): Financial knowledge of teens and their parents. *Financial Counseling and Planning* (2) 93-101. p.

Elliott, William; Webley Paul and Friedline Terri (2011): Two accounts for why adolescent savings is predictive of young adult savings: An economic socialization perspective and an institutional perspective. CSD Working Paper, (11-34) 1-29 p.

Grinstein-Weiss, Michal; Spader, Jonathan; Hun Yeo, Yeong; Taylor, Andréa and Books, Elizabeth Freeze (2011): Parental transfer of financial knowledge and later credit outcomes among low- and moderate-income homeowners. *Children and Youth Services Review* 2017. (33) 78–85 p.

Hornyák, Andrea (2013): Money, Money, Money: Financial Literacy of the Young People. *Training and Practice* (1-4) 35-47. p.

Imre Zita, Hergár Eszter: A középiskolások okosabban gazdálkodnak. [High school students manage their finances wiser] *Világgazdaság*: 2017. 07. 10. 14:09

Koh, Noi Keng; Chwee, Beng Lee (2010): "Because My Parents Say So" – Children's monetary decision making. *Procedia Social and Behavioral Sciences*, (9) 48–52. p.

Kulcsár, László; Kovácsné, Henye Lívia (2011): Financial Literacy: Treasure which we have not. *Új Ifjúsági Szemle* (4) 35-44 p.

Luksander, Alexandra; Béres, Dániel; Huzdik, Katalin; Németh, Erzsébet (2014): Analysis of the Factors that Influence the Financial Literacy of Young People Studying in Higher Education *Public Finance Quarterly* (2) 237-258. p.

Lusardi, Annamaria; Mitchell, Olivia S. and Curto Vilas (2010): Financial Literacy among the Young. *Journal of Consumer Affairs* (2) 358–380. p.

Lusardi, Annamaria és Mitchell, Olivia S. (2007): Baby Boomer Retirement Security: The Role of Planning, Financial Literacy, and Housing Wealth. *Journal of Monetary Economics* (1) 205–224. p.

Mandrik, Carter A.; Fern, Edward F. és Bao, Yeqing (2005): Intergenerational Influence: Roles of Conformity to Peers and Communcation Effectiveness. *Psychology & Marketing* (10) 813-832. p.

McNeal, James U. (2007): On Becoming a Consumer: The Development of Consumer Behavior Patterns in Childhood. Burlington, Elsevier.

Mészáros, Aranka (2017): Pénzügyi attitűdök és pénzügyi viselkedés. [Financial attitudes and behaviour] In. Pál, Zsolt (edit.) *A pénzügyi kultúra aktuális kérdései, különös tekintettel a banki szolgáltatásokra*. [Current topics in financial literacy, with special regard to banking services] Miskolc

Mischel, Walter (2014): The Marshmallow Test: Understanding Self-Control and How to Master It. Bantam, London.

Németh, Erzsébet, Béres, Dániel, Huzdik, Katalin, Zsótér, Boglárka. (2016): Financial personality types in Hungary-research methods and results. *Financial and Economic Review*, 15, 2:153-172

Norvilitis, Jill M; Michael G. és MacLean (2010): The role of parents in college students' financial behaviors and attitudes. *Journal of Economic Psychology* (31) 55–63. p.

Samy, Martin; Tawfik, Hissam; Huang, R. és Nagar, Atulya K. (2008): Financial Literacy of Youth: A Sensitivity Analysis of the Determinants. *International Journal of Economic Sciences and Applied Research* (20) 55–70. p.

Shim, Soyeon; Card, Noel A.; Xiao, Jing J. and Serido, Joyce (2010): Financial socialization of first-year college students: The roles of parents, work, and education. *Journal of Youth and Adolescence* (12) 1457-1470. p.

Soisson, Isabel (2018) Here's why you shouldn't buy everything on your kids' holiday wish lists.

Published 10:41 AM ET Tue, 6 Nov 2018

Tyler W. Watts; Greg J. Duncan és Haonan Quan (2018): Revisiting the Marshmallow Test: A Conceptual Replication Investigating Links Between Early Delay of Gratification and Later Outcomes,

Psychological

Science.

http://journals.sagepub.com/doi/abs/10.1177/0956797618761661

Walter, Mischel; Yuichi, Shoda és Rodriguzez, Monica L. (1989): Delay of gratification in children. *Science*. 244: 933–938.

Zsótér, Boglárka (2017): Apple from the tree... Intergenerational effects in young adults' financial socialization in family. Ph.D. dissertation, Corvinus University of Budapest, Doctoral School of Business Administration.