Financial personality types in Hungary – research methods and results*

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The objective of our study is to determine the characteristic features according to which an individual can be evaluated from the aspect of his/her financial culture. People filling in the questionnaire consisting of 36 questions may determine how much they can be characterised by individual features or behaviours. We worked with two types of personality profiles. One of them was compiled by the author of the test (preliminarily defined personality profile). In this case, respondents get feedback on the results they achieved in each pre-defined dimension (Price-sensitive, Economizing, Moderate, Saver, Diligent, Controls his finances). Among these dimensions, awareness and diligence are positive preliminary indications of the level of the person's financial culture. The high level of saving and price-sensitivity did not correlate with good results achieved in other personality dimensions. In addition, we elaborated another personality profile obtained in empirical way. In order to establish the dimensions, we performed factor analysis. The established dimensions are: Short of cash, Economizing; Money-devouring; Order creates value; Price-sensitive; Collector; Planner; Ups and downs; Diligent and Cannot control his finances.

Journal of Economic Literature (JEL) Classification: A13, D03, D12, I22

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1. Introduction

Individuals' financial behaviours and habits may be extremely varied in both space and time, as the formulation and modification of these are influenced by a number of factors.

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With the present research (*Béres et al. 2015*), our objective is to explore what dimensions can be determined from the aspect of the financial personality, and how they can be evaluated from the aspect of financial awareness.

This research qualifies as basic research,[1] i.e. the primary objective is to offer a starting point for further research. However, we would like to point out that with a little bit of further thinking, the results may be directly suitable for “objectivising” the subjective risk analysis considerations in the field of retail lending, i.e. it is possible to use the results directly in the industry.

2. Financial personality

Since the 1970s, a number of researchers have been examining financial attitudes and personality types, trying to find out the factors according to which people’s financial behaviour patterns evolve. This study examines the financial personality and the individual’s relation to money from economic and psychological points of view. In processing the professional literature, from the studies completed in this area we review those which we found relevant to this research and which served as a basis for our own evaluations.

The first such study is related to the names of *Goldberg and Lewis* (*1978*). They distinguished three types of individuals in their study: collectors, individuals striving for independence and power players. They came to the conclusion that individuals striving for independence accumulate money to reduce their feeling of discomfort, while collectors accumulate money to avoid damages originating from economic and environmental changes. As opposed to the first two groups, the main objective of power players is not to ensure security, but to use their money to attract the attention and earn the admiration of other people.

A decade later, *Forman* (*1987*) supplemented the system of Goldberg and Lewis with another category, the gamblers. The members of this new group connect the acquisition of money to an intensive status of excitement and emotions – poker or roulette may be similar – and sometimes the stock exchange itself can be interpreted as a kind of gamble.

Similarly to *Mellan* (*1997*), *Yamauchi and Templer* (*1982*) defined the attitude to money as a multi-dimensional term.[2] According to their research, the *first dimension* is the power-prestige, in which money is the symbol of success and

[1] The report on the research can be found on the website of the Pénziránytű Foundation *http://www.penziranytu.hu/helyes-diagnozis-nelkul-nincs-hatekony-terapia*

[2] Later, a number of researchers, including *Furnham (1984)* and *Tang (1992)* also used dimensions to define individuals by financial personality.

power in the individuals' attitudes. In this sense, money helps the individual acquire power, security and freedom, and become special compared to others. This is identical with *Goldberg and Lewis'* earlier (*1978*) research results and *Zsótér and Nagy's* later (*2012*) research results. This is supplemented with the research by *Bell* (*1998*) and *Durvasula and Lysonski* (*2010*) in a way that the continuously increasing consumption by individuals belonging to the power-prestige dimension also increases the materialism-centred nature of people, and its climax may be compulsive shopping activity. The *second dimension* is retention-time. In the case of individuals in this group, the main focus is on preparation for the future and keeping the financial situation under continuous control. For these people, saving and amassing are of primary importance, and they regularly record the situation of their finances. They are able to give up present consumption in the hopes of later, probably bigger consumption. Giving up may be explained over the short term by strengthening their sense of security.

The *third financial personality dimension* of *Yamamuchi and Templer* (*1982*) is distrust. The common feature of individuals in this category is that they look at money with suspicion, almost with fear. For them, money is practically the source of distrust. In general, we can say that individuals that have no trust in money and finances, usually do not trust themselves either to the necessary extent. For instance, this may be the case when someone does not have enough experience or knowledge in a given area, in this case, in finances.

The *fourth* and last *dimension* of the authors contains anxious individuals, who tend to be nervous (anxiety dimension). For this type of personality, money is a controversial phenomenon, as it means both anxiety and protection for them. In other words, we could simply say that they are the "what will happen, when we do not have it" personalities. A characteristic feature of the paradox personality is that they ease their anxiety by shopping, and it may become a compulsive activity (*Valence et al. 1988*).

The above described typology of *Yamamuchi and Templer* (*1982*) was used by *Bauer and Mitev* (*2011*) in Hungary as well. In their study, they used the so-called *"Money Attitude Scale"* retention-time dimension to examine relations with compulsive shopping. Based on their results, the retention of money and prudent spending may not form one dimension. In their opinion, retention and compulsive shopping may exist side by side, as there may be consumers who can afford compulsive shopping. This is in line with the results of the study published earlier by *Ridgway et al.* (*2008*).

Furnham's work in 1984 focused on beliefs and behaviour patterns related to money. The scale he used is called the *"Money Beliefs and Behaviors Scale"*. The sixty statements on the scale are reduced to only six factors. These are (*1*) obsession, (*2*) power/spending, (*3*) retention, (*4*) security/conservative, (*5*) inadequate, (*6*) effort/ability.

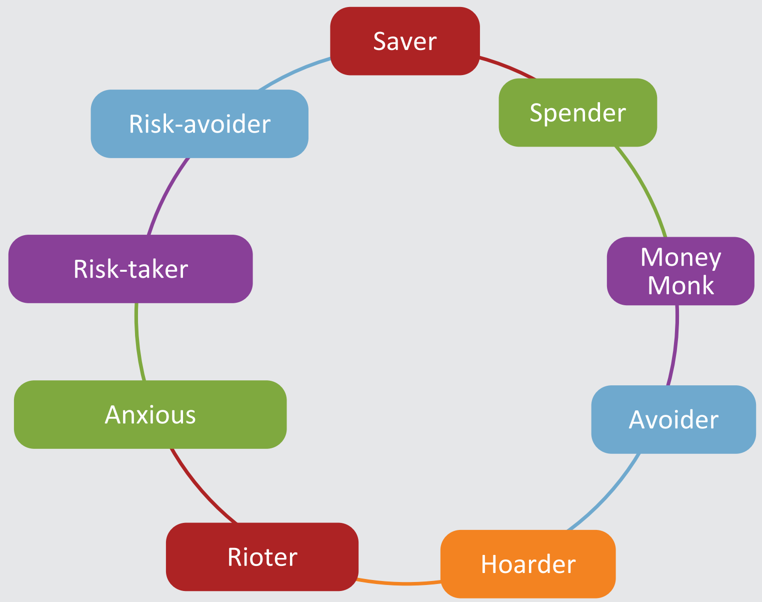
In the studies of *Furnham* (*1984*), obsession means that individuals use money as a basis of comparison with others. These persons associate the possession of money with superiority, from which the second category, i.e. power is separated to a small extent only. In the case of people in the power category – similarly to the results of earlier research – possession of money is the primary (with a little exaggeration, the exclusive) basis of power. The third dimension is retention, which – in Furnham's opinion – focuses on financial conservativism and placing security at the forefront. A common feature of people belonging to the dimension of dissatisfied persons is that they never feel that they have enough money, i.e. they are characterised by the attitude of "more is better than much", which is a kind of driving force for them as well. Last, but not least, according to Furnham, the effort dimension includes all people for whom the motive of work appears in connection with money and their attitude to money, and that reflects certain values as well. It can be seen that Furnham's results are not significantly different from the results of earlier studies.

Furnham's scale of 60 statements (*1984*) was used by *Christopher et al.* (*2004*) in a shortened version for their study. In the case of Christopher et al., the received dimensions compared to the original six factors are: dissatisfaction (which is identical with one of the factors of the original research), self-praising, conservative approach, and negative feelings about money. It is obvious that the meanings of the factors have also changed in their contents. All of this is even more obvious in the study by Masuo and partners. The three factors they specified are: power, security and financial modesty.

Based on the attitudes to money, *Tang* (*1992*) identified six factors, which also contain affective, cognitive and conative factors. Within the affective component, the good and the evil side of money is presented, i.e. the feelings triggered by money. Within the cognitive component, performance, respect and power emerge, i.e. kind of evaluating thoughts related to money. The budget emerges within the conative component, i.e. this is what primarily determines actual behaviour. The questionnaire that originally contained 30 statements (metering scale) was later used by Tang in a shortened version, first with 12 statements (*Tang 1995*), and finally with 6 statements (*Tang and Kim 1999*). The six statements determine three factors. The first factor is budget ("I control my budget with care", "I use my money carefully"), the second factor is negative feelings about money ("money is bad", "money is the source of all bad things"), while the third factor is that money is the token of success ("money is the symbol of success", "money reflects performance").

Compared to previous researchers, *Mellan* (*1997*) identified more, altogether nine personality types on the basis of their attitude to money.

Figure 1
Mellan's financial personality types



Source: Mellan (1997)

In Mellan's typology, the saver is person who sticks to his money, finds it hard to buy things that would cause momentary pleasure to himself or its beloved ones. Money represents a kind of security to him, so hedonist behaviour is far from him.

For the spender type of personality, the pleasure is in spending his money when and on what he feels necessary – this status is usually related to an external stimulus. In other words, they could also be called impulsive. Saving money and making budgets are not the characteristic features of this personality type.

It makes Money Monks feel bad when they have a lot of money. This makes them feel guilty in a way, especially when they get a large amount of money suddenly. They are convinced that money spoils everything.

People who try to avoid daily tasks about money are called avoiders by *Mellan* (*1997*). Individuals belonging to this group do not like to deal with their finances, so they usually also do not produce budgets. In fact, this characteristic feature can be compared to *Yamamuchi and Templer's* (*1982*) uncertainty category, i.e. it is possible that they evaluate their financial skills in an unrealistic way and are convinced that they have no proper knowledge about finances.

The next category is the hoarder personality. The main feature of people in this category is that the amount of money available to them – or rather the increase of it – is one of their main objectives, as that is the way they can also prove their power.

The combination of the saver and the spender personality types are called rioters by *Mellan* (*1997*). This person tends to economise for a while (say, for the achievement of a major objective), but if he is affected by an external stimulus (impulse), he is able to buy something without consideration.

The anxious personality type is also present here. The common characteristic feature of people in this group is that they lack self-confidence, they are afraid to lose control, and therefore they control their finances. Typically, they continuously monitor their financial situation.

For people in the group of risk-takers, money means adventure, excitement and freedom. They like to risk their money, as they enjoy the shivering and adrenaline, which come with it.

And last but not least, the last category of *Mellan* (*1997*) is the group of risk-avoiders. For them, money equals security, therefore, they prefer keeping their money at home, if they can.

Based on the above points, we can say that research on financial personalities has significant roots, but, at the same time, we can also say that certain personality types cannot be clearly distinguished from each other: there are some overlaps between them (*Béres et al. 2015*).

Considering the time that has elapsed between the individual studies (and the different metering scales), we can draw the conclusion that the individual group-creating features also change with time (the emphasis is shifted).

3. Methods

3.1. Questionnaire

In order to identify the financial personality types of respondents, and to find out what behaviour patterns, habits and attitudes characterise them, we compiled a personality test containing 36 statements (*Annex 1*). For each item of the questionnaire, the responding persons had to decide to what extent the given statement was true for them. They were able to do so by using a Likert scale of five degrees, in which 1 means not agreeing at all, and 5 means full agreement.

The questionnaire was inquired on-line from the www.penziranytu.hu website, from 3 June 2015 to 17 August 2015. In the specified period, a total of 3,139 respondents filled in the questionnaire, and following data cleaning, 3,088 persons remained. It can be seen that not a lot of respondents had to be excluded in the course of data cleaning. Those who started to fill in the questionnaire, usually completed it. In the case of on-line questionnaires, it may often happen that respondents interrupt the completion of the form for some reason (they find the questions boring, they think that the questions are not relevant for them or may find them disturbing, or do not understand the statements, etc.), therefore they cannot be included in the final analysis. In this study, this problem did not occur. Another similar problem with the on-line self-completion methodology may be that respondents do not take the answers seriously, and tick the same answer to each question (e.g. one), or tick the answers erratically, without any thought. In order to mitigate this problem, we incorporated reversed statements, i.e. when statements of similar contents are included in both assertive and negative forms. All of this allowed us to exclude respondents who entered contradictory answers.

In the present research, the high rate of respondents and the honest replies were facilitated by the following factors.

Way of phrasing: We tried to phrase the statements in a way that respondents would not feel the subject too scientific or remote, and be more motivated to give honest answers to the questions. At the same time, the simple and respondent-friendly phrasing also allowed us to minimise the risks of misunderstanding.

Omission of sensitive issues, ensuring anonymity: We requested no demographic data in the questionnaire, so that respondents would not feel that they could be identified at the end of the study. The lack of demographic variables can also be interpreted as a limitation of the research, but it significantly increased the willingness to reply, and thus we were able to analyse the contents of the scale with a sample of large number of items.

Inclusion of motivation element: Following the completion of the form, respondents immediately received the evaluation of their profile suggested by their replies. The inclusion of this feedback into the research also resulted in higher willingness to participate, and facilitated honest replies as well.

3.2 Personality profile

In the course of this research, we worked with two types of personality profiles. One of them was compiled by Erzsébet Németh, the developer of the test, and that is referenced in this article as a pre-defined personality profile. In this case, following the completion of the test, respondents immediately get a so-called personality profile and an evaluation of their scores achieved in the pre-defined dimensions (Price-sensitive, Economizing, Moderate, etc.).

In addition, we worked out another personality profile obtained in an empirical manner. These personality dimensions were obtained with mathematical-statistical methods on the basis of the answers to the individual statements.

3.2.1. Pre-defined personality profile

The questionnaire is a so-called Likert-scale of 36 questions. The respondents may use a scale from one to five to evaluate the extent a specific characteristic feature characterises them. They have to answer questions such as: "It happens that on a bigger shopping trip, I spend more than I planned"; "I will make a snack so that we do not have to buy anything in the buffet"; "The yellow cheques are killing me", or "I know exactly what costs what", etc.[3]

Considering the fact that the research put the emphasis on features that are related to financial culture and that are considered positive, in the development of the individual personality profile patterns and the statements representing them, the pre-defined personality types also reflect these elements. In other words, the individual statements belonged to six categories: (*1*) Price-sensitive, (*2*) Economizing, (*3*) Moderate, disciplined, (*4)* Saver, (*5*) Diligent, (*6*) Aware.

In the questionnaire, six statements belonged to each dimension.

The pre-defined personality profile was immediately evaluated, so the respondents received prompt feedback. The basis of the evaluation was the value of the answer given to individual questions on the Likert scale, i.e. if they fully agreed, it was 5 points, if they did not agree, it was 1 point. If somebody achieved more in a given dimension than 17 points,[4] then they received a positive evaluation along that dimension, and if they received 17 or less, it was a negative evaluation.

Pre-defined personality profiles are evaluated in two ways. On the one hand, we select those who received the most or the least points in a given dimension, and compare their averages with each other, and, on the other hand, we check how they perform compared to the average of the total.

3.2.2. Personality profile obtained in an empirical manner

According to our hypothesis, the pre-defined personality profile – especially because of the overlaps between individual financial personality dimensions – will differ from the personality profile obtained in an empirical manner. In order to determine the latter, we apply mathematical-statistical methods with multiple variables (e.g. factor analysis).

[3] *For details, see: http://www.penziranytu.hu/penzugyi-szemelyisegteszt*

[4] If the respondent enters the value of 1 to each question, the minimum number of points is six, so we did not take half of the possible maximum, i.e. 30, which would have been 15, but lifted the dividing line, so the dividing value was 17 points.

4. Results

4.1. Characteristics of the basic dataset

The number of items in the sample mentioned in the methodology description is 3,088. Socio-demographical data are not related to the database, so we are unable to check the representative nature of the dataset (we treat it as a non-representative sample), but the large number of respondents allow us to consider our results valid.

4.2. Answers to the statements in the questionnaire

In connection with the 36 statements in the questionnaire, respondents had to decide whether or not that statement was true about them. The number one indicates that something is not typical at all for the respondent, while number 5 means that it is totally typical of him.

The largest number of fives were given to the statement that people know exactly how much money they have. Although we must not forget the fact that the less resources are available to us, the more attention we pay to that, we take it as a positive feature for the financial personality, because when we do not know what we control, we will probably not achieve a good result.

Approximately 45% of respondents indicated that economizing was totally true for them when they had little money, and also, that they did not like to throw out still usable things, which we also evaluated in a positive way, as the former reflects an economizing character, while the latter reflects the proper assessment of values (being aware of the real value of a given thing).

In addition, more than 30 per cent of respondents thought it was completely true for them that they controlled their spending, always had enough savings, compared the prices in shops where they took shopping lists compiled with proper consideration. From the aspect of the financial personality, we evaluated these features as positive aspects in each case. There was only one exception in the category over 30%, which we evaluated a bit more negatively, namely the situation when someone wants to provide his child with everything. The reason for the more negative qualification is that in our opinion – considering pedagogical aspects, too – it is not necessarily a positive process over the long term when a child receives everything and does not have to work for it. However, the reason why we do not consider it as a clearly negative feature is that respondents may have interpreted this statement in a more moderate sense.

Reversing the scale, a little more than three quarters of respondents said that they had no financial problems at the end of the month, i.e. they did not have to borrow money. This is completely true for 4.37 per cent only. From the aspect of judging the financial personality, we also considered this as a positive feature, because when someone needs no loan at the end of the month, it means he is able to economize, and it implicitly means that he has enough income to maintain his standard of living.

A little higher ratio is represented by people who think it is completely true for them that they have an enormous amount of debt (7.8 per cent), but for the vast majority it was still not true at all – almost 64% of the respondents.

In addition, more than 40% of respondents think that they are always able to pay their bills in time (people who always pay late represent a ratio of 8.55 per cent). If we look at the ratio of people for whom this is not really the case (who selected 1 or 2), their total ratio is close to 70 per cent (if we add those who selected 3, they represent 80 per cent), and looking at the whole dataset, it is also a positive feature.

The most dividing statements (where each category was selected by at least 14 per cent of respondents) are as follows: (*1*) When I need more money, I take on extra work. (*2*) I make a sandwich, so that we do not have to buy one in the buffet. (*3*) I always have enough savings for unexpected expenses.

The more they feel the above three statements are true about them, the more positive their assessment will be from the aspect of financial personalities. Considering the fact that all three mean a kind of willingness to perform extra activity (work), we think that – also considering the features of the work supply curve – the statements looking at the approach to work belong to the key factors of financial personality. The reason is that individuals can be best distinguished from each other by these features.

Last but not least, we should mention statements that resulted in the most neutrality, i.e. where the number of 3 responses given to the statements was highest in the replies. In our case, these statements were “we like it, when our home is nice and warm”, or “we spend a lot on healthy food and mineral water”. Almost 35% of respondents gave a value of 3 to these statements. In our views, from the aspect of judging the financial personality, these are negative statements, but in these cases, together with the 1-s and 2-s, the total picture is positive, i.e. these statements are not typical of more than 73 and 64 per cent of respondents.

4.3 Pre-defined financial personality profile

In each category we defined, we examined if respondents belong to the positive or negative range within the given financial personality dimension (to what extent the given dimension is true for them), and on the other hand, we compared them with people who were least characterised by the given feature (who received the least points to the six questions in the given dimension). In the evaluation of the above results, a dimension was considered positive if the people with above-average results in that dimension also had similar results in other dimensions, because the pre-defined dimensions were defined by using the positive financial personality features.

4.3.1. The price-sensitive

Within the total dataset, altogether 327 people (10.6%) received the highest points on categories defined for price-sensitivity. On the other hand, for 554 people (14.3%) price-sensitivity was the weakest feature.

With the exception of being moderate, price-sensitive people always have a positive assessment, so they are in the positive domain on the pre-defined scale (their average value is higher than 17), but looking at the total dataset, they do not exceed the average. At the same time, it is interesting to note that the least price-sensitive people have the best performance in all other dimensions. Therefore, our conclusion is that *price-sensitivity is not necessarily a positive category when we talk about financial personalities*.

4.3.2. The economizing

More than one fifth of the total dataset (20.95 per cent) reached the highest points in the economizing dimension. It can be said about them that their financial personality image is positive in terms of all characteristic features according to pre-defined categories, but even despite its size, the group is below the average of the whole dataset. Based on that , we can say that *economizing in itself does not mean a positive personality image* – all the more because in other categories, people who can manage their money in a less efficient way, usually perform better. At the same time, it must be noted that the differences between individual dimensions are by far not as large as they were in the case of price-sensitive people.

4.3.3. The moderate (disciplined)

Regarding the group of moderate people, the most interesting point is that almost 22% of those asked belong to people for whom this is their least typical characteristic feature, and it is most typical for only 5.76 per cent of them. The moderate are closest to the average of the whole dataset in the respect of saving and diligence. Therefore, we can draw the conclusion that *being moderate does not necessarily influence whether or not someone is a saver or hard-working*. The difference between the most and least economizing people is smaller than in the case of price-sensitive and economizing people, i.e. the sample is better-balanced along this dimension.

4.3.4. The savers

Only 12.4 per cent of those asked belong to the group of people for whom saving is the most important thing, and those, for whom saving is the least important feature, represent only 8.1 per cent.

It is important to note that the members of both groups are above the expected value of 17, i.e. saving characterises all respondents independently of the fact whether they found it important or less important.

To make it even more interesting, the least thrifty people are the ones who performed above the average of the whole group in each dimension. Therefore, our conclusion is that *saving is important for individuals, and it is a good indicator to judge one slice of the financial personality, but it may be misleading in itself.*

4.3.5. The diligent

The most important conclusion regarding the dimension of diligent people is that most of the respondents (approx. 23.67 per cent of all respondents) received the least points in this category, i.e. the number of people who are not really diligent is the highest within all categories. The most and least diligent people are above the pre-defined dividing line of 17 in every other category.

4.3.6. The aware

Aware respondents are people who are able to control their finances. We find it a very positive feature that 25.4 per cent of respondents, i.e. more than one fourth of them received the highest points on awareness. Individuals putting financial awareness in the focus received more points in each category than those who rated another feature higher. Based on that, it is obvious that *financial awareness, i.e. when someone is able to control his finances is clearly the best indicator for judging the financial personality.* It happens only in the case of people preferring awareness that they always perform above the average of the overall dataset, but it is also due to the fact that they represent the highest ratio, so no more conclusions are drawn from this.

4.3.7. Lessons from pre-defined dimensions

Having examined the individual dimensions one by one, we collected useful pieces of information. The first and most important thing is that for the description of a financial personality – to decide what can be considered a positive direction – in most cases it is not enough to make decisions on the basis of a special indicator, but in individual cases, it may serve as an extremely good guidance.

It turned out from the results that the price-sensitive do not necessarily have proper financial personality profiles. We accept that as a result, as on a second thought, when price is a primary consideration for someone, then quality (be it a product or a service) is only of secondary or lower priority, so it may happen that at the end we have to spend more times and higher amounts on something. This may refer to the lack of long-term thinking and investment-centred thinking, which is not positive from the aspect of the financial personality profile. In summary, if we *look at price-sensitivity only, in our opinion, people who are less price-sensitive are judged in a more positive way*.

It is usually judged in a positive way when someone is able to economize with the sources available to him. In our case, it has not been clearly proved about the economizing personality whether it is positive or negative from the aspect of the financial personality; this requires more examination.

As far as being moderate is concerned, this was the characteristic feature for which the majority of respondents received the least number of points. Based on the values of the respondents, we were able to draw the conclusion that *being moderate does not influence the fact whether someone is able to economize or not*.

The number of people who thought saving was the most or least important thing is low. That leads us to the conclusion that saving is a feature that is considered important by most people participating in the survey, but it is not important enough to play a role for them. This is why we think that *saving in itself cannot be an indicator for the assessment of the financial personality*. This is important because in the credit rating systems of banks, savings (or, in other words, saving up money) are included as evaluation considerations regarding saving. From macro-economical approach, it is important because saving is not of primary importance in the views of respondents, but investments realised from savings are important at the national economy level. What this means to us is that both the competitive sphere and the public sphere should continuously stimulate savings with their own measures, in order to take the economy in a positive direction.

We found it an important positive feature that the ratio of the least diligent people was the lowest within the whole dataset. It also means to us that respondents attribute real value to income obtained through work, so it is less likely that they will spend it carelessly – in other words, it is more likely that they will maximize their usefulness with a choice on the basis of proper value for money, when it comes to spending their income.

Last but not least, it can be considered as a significant positive feature that *most respondents control their finances, so they received the most points on awareness*. This is all the more positive because individuals classified as aware pay more attention to their environment, and it happened only once in their case that they performed better in each dimension (received a higher average value) than respondents who attributed the least importance to awareness. Therefore, we think that *the best way of assessing the financial personality is to put awareness in the centre of future examinations and research*.

4.4. Personality profile obtained in an empirical manner

We have already seen the results that could be achieved by evaluating the financial personality profile through the pre-defined financial personality dimension. However, when designing this study, we were aware that an individual's financial personality profile may be determined according to different dimensions as well, because there are sometimes only slight differences between individual dimensions. In the following, we examine other dimensions according to which respondents could be evaluated.

In establishing the dimensions, we ran factor analysis for the statements in the questionnaire, or rather, for the answers. Based on the factor analysis, a total of nine groups emerged. On the basis of the results of people who statistically received similar number of points to the same questions, we have created our own dimensions: (*1*) Economizers with little money, (*2*) Money-devouring (opposite of moderate), (*3*) Order creates value, (*4*) Price-sensitive, (*5*) Collector, (*6*) Planner, (*7*) Ups and downs, (*8*) Diligent, (*9*) Cannot control finances

It is obvious from the categories that there are overlaps with pre-defined categories, but the factor analysis allowed us to set up more sophisticated dimensions.

4.4.1. Economizers with little money

The dimension of economizers with little money includes people who have trouble managing their finances, most of them struggle with debts, but at the same time and as opposed to it, it may happen that they also have some savings. Economizers with little money, while struggling with their financial problems, are convinced that they are able to control their finances well. *We found it a positive feedback for the conclusion drawn for the pre-defined categories that economizing does not necessarily mean a positive financial personality image.*

4.4.2. Money-devourers

Among the characteristic features of money-devourers, it is primarily the short-term features that dominate – they love to have fun, they immediately buy what they like, they love shopping and often reward themselves. It is important to point out that risk-taking is also present here. All in all, we could call this category "dolce vita", i.e. sweet life, but this cannot be maintained over the long term, so the assessment of respondents belonging here is not positive from the aspect of financial personality.

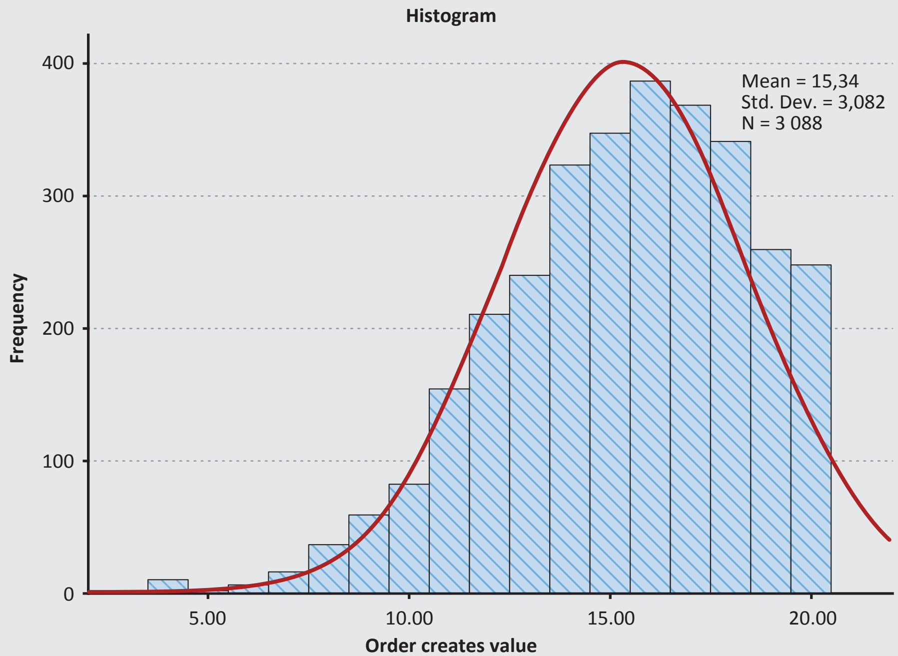
4.4.3. Order creates value

From the aspect of the financial personality, it is worth focusing on this dimension. If someone performs well here, he keeps track of his expenses, knows exactly when and how much money he has, and from this, it partly comes that he keeps his home and household tidy, and before shopping, always thinks over what he needs. If we had to find one indicator for high-level financial culture, this would be it, on the basis of the profile gained in an empirical manner.

As the factor consists of four statements, respondents were able to give altogether 20 points. Based on *Figure 2*, we found it a positive feature that a significant portion of respondents gave an average mark of at least 4 to the four questions (both the modus and the median values are 16), and, in addition to that, more than half of the respondents gave a value of 16 or higher.

From the pre-defined categories, the dimension of the aware is closest to the order creates value dimension.

Figure 2
Order creates value factor (distribution)



Source: authors' work

4.4.4. The price-sensitive

The dimension obtained in an empirical manner contains people for whom it is most typical that they compare prices before shopping, and as a result, are able to take their time in selecting the articles. They know the exact price of everything, and because of the time and energy invested in the process, they find it hard dispose of their belongings.

This dimension is different from the price-sensitive group defined by us in advance, as in this case, the focus is rather on good value for money and on long-term interests, while in the pre-defined group, price-sensitivity meant that individuals could have additional expenses in the future, because low prices may be coupled with poor quality – thinking about the Veblen-effect – and may generate additional expenses in the future.

The above points also indicate the general weak points of financial personality profile definitions – which were partly known during the processing of the technical literature – which means that the definition of the financial personality dimensions of people always involves certain challenges without the firm definitions of terms.

4.4.5. Collectors

In this dimension, those people reached higher scores who take advantage of sales and try to amass everything. They do not necessarily keep their environment tidy, but when they do, they realise how many unnecessary things they have. When they go shopping, they usually buy more items than they planned. We can say that they are capable of long-term thinking, but momentary impacts and impulses divert their behaviour in the wrong direction. In other words, we could call them the victims of marketing.

4.4.6. Planners

The name of the dimension refers to the fact that people reaching higher scores in the category usually compile a list before shopping (they plan what they want to buy). We can feel that they have awareness, but based on their features, they are different from the order creates value dimension. Therefore, we think that *in addition to the order creates value dimension, it is the planners dimension that clearly indicates a positive financial personality.*

4.4.7. Ups and downs

In this dimension, savers and spenders are together, so we thought that *Mellan's* (*1997*) rioter category would fit them best. However, rioters clearly refer to a negative category, and therefore we felt it important to ease the description. In fact, from the aspect of financial personality, their assessment depends on which feature is stronger in the given respondent.

4.4.8. Diligent

This dimension corresponds to the diligent category pre-defined by us. The central organising principle is work, in connection with which individuals assess the acquired income, and as a consequence, they are able to appreciate it. The assessment of individuals reaching highs scores in this category is clearly positive in respect of their financial personality.

4.4.9. Cannot control finances

When giving a name to this dimension, we could have selected the use of the money-devouring category, because even people with high scores here spend money like water, and are unable to fully control that. The difference from the previous money-devouring category is motivation. While in the previous category the motivation (e.g. shopping) was to maximise the advantages over the short term (pleasure), here the individuals are not able to appreciate the real value of the goods they wish to consume, and over the short term it means that they are surprised at the amount they have to pay at the cash-desk, and over the long term, it may take the development of their children in a negative direction, as they give everything that their children desire. From the aspect of the financial personality, we do not classify it as a positive dimension.

4.4.10. Lessons learned from dimensions obtained in an empirical manner

It is obvious from the established dimensions that in the creation of the individual financial personality profiles, it is not possible to draw sharp dividing lines, which is a weakness – and a strength – of all financial personality profile studies.

We found it a positive feature that several of the pre-defined financial personality dimensions could partially or fully be matched with the new personality dimensions created on the basis of empirical data, for instance price-sensitivity, diligence, planning and being moderate. Personality dimensions obtained in the empirical way were also interpreted as the validation of pre-defined dimensions.

The order creates value dimension and the planner dimension obviously contain characteristic features which are the most likely bases of having a positive financial personality that can be considered good. This is all the more important as in loan assessments by banks, the weight of subjective elements is high, but the set of tools available to assess it is rather limited – it is primarily based on personal impressions. Consequently, what this research can offer as a contribution to the development of such systems is the implicit questions, based on which we can draw some conclusions about the debtor’s personality and behaviour pattern, and the key point for the bank is whether or not the person will be able to repay the loan.

5. Summary

This research served two purposes. On the one hand, with proper foundations from the technical literature, to determine and test financial personality dimensions which lead us to believe at the beginning of the research that it would be possible to define the financial personality profile of an individual. On the other hand, we were aware that, because of the overlaps between individual dimensions, real life will not fully confirm our ideas. Therefore, our secondary objective was to determine new dimensions typical of the given dataset, using mathematical-statistical methods, on the basis of the answers received. We also used the latter to validate our originally established model.

Our sample used in the research was not representative, but it contained a high number of elements (almost 3,100), and therefore we believe that the conclusions from the sample are suitable for drawing effective conclusions. It must be noted though that respondents' points in individual dimensions may depict a better picture of domestic financial awareness, than measuring the same in a representative sample. It can be supposed that if someone devotes the time to fill in a test (and finds it), he will be interested in the subject more than the average.

Our most important conclusion is that it is very difficult to evaluate the financial personality of individuals along one specific dimension: it may present a number of challenges and false directions. However, it is important to note that both the pre-defined and the empirical dimensions contain dimensions that may be suitable for this purpose.

Among the pre-defined dimensions, awareness and diligence are such categories, while among the dimensions obtained in an empirical manner, these were diligence and planning. As the names are not separated significantly, the contents of these dimensions are not significantly separated from each other. Planning, a long-term approach, the assessment of money through the work done for it are all positive features for the financial personality.

As to the usability of the results of the research, we think that they can be used best as a starting point for further financial personality research, but they could also be well utilised for business purposes. One option is loan assessment in banks, as the answers given to the statements may offer some objective information on the borrower, which used to be part of subjective loan assessment before.

Finally, we can also draw macro-economic conclusions, based on individuals' preferences. Saving seems to be an objective that is considered important by the majority of the participants of the surveys, but it does not play a central role in their financial personality profiles. In other words, we can say that retail savings are able to grow and will grow as a result of incentives only, whether these are induced by the private sector or the public sector, it is irrelevant from the aspect of the financial personality.

The most important lesson to be learned from the research is that individuals can do a lot to be better off. Both the pre-defined and empirical dimensions indicate that the most efficient strategies are financial awareness (planning and recording expenses) and the improvement of diligence. Economizing and price-sensitivity alone are not enough, especially if the person tends to do impulsive shopping. It is worth building subsequent examinations on the results of the research, and carefully examining these personality types and relations.

The results of the research may be a useful source of information in the development of domestic programmes aimed at improving financial culture, and may offer some support to the formulation of the national strategy of financial culture development and to the development of operating plans.

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