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What shapes spending styles: demographics, income, or individual psychological traits?[1]

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Abstract. Financial behaviour is quite often explained by demographic variables (e.g. age, education) and the level of income. It turns out, however, that these variables only partially explain financial behaviour, and analyses that consider psychological variables (such as personality traits, self-control, time perspective) better explain the complexity of financial attitudes and can better predict financial behaviour. This article presents a model of Money Spending Styles based on two dimensions: (a) behavioural: ease of spending and control of expenses, and (b) emotional – emotions accompanying this behaviour (positive vs. negative). The model distinguishes four spending styles: *Spendthrift*, *Belt-tightening*, *Happy spending*, and *Thrifty spending*. Data presented from qualitative (in-depth individual interviews) and quantitative (surveys on representative samples) research show the difference between these styles as well as their dependency not only on demographic variables and income level, but also on psychological variables (as Big Five personality traits and time perspectives).

Keywords: money spending styles, materialism, Big Five, time perspective.
JEL Codes: D14, D13.

1. Introduction

Economists usually explain differences in people's financial behaviour through their material situation: those who have more money, spend more, buy more expensive products, have greater savings, invest more often, take out insurance, and also save for retirement. This seemingly simple relationship holds true if we look at it at the observed statistical relationships in a macro perspective, but it ceases to be so if we view the question from an individual perspective. Often turns out that comparing two people with similar incomes and similar life situations, one will spend money quite freely and easily, while for the other every penny spent causes

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a lot of pain. Another example would be two people, again in similar life and material situations, where one always has savings, while the other is not able to save at all and is always running short by the end of the month. What may explain such differences is that financial behaviour depends not only on a person's financial resources (which of course it does to some degree), but on many other individual and psychological factors, for example a person's general approach to life, degree of optimism, sense of control over their own destiny, relationship to money, style of money management, or also their relationship to financial institutions.

Take for example saving. Economists frequently link the possession of savings directly to financial means – whoever has a greater amount of money at their disposal also has greater savings. Many studies on saving confirm this relation, indicating that the amount of savings depends on the level of household income and wealth [Xiao, Anderson 1997]. Davis and Schumm [1987] studied saving-related behaviour in low-income and high-income households and found that above a certain threshold, savings rose dramatically. A similar relationship has been found by other researchers, who sometimes even assert that income is the most important determinant of savings [Harris, Loundes, Webster 2002; Dynan, Skinner, Zeldes 2004].

Explaining saving, like other financial behaviours, solely or mainly through financial means or demographic factors, while omitting psychological factors and individual differences, seems, however, to be an oversimplification. This article will show that aside from the level of income – which no doubt is a significant reason why a person may undertake certain financial behaviours – there are many other individual and psychological factors that determine how a given person approaches their finances, whether they spend freely or with difficulty, or also whether they spend too freely, unable to manage their finances.

2. The role of individual factors in shaping financial behaviour

The time when human economic behaviour was viewed solely from the perspective of finances and demographics fortunately now belongs to the past. It is now known that many financial decisions depend to a great degree on non-financial factors, both those that are situational in nature [Simon 1987; Kahneman 2011; Thaler, Shefrin 1981], and those related to people's individual disposition arising from their cognitive and personality traits [Donelly, Ivyer, Howell 2012]. The interest in non-financial factors influencing economic behaviour is leading economics closer to psychology and is increasingly attracting greater interest from scholars operating on the frontiers of both the fields as behavioural economics [Kahneman 2011; Thaler 2016] or economic psychology [Zaleśkiewicz 2013; Wärneryd 2004].

2.1. The significance of personality traits for financial behaviour

What attracts the greatest interest of those studying individual determinants of economic behaviour is the classic five-factor theory of personality, known as the Big

Five, the name coming from the Big Five Personality Model [McCrae, Costa 1989; Costa, McCrae 1992]. This model distinguishes five key dimensions of personality: conscientiousness, extraversion, agreeableness, neuroticism (vs. emotional stability), and openness to experience [Costa, McCrae 1992]. This is a hierarchical model of personality, which means that each of the five main dimensions has lower order facets, six for each dimension. For example, agreeableness includes modesty, straightforwardness and altruism, and conscientiousness includes dutifulness, self-discipline, and deliberation.

A fundamental assumption of personality theory is that personality traits are internal predispositions to behave in a particular way. This means that people with a high level of a trait (with a high score in the questionnaire) will behave differently than people who exhibit a low level of behaviour associated with the given trait. The Big Five model has been successfully applied in management theory, where the relationship has been demonstrated between personality traits and professional efficiency or helped understanding of individual behaviour in organizations [Mount, Barrick, Stewart 1998; Consiglio, Allessandri, Borgogoni, Piccolo 2013]. Another area is marketing, where the relationship between personality dimensions in the Big Five model and consumer behaviour has been studied, including their relationship to perceptions, preferences and brand choices [Westfall 1962; Sirgy 1985; Mulyanegara, Tsarenko, Anderson 2009].

The concept of the Big Five is gaining greater popularity among those researching financial behaviour, and at the same time is probably the most widely used personality model in this field. The first area in which this theory was used to seek explanations for financial decisions was in the behaviour of investors in stock markets [Zaleśkiewicz 2007]. Studies have shown that apart from individual traits such as an inclination to take risks or self-confidence, investment behaviour also depends on features directly related to the Big Five taxonomy, such as creativity, which is a component of openness to experience [Erbas, Bas 2015] and optimism, which is related to emotional stability [Angellini, Cavapozzi 2017]. Optimism encourages risky financial behaviour, while risk avoidance (a component of conscientiousness), a low level of trust and a lack of social interaction (components of extroversion) discourage it. Studies of individual financial behaviours also show how they are related to the personality traits in the Big Five model [Brown, Taylor 2014]. Extraversion is conducive to a higher level of debt, openness to experience correlates positively with the ownership of assets, while conscientiousness is negatively correlated with the amount of debt.

In the area of financial management, the Big Five concept has also contributed greatly to the understanding everyday money management. The results of various studies have shown that the most important in this context is conscientiousness. People with a higher level of conscientiousness have greater self-control and, as a result, they clearly manage their finances better. Such people are more self-disciplined and responsible, which affects their financial behaviour. They meet their financial obligations on time, have greater control over their spending and do not make risky decisions. In addition, they save more [Webley, Nyhus 2001; Brandstatter 1996; Wärneryd 1996; Donelly, Ivyer, Howell 2012] and are less prone to go into debt [Webley, Nyhus 2001]. In other words, conscientiousness is conducive to better financial management. In contrast, neuroticism (i.e. emotional instability) predicts a tendency to go into debt [Webley, Nyhus 2001] and impulsive behaviours [Brougham et al., 2011; Dittmar 2005].

The classic questionnaire to study the five-dimension model of personality consists of sixty statements to which a person is to respond ([Costa, McCrae 1992]; the Polish adaptation by Zawadzki et al. [2007]). There is also an abbreviated five-factor inventory of personality, TIPI or Ten-item Personality Inventory [Gosling et al. 2003], which is made up of fifteen statements.

2.2. The significance of time perspective for financial behaviour

The personality traits distinguished in the Big Five model are not the only individual psychological traits of interest to scholars of financial behaviour. Another important factor that influences financial behaviour is the time perspective, that is, people's view of the world in the context of time, which includes their past experiences, how they perceive their current status and expectations for the future. Consequently, one speaks of three temporal areas: past, present and future, and it is assumed that every human activity is always integrally connected with the time perspective which includes not just the present (the moment of action), but also the past (previous experiences) and the future (consequences).

Probably the best-known concept of time in psychology is Zimbardo and Boyd's Time Perspective Theory [2009], which reflects the diversity of people's attitudes towards time. The authors developed the Zimbardo Time Perspective Inventory – ZTPI [Zimbardo, Boyd 1999]), consisting of fifty-six statements encompassing five independent dimensions referring to the following orientations: (1) past negative; (2) past positive; (3) present fatalistic; (4) present hedonistic; (5) future. People being evaluated rate statements relating to each of the above five perspectives on a five-point scale as to how typical or true they are for them personally. In 2013, Zhang and colleagues [Zhang, Howell, Bowerman 2013] created an abridged version of the Time Perspective Inventory, selecting the three strongest statements from each scale. They thereby developed a tool with fifteen statements (Short Zimbardo Time Perspective Inventory – SZTPI), allowing measurement of the five time perspectives. The developers of the shortened version of the tool assessed its psychometric properties and obtained satisfactory results [Zhang et al. 2013].

Zimbardo and Boyd [2009] distinguished five time perspectives. The first two are related to the past – positive and negative perspectives. A *past positive* time perspective includes perception of the past and not just an objective comparison of good or bad events. A positive attitude towards the past can be a reflection of the positive events that people have actually experienced, but above all it is a positive perception of past situations that may not necessarily have been positive.

Likewise, a *past negative* time perspective reflects a negative attitude to the past, which may be the result either from the actual experience of unpleasant, unfavourable events, but above all from the negative perception of what has taken place in the past. The next two perspectives concern the perception of the present. The first is the *present hedonistic* time perspective, which characterizes people who actively seek pleasure and at the same time avoid whatever is unpleasant. People with this perspective choose activities and relationships in life that are stimulating, exciting and new. On the other hand, people with a *present fatalistic* perspective have no sense of having an influence on what occurs to them in life, or that they have any control over it. They are resigned, not believing that their behaviour can influence what will happen to them in the future. Their perception of the world is dominated by pessimism and fatality. The last is the *future* time perspective. It is characteristic of people who plan their future - both the nearest (e.g. the next day) and the distant future (e.g. years); these people set goals that they want to achieve and consider concrete steps (strategies) that lead to doing so. They also often sacrifice immediate gratification (profit), expecting a higher reward in the future.

At this point, the question arises as to how important the time perspective is with regard to financial behaviour, e.g. when people decide to save or not, when they choose forms of saving or investing their money, when they think about taking out insurance or putting aside money for retirement. Many studies confirm that proper time estimation is an important factor regulating economic behaviour such as saving, investing or taking out insurance. Zimbardo and Boyd [2009] have shown that depending on their time perspective, people show differing approaches to money and economic behaviour. Other studies have shown that people who plan their future carefully and assume a longer time horizon have greater savings and less debt (cf. [Lunt, Livingstone 1992; Lea et al. 1995]) and more frequently purchase insurance policies [Economidou 2000; Perek-Białas, Rószkiewicz 1999; Brzozowska, Goszczyńska 2002]. Yet another study showed that people who stated that they had savings and contributed regularly to them exhibited a lower level of the future negative and present fatalistic time perspectives (that is, perspectives in which a lower sense of agency is dominant) and a higher level of the future time perspective [Sekścińska, Goszczyńska, Maison 2018]. The study also showed that the future perspective was clearly conducive to having various types of insurance. Persons with automotive comprehensive cover (CC), accident insurance, home and supplemental health insurance had a significantly higher level of future time perspective than those without such insurance. On the other hand, their levels of past negative and present fatalistic perspectives were higher. It also turns out that the time perspective differentiates whether a person is inclined toward making safe or risky investments [Sekścińska, Rudzińska-Wojciechowska, Maison 2018]. A high level of the future perspective (future TP) was conducive to a willingness to invest, but at the same time to seek safe investment options (bonds). On the other hand, a high level of the present hedonistic perspective was associated with a lower willingness to invest, and, if at all, in higher risk investments (stocks).

In sum, a series of studies exploring the relation of time perspectives to different financial behaviours have shown the importance of four time perspectives in the context of financial behaviours: past negative, present fatalistic, present hedonistic, and future. The future time perspective seems to be conducive of the most mature financial behaviour: setting money aside, taking out various kinds of insurance, or making low-risk investments. The present fatalistic time perspective is conducive to not undertaking any financial activities, especially any related to saving or taking out insurance. This result is understandable in that people with a high level of this time perspective have a little sense having any influence on what happens to them in life or control over their own destiny, resulting in their tendency to give up on many kinds of actions, including financial ones. Similar results of not taking advantage of available financial solutions can also be seen in people with a stronger past negative time perspective. On the other hand, the present hedonistic time perspective favours immediate consumption (instead of e.g. saving) and less safe behaviours, such as investments burdened with higher risk (stocks).

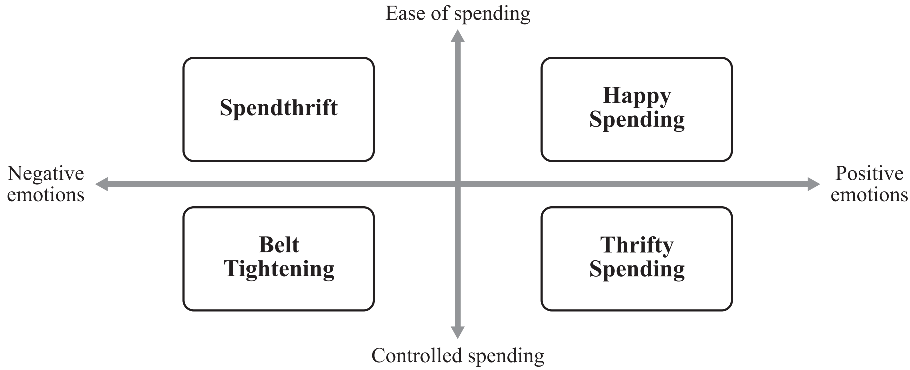
3. Money Spending Style – MSS – an original model

3.1. What are Money Spending Styles?

When managing their money, people make various decisions, for example, whether the money they have at their disposal should be spent later, whether to spend it on whimsical pleasures or on necessities. In this context, the question arises as to why some are better at financial management than others. Why do some people, with the same salaries, always have money, while others constantly struggle with their finances? Why is it easy for some to buy new things while others suffer at every penny spent? The simplest economic explanation for these discrepancies are differences in income. This is insufficient as an explanation, however. It turns out that low-income people who are satisfied with their material situation (financial optimists) may sometimes spend money with greater ease than those who have high incomes, but who have a negative perception of their material situation (financial pessimists) [Maison 2013]. Therefore, as previously shown, explanations for the differences in financial decisions and behaviours should also be sought in psychological factors, such as the values a person professes, the degree of cognitive development, and the level of self-control.

Below in Figure 1, there is presented an original model of Money Spending Styles (MSS). The aim of this concept is to understand the differences not only between people who behave differently when spending money (spending easily or with great difficulty), but also the emotions accompanying each of these behaviours (positive vs. negative). The differences between people consist not only in whether they spend money easily or not, but also whether spending money makes them happy or is accompanied by negative emotions, such as feelings of guilt. The same may apply to limiting their expenses, which may be accompanied by either positive or negative emotions. The model is built on two key dimensions. The first is the behavioural dimension - spending money (Figure 1, vertical axis), and the second is the emotional dimension, that is, the emotions that a person feels when spending or refraining from spending (Figure 1, horizontal axis). The behavioural dimension of spending (vertical axis) has two extremes, one of which (a) is ease of spending, and the other (b) is control of spending. The emotional dimension (horizontal axis), on the other hand, has different extremes: (a) positive emotions or (b) negative emotions. At the intersection of the two dimensions, four spending styles emerge, which despite the apparent similarity at the behavioural level, may be in fact different due to the emotions accompanying them. Thus, behaviours connected with refraining from making a purchase, when they result from *Thrifty spending*, are accompanied by positive emotions, while when they result from *Belt tightening*, they are accompanied by negative emotions.

Figure 1. Money Spending Styles



Source: Author's own work.

The four money spending styles distinguished are:

a) *Happy spending* – this style is when people spend money with great ease and at the same time, spending is accompanied by positive emotions. They are able to enjoy the money they have spent and the products they have bought. Sometimes they can buy things that are not really necessary or even reasonable, but it gives them great pleasure.
b) *Spendthrift* – at the behavioural level, this style appears to be similar to *Happy spending*, but the emotional dimension is different. *Spendthrift* behaviour is more often accompanied by negative emotions. In this style, purchases result from a lack of control over finances and manifests itself in people spending beyond their means, the inability to show restraint and postpone a purchase (e.g. until they have more money). Thus, purchases by people with a high level of spendthrift behaviour are accompanied by negative emotions (e.g. a feeling of guilt).

c) *Thrifty spending* – this style has more to do with spending constraints, with more effective control over spending. For thrifty people, not spending money is associated with positive emotions (as opposed to those who are *Belt tightening*) – these people do not spend because they have a high level of self-control, do not give in to cravings, are able to postpone gratification and place expenditures into a hierarchy of importance. People with a high level of this style of financial management often limit their expenses in order to be able to spend money in the future on something more important to them, which will give them more pleasure. Although this style is based on limiting spending, it is accompanied by positive emotions.

d) *Belt tightening* – at the behavioural level, this style is similar to *Thrifty spending*, but it is accompanied by negative emotions. People limit expenses out of the feeling that they have too little money, that they are poor, that they cannot afford pleasures. In this situation, every expenditure is connected with a sense of guilt, a lower feeling of worth, a sense of injustice and injury, and so purchases are not enjoyable.

3.2. Qualitative exploration of Money Spending Styles

Qualitative research devoted to exploration of the money spending styles described above [Maison, Furman 2017] showed significant differences between the styles which are similar on the behavioural level (such as *Thriftiness* and *Belt tightening*) and provided insight into the differences between people exhibiting different money spending styles. The analysis was based on forty in-depth individual interviews conducted in the respondents' homes (ethnographic interviews), each of which lasted around 120 minutes [Maison 2018]. Participants were aged 18-24 years, with their own income. The interviews were conducted in large and small urban areas and in villages[3].

The results of this study showed, first of all, a highly significant difference between people with a high level of *Thriftiness* and *Belt tightening* above all in relation to money, namely, the role money plays in each group, whether more as an end in itself (with a desire to accumulate it) or more a means to an end [Wąsowicz 2008], as well as whether it plays more of a functional or symbolic role for people [Gąsiorowska 2014]. People with a high level of *Thriftiness* are rather indifferent to money, although not to the things that it can buy. One could say that for them money is a means to an end, not an end in itself. Spending money is a joy and pleasure for them, but at the same time, because they manage money rather rationally, it does not occur that they lose control over their budget. Nor do they experience any frustration that for some things they do not have the money. What matters to them is their goal: if it is important, they put money aside for it, if it is something less

[3] The research was financed by the National Bank of Poland as part of a long-term project regarding the use and access to banking services in Poland. More details from the research are described in the article [Maison, Furman 2017].

important, they refrain from buying it without regret. If they want to have more money, it is always in the context of other important concrete goals that money could help them achieve.

For people who exhibit a high level of *Belt tightening*, unlike *Thrifty spending*, money is characterised by emotions, especially negative ones. They experience a predominant fear of losing their money, shame and frustration that they have too little money and a sense of guilt associated with spending it. At the same time, money is perceived by people with a high level of *Belt tightening* as the only remedy for these negative emotions, and therefore they very much want to have as much as possible. Belt tighteners emphasise material values such as status and position, which is why they want more money, and the feeling of there being a lack of it frustrates them. Yet regardless of how much money they have, the negative emotions about money persist or even increase - the more money these people have, the more they fear losing it and the more they desire to have more. Even parting with money in the form of spending is unpleasant for them - it produces feelings of guilt and remorse. They feel no joy in spending and enjoying even the most trivial purchases (as opposed to *Thrifty spenders*). Belt tighteners constantly feel that money could be spent differently, better, and preferably not spent at all. Much of their dreams of the future has to do with to material questions.

> *"I don't tend to give anything up because I can't afford it. I don't need such things. I don't have high expectations. I don't have to have the latest phone, that doesn't say anything about a person. I'm satisfied with what I have right now, it's enough."*
>
> (female, from a small town, Money Spending Style: Thrifty spending)
>
> *"I keep money in envelopes, with birthday cards, camouflaged between books, in books themselves, in an old childhood diary, in clothes, socks, jacket pockets, under the bed. It's spread out in various places, so that no one can steal it all from me. Sometimes I randomly check if it is still there, or I change the hiding place if someone from the family accidentally discovers some."*
>
> (female, Warsaw, Money Spending Style: Belt tightening)

The qualitative study also showed differences between people with a high level of *Spendthrift* behaviour and *Happy spending*, that is, the next two styles that are similar at the behavioural level but differ in emotions accompanying them. People with high levels of these two spending styles spend easily and make spontaneous financial decisions (especially when it comes to spending), with the result that both groups sometimes overspend. Neither group (those with high level of *Spendthrift* behaviour or *Happy spending*) can be said to manage their budgets well. They do not plan their expenditures, nor do they calculate how much they spend and what they spend it on. They make no attempts to reduce one type of spending for the sake of another. However, people with a high level of *Happy spending* maintain relatively greater control over their finances - they know better how much money they currently have and how much they have left. If they go over budget, they do so consciously, also thinking about the consequences. Sometimes they even limit their expenses to stay on budget. They tend to avoid running entirely out of money at the end of the month, which is the norm for many *Spendthrifts*. As a consequence of their greater ability to control their finances, people with high levels of *Happy spending* are more able to save money, although this usually is saving in order to buy something more expensive in the future. Planned savings, however, are very rare in the group of people with high levels of *Spendthrift* style - they can neither save effectively, nor hold on their savings. Even if at the end of a month they may have some money left, they quickly spend it.

> *"I saved up for a holiday, because on holiday I don't regret spending it. At the end I had 3000. One time I put aside 100 PLN, another time 600 PLN, I don't put any special importance on it - simply what I have left over is what I put aside."*
>
> (male, from a small town, Money Spending Style: Happy spending)
>
> *"It's hard for me to save anything on what I earn, things tend to balance out. Sometimes I have something left over, but it doesn't really make sense to save even that."*
>
> (male, from a village, Money Spending Style: Spendthrift)

As assumed, *Happy spending* and being a *Spendthrift*, even though they are similar behaviours, they are accompanied by different emotions. This can be seen, for example, in the reaction to the lack of money to spend. For people with a high degree of *Spendthrift* behaviour, not being able to permit themselves to buy something is a source of frustration and lowers their self-esteem, and consequently arouses negative emotions. In this situation, they look for ways to satisfy their consumption needs, e.g. by borrowing. In contrast, people with a high level of *Happy spending* avoid bailing themselves out with loans, because the need to avail themselves of others' money evokes a sense of loss of independence and is a source of more negative emotions that are much stronger than those coming from denying themselves another purchase.

> *"When the money runs out, you borrow from someone, for example from a friend, then you pay it back, and so on, over and over again."*
>
> (male, from a village, Money Spending Style: Spendthrift)
>
> *"When I run out of money, I reduce my expenses, Two or three times, I miss going out with my friends, too bad."*
>
> (male, from a small town, Money Spending Style: Happy spending)

3.3. Money Spending Styles Scale

Based on the Money Spending Styles model, the Money Spending Styles Scale was developed. This scale consists of thirteen statements (three for three styles and four for one – see Appendix 1), which have been tested in several quantitative studies. Analysis of the reliability of Cronbach's alpha[4] for each style usually reveals acceptable values for three styles:[5] *Happy Spending* (0.8); being a *Spendthrift* (0.79); *Thrifty Spending* (0.87). In contrast, *Belt tightening* often shows a value that is slightly lower than acceptable (0.64).

Further exploration of the relevance of the scale has shown the link between spending styles and emotions and life satisfaction as measured by the SWLS scale [Diener et al. 1985] (Table 1). *Thrifty spending*, as assumed, is accompanied by positive emotions and a higher level of life satisfaction. *Belt tightening*, while exhibiting similar behaviour, is accompanied by negative emotions and less life satisfaction. In the case of being a *Spendthrift* and *Happy spending*, the results are not as clear, but *Happy spending* is correlated (statistically significant, albeit weakly) with positive emotions and satisfaction with life, while being a *Spendthrift* is not statistically correlated with these variables.

Table 1. The relation between Money Spending Styles and emotions and life satisfaction (SWLS)

	Emotions (higher value, more positive emotions)		**Life satisfaction** (higher value, greater life satisfaction)	
n=1048	***r***	***p***	***r***	***p***
Thrifty spending	**0.269**	0.001	**0.268**	0.001
Belt tightening	**-0.164**	0.001	**-0.109**	0.001
Happy spending	**0.091**	0.003	**0.072**	0.019
Spendthrift	0.013	0.680	-0.030	0.336

Source: [Maison 2019].

The next analysis investigated the relationship between Money Spending Styles and materialism [Gromniak 2018]. Currently the most popular understanding of materialism is that of Richins and Dawson [1992], who define materialism as ascribing meaning to the possession and accumulation of material goods, but also emphasising how this is linked to key goals in life. The authors developed an original measurement tool, the Material Value Scale (MVS) [Richins, Dawson 1992], which has three dimensions of materialism: (a) centrality – placing the possession and accumulation of material goods at the centre of one's life, (b) success – regarding the possession and accumulation of goods as something that leads to the achievement

[4] Cronbach's alpha – a statistical test that determines the consistency of the items in a given scale (whether they measure the same theoretical construct). The indicator has a value ranging from 0 to 1. It is assumed that the value of the coefficient should be at least 0.70 for scales intended for scientific research concerning assessment of a problem, and a minimum of 0.80 for the scales used for individual assessment.

[5] Source: survey of a nationwide representative sample of Poles, n=1050.

of happiness and life satisfaction; c) happiness, that is the conviction that possessing and accumulating goods leads to happiness and life satisfaction. In this study, materialism was measured using the Richins and Dawson MVS scale [1992], and its relation to spending styles was analysed in the three dimensions: centrality, success and happiness. 184 adults participated in the study. The results were analysed for each of three dimensions of materialism (see Table 2). *Happy spending* and *Spendthrift* Money Spending Styles correlate most strongly with the centrality of materialism, while *Belt tightening* correlates with the dimension of happiness. This means that for people with a high indicator of *Happy spending* and being a *Spendthrift*, possessing and accumulating goods is of central importance in their lives and is also regarded as an indicator of success in life (correlations with the dimension of happiness are significant, although only slightly). *Belt tightening* is accompanied most of all by the conviction that possessing and accumulating goods leads to happiness and life satisfaction, so the feeling of having too little is a source of dissatisfaction and frustration. The only spending style that had no connection to any dimension of materialism is *Thrifty spending*.

Table 2. The relation between Money Spending Style and the dimensions of materialism (centrality, success and happiness)

	centrality		**success**		**happiness**	
n=184	***r***	***p***	***r***	***p***	***r***	***p***
Thrifty spending	-0.002	0.973	0.107	0.150	-0.111	0.134
Belt tightening	-0.018	0.813	**0.154**	0.037	**0.319**	0.001
Happy spending	0.409	0.001	**0.277**	0.001	**0.164**	0.026
Spendthrift	**0.330**	0.001	**0.260**	0.001	**0.181**	0.014

Source: [Gromniak 2018].

The last analysis examined the relationship between Money Spending Styles and various financial behaviours: level of access to and use of banking services (the level at which various financial tools are used), use of cash loans, possession of savings and investments (Table 3). The most important factor in financial behaviour is the *Thrifty spending* style, which is conducive to more mature and responsible financial management, namely greater use of banking services, higher savings and investments, but at the same time less use of cash loans. The opposite of this is found in *Belt tightening*, which is conducive to taking out cash loans and not having savings and investments (although in this style the correlations with financial behaviour are quite weak).

Table 3. Relation between Money Spending Style and financial behaviours

	Use of banking services		**Cash loans**		**Amount of savings**		**Having investments**	
n=1048	***r***	***p***	***r***	***p***	***r***	***p***	***r***	***p***
Thrifty spending	**0.190**	0.001	**-0.192**	0.001	**0.398**	0.001	**0.201**	0.001
Belt tightening	-0.023	0.465	**0.073**	0.018	**-0.089**	0.004	**-0.104**	0.001
Happy spending	0.107	0.001	0.026	0.403	0.053	0.086	0.038	0.216
Spendthrift	0.056	0.069	**0.063**	0.040	-0.021	0.507	-0.005	0.878

Source: [Maison 2019].

4. Individual factors determining Money Spending Style

The aim of this article was to consider the individual psychological factors that may have an impact on financial behaviour. The convergence of psychology and economics currently is enjoying constantly growing interest. This was initiated by economic psychologists [Wärneryd 2004; Zaleśkiewicz 2013] and the field of behavioural economics [Thaler 2016]. This article addresses the meaning of individual psychological traits, that may explain Money Spending Styles.

The Money Spending Styles model presented in this article is based on two dimensions: control vs. ease of spending and the emotions accompanying each of these behaviours (positive vs. negative). At the intersection of these dimensions, four spending styles have emerged: *Thrifty spending*, *Belt tightening*, *Happy spending* and *Spendthrift*, which are differentiated by the emotions that accompany them. Earlier studies have shown that the four different ways of spending money are linked to various degrees of materialism and life satisfaction. *Thrifty spending* is most closely related to positive emotions and life satisfaction, while at the same time it is not related to materialism. At the other extreme is *Belt tightening* (a seemingly similar behaviour aimed at reducing spending), which is linked to the lowest level of life satisfaction and a strong link to materialism, especially to its dimension of happiness (as understood by Richins and Dawson [1992]). This means that people who exhibit a high level of the *Belt tightening* spending style see material goods as a source of happiness, and therefore, they still strive to possess more material goods, deluding themselves that this will bring them happiness.

The goal of the primary research presented in this subsection is to understand what individual psychological attributes determine particular styles of spending money. Two measures of individual psychological traits were used in the research: first, the Big Five personality traits [Costa, McCrae 1992; Zawadzki et al., 2007] consisting of conscientiousness, extraversion, agreeableness, neuroticism (vs. emotional stability), and openness to experience [Costa, McCrae 1992], and second, the four time perspective dimensions according to Zimbardo and Boyd [2009].

The survey was conducted online (CAWI) in 2016 on a nationwide representative random-quota sample, in which respondents were drawn from persons enrolled in a research panel, and then the demographic structure of the sample was controlled so that in terms of basic demographic variables it corresponded to the structure of the Polish population (gender, age, education, size of the place of residence). Because the research covers numerous thematic areas (more than described in this article), the psychological scales used for the research were abbreviated compared to those in the original tools. The personality traits of the Big Five were measured using a shortened TIPI tool consisting of fifteen questions [Gosling et al. 2003]. On the other hand, the time perspective was measured using the SZTPI scale (Short Zimbardo Time Perspective Inventory) consisting of fifteen statements measuring five time perspectives [Zhang et al. 2013]. Money Spending Styles were measured with thirteen statements on the MSS scale [Maison 2019].

In order to investigate the importance of individual psychological traits for different spending styles, four multifactorial step-by-step regression analyses were carried out for each Money Spending Style. In each analysis, demographic variables (gender, education, age) were introduced in the first step, in the second step the personality traits of the Big Five taxonomy, and in the third step the four time perspectives. The results presented in Tables 5a-d (Appendix) show that for each spending style there are individual psychological characteristics that are conducive to them. In the context of earlier considerations, it is also worth noting that the demographic variables introduced in the first step usually explained a small percentage of variance (from 1 to 10%). However, the introduction of psychological variables into the model clearly increased the percentage of explained variance from 7 to 15%. These results show that the introduction of psychological variables usually clarifies spending styles better than the demographic variables themselves. It is important to note, however, that the overall percentage explained in each model was not high, which means that other factors not taken into account here are more relevant to ways how people spend money.

Comparison of the analyses carried out for *Thrifty spending* and *Belt tightening* shows that these are entirely different behaviours from a psychological perspective. *Thrifty spending* increases with the level of education - better educated people are usually more thrifty. Moreover, of the psychological variables, the one which is most important for *Thrifty spending* is the future time perspective – people who are more thrifty are more future-oriented and consider the future consequences of their financial decisions. At the same time, thrifty individuals have a lower level of the past negative time perspective. In contrast, the past negative time perspective fosters *Belt tightening*. On the other hand, this style of money spending is negatively correlated with the present hedonistic time perspective - people who are oriented toward instant gratification have lower *Belt tightening* indicators.

In the case of the next two spending styles, *Happy spending* and *Spendthrift*, the results of the analysis were rather similar. First, these two spending styles are dependent on two demographic variables: gender and age. *Happy spending* and *Spendthrift* are more prevalent among women and younger people. Moreover, both of these spending styles are facilitated by a strong present hedonistic time perspective and not by agreeableness - the higher the level of *Happy spending* and *Spendthrift*, the lower the level of agreeableness.

5. Conclusion

The preceding article has presented a model of Money Spending Styles, in which four styles are distinguished: *Thrifty spending*, *Belt tightening*, *Happy spending* and *Spendthrift*. Previous qualitative studies have shown that these styles differ in terms of the emotions and motivations behind spending or not spending [Maison, Furman 2017]. These differences cannot always be captured in a quantitative study, as they are often based on unconscious mechanisms and a person may not accept all the behaviours or emotions that accompany these styles. In previous quantitative studies, the thirteen-item scale of Money Spending Styles was tested. This scale shows satisfactory psychometric values for three styles: *Happy spending*, *Spendthrift* and *Thrifty spending*, while the *Belt tightening* dimension has psychometric properties that are slightly below the acceptable limit. However, one of the problems of quantitative measurement of these phenomena based on declarations may be an unconscious and unaccepted mechanisms that accompanies purchasing decisions. They can be captured only in qualitative research. Nonetheless, further analysis of the results of the quantitative research showed a different relationship between these Money Spending Styles, life satisfaction and materialism. *Thrifty spending* is related to life satisfaction, but not to materialism (in any of its dimensions). Moreover, *Thrifty spending* is conducive to the most adaptive financial behaviour: a higher level of use of banking services, savings and investment, rather than use of cash loans. Conversely, *Belt tightening* is negatively related to life satisfaction and positively related to the happiness dimension of materialism. This means that people with a high level of *Belt tightening* feel less happy and see material goods and money as a source of happiness and self-esteem. *Spendthrift* and *Happy spending*, on the other hand, are linked to the centrality dimension of materialism, but only to a small degree to concrete financial behaviours (loans, savings).

The original research presented in detail in this article was devoted to explaining the four discussed money spending styles through the personality traits of the Big Five taxonomy [Costa, McCrae 1992] and the Zimbardo and Boyd time perspective model [1999]. It turns out that money spending styles depend not only on socio-demographic factors, but also on individual human characteristics of an internal and psychological nature. The most effective control over spending instead of immediate consumption is manifested by people with a future time perspective, that is by people with a greater ability to postpone gratification - these are people with a high level of *Thrifty spending*. *Belt tightening*, on the other hand, is facilitated by the past negative time perspective. On the other hand, people in whom the next two styles of spending are dominant, *Happy spending* and *Spendthrift* are those with a higher present hedonistic time perspective, focused on the pleasures of the here and now. In contrast, it is more difficult for people with a strong present hedonistic time perspective to restrain their desire to spend money and postpone immediate consumption. They enjoy the moment, so they prefer to spend immediately on something that pleases them rather than to save it for later (even if there would be more of it or something better). At the same time, these people have a lower level of agreeableness as a personality trait.

The puzzling question is why essentially only one personality trait in the Big Five taxonomy – agreeableness – matters when it comes to spending styles, and what is more, only in explaining two styles, *Happy spending* and *Spendthrift*, with which it correlates negatively. This result is not consistent with what was expected, as many previous studies have shown the relationship between different personality traits and financial behaviour. One of the explanations for the lack of a connection for most features may be the fact that the study used an abbreviated TIPI personality scale [Gosling et al. 2003], rather than the classic expanded NEO-FFI scale consisting of sixty statements [Costa, McCrae 1992]. The abbreviated scale may not have been sensitive enough to capture the differences between various spending styles of money. Another explanation may also be that the personality traits studied are generic (not related to finance) and thus may not be sufficient to explain the subtle differences between spending styles. Perhaps in the case of the study of money spending styles, better explanations are possibly through specific features (that is, those directly related to finance), such as materialism as discussed above or the attitude to money.

The results regarding Money Spending Styles presented here also showed how seemingly similar behaviours (e.g. control over finances) can be based on different motivations and consequently be related to other individual traits – this is particularly apparent in the case of differences between *Thrifty spending* and *Belt tightening*. Since the personality traits distinguished in the Big Five model are not the only individual traits of interest to researchers in the context of financial behaviour, future research on Money Spending Styles could well investigate their dependence on other psychological features, such as self-control, entitlement, the locus of control or values. The use of these variables in financial behaviour research is slightly less common than research using the classic Big Five personality theory, but perhaps it can better explain some financial behaviours, including spending styles.

In addition to psychological factors, the analyses conducted have also shown that demographic variables are related to money spending styles. First, two styles associated with control of spending are related to education. *Thrifty spending* is positively related to education - the more educated people are, the more thrifty they are, although after the introduction of psychological variables into the analysis, the strength of this relationship decreases. In the case of *Belt tightening*, this is even more evident, as here the relation between this style and education becomes entirely irrelevant when psychological variables are introduced into the model. On the other hand, two styles associated with the lack of control over spending, the *Happy spending* and *Spendthrift* are related to age and gender. Both are more common in women and younger people. At this point, however, it is worth considering to what extent these styles are in fact more typical of women, or whether admitting spontaneous or uncontrolled shopping (e.g. question number 5 or 12) is truly more typical of women, or whether it is more culturally accepted for women to admit it. Such a cultural explanation is suggested by the results of qualitative research, in which these money spending styles have also been observed among men, but they have often tried to justify more rationally why they make purchases.

Although the research results presented here show that not all the personality traits of the Big Five model are related to Money Spending Styles, they do provide evidence that psychological factors are important in explaining the causes of financial behaviour. In addition, they show that spending styles are determined not only by demographic traits (although some of them also depend on them), but by individual psychological characteristics as well, not only in terms of personality, but also, for example, in terms of the time perspective.

Appendix

Table 4. Money Spending Styles: Below are various statements about shopping and spending. To what extent do you agree with each of them?

	IN ROTATING ORDER	**Strongly disagree**	**Slightly disagree**	**Mostly agree**	**Strongly agree**
1	Since I regularly save, I always have some money saved for a rainy day	1	2	3	4
2	Since I'm good at controlling my budget, I always get some money put aside	1	2	3	4
3	I try to have some money put away because you never know when you're going to need certain things	1	2	3	4
4	I sometimes happen to buy things that I don't need that much just because they really caught my eye	1	2	3	4
5	I sometimes spend larger amounts of money without a second thought, completely spontaneously	1	2	3	4
6	When I'm really set on something, I can spend a lot of money to get it	1	2	3	4
7	Sometimes I like buying something nice, even if it isn't a particularly reasonable buy	1	2	3	4
8	I sometimes deny myself certain products because I can't afford them	1	2	3	4
9	In order to save, I mainly buy in thrift stores, large supermarket chains or discount stores	1	2	3	4
10	I sometimes visit several shops in search of the cheapest product	1	2	3	4
11	I sometimes can't curb the urge to buy something and then I end up skint	1	2	3	4
12	Sometimes, when I see something I'd really like to have, I can't resist buying it	1	2	3	4
13	I can sometimes spend money on things that are completely unnecessary and then I end up regretting it	1	2	3	4

Thrifty spending: 1-3, Happy spending: 4-7, Belt tightening: 8-10, Spendthrift: 11-13.

Table 5a. Predictors of ***Thrifty Spending***

	Step 1			Step 2			Step 3		
Variables	*B*	*SE*	*p*	*B*	*SE*	*p*	*B*	*SE*	*p*
(D) Gender (woman = 1)	-0.06	0.18	.76	-0.05	0.19	.80	-0.08	0.19	.66
(D) Age	-0.006	0.007	.37	-0.01	0.07	.13	-0.01	0.01	.12
(D) Education	0.24	0.08	**.003**	0.20	0.08	**.01**	0.17	0.08	**.04**
(B5) Openness to experience				0.06	0.84	.45	0.24	0.09	.79
(B5) Extraversion				0.08	0.09	.34	0.78	0.08	.35
(B5) Agreableness				-0.12	0.10	.23	-0.19	0.11	**.07**
(B5) Conscientiousness				0.18	0.10	**.06**	0.05	0.10	.62
(B5) Emotional stability				0.21	0.08	**.01**	0.14	0.08	**.09**
(TP) Past Negative							-0.23	0.12	**.05**
(TP) Past Positive							-0.10	0.15	.53
(TP) Present Fatalistic							0.11	0.15	.45
(TP) Present Hedonistic							-0.02	0.16	.88
(TP) Future							0.62	0.17	**<.001**
F	3.12	.03		3.88	<.001		3.67	<.001	
R^2	.02			.05			.07		

Table 5b. Predictors of ***Belt Tightening***

	Step 1			Step 2			Step 3		
Variables	*B*	*SE*	*p*	*B*	*SE*	*p*	*B*	*SE*	*p*
(D) Gender (woman = 1)	0.22	0.14	.12	0.19	0.15	.19	0.12	0.14	.40
(D) Age	-0.00	0.01	.87	0.00	0.01	.63	0.00	0.01	.97
(D) Education	-0.13	0.06	**.04**	-0.11	0.06	**.08**	-0.09	0.06	.13
(B5) Openness to experience				-0.01	0.06	.84	-0.03	0.07	.70
(B5) Extraversion				0.01	0.06	.87	0.04	0.06	.57
(B5) Agreableness				-0.07	0.08	.41	-0.05	0.08	.52
(B5) Conscientiousness				-0.03	0.07	.73	-0.09	0.08	.25
(B5) Emotional stability				-0.15	-0.06	**.01**	-0.06	0.06	.33
(TP) Past Negative							0.30	0.09	**<.001**
(TP) Past Positive							0.17	0.11	.13
(TP) Present Fatalistic							0.16	0.11	.16
(TP) Present Hedonistic							-0.24	0.12	**.04**
(TP) Future							0.17	0.13	.21
F	2.30	.076		2.44	.013		3.64	<.001	
R^2	.01			.03			.07		

Table 5c. Predictors of ***Happy Spending***

	Step 1			Step 2			Step 3		
Variables	*B*	*SE*	*p*	*B*	*SE*	p	B	SE	p
(D) Gender (woman = 1)	0.41	0.21	.05	0.63	0.22	**.005**	0.61	0.22	**.005**
(D) Age	-0.06	0.01	<.001	-0.05	0.01	**<.001**	-0.05	0.01	**<.000**
(D) Education	0.12	0.09	.18	0.09	0.09	.33	0.08	0.09	.36
(B5) Openness to experience				0.17	0.10	**.08**	0.03	0.10	.78
(B5) Extraversion				0.07	0.10	.45	0.06	0.10	.50
(B5) Agreableness				-0.38	0.12	**<.001**	-0.36	0.12	**.003**
(B5) Conscientiousness				-0.15	0.11	.18	-0.10	0.12	.41
(B5) Emotional stability				0.11	0.09	.22	0.14	0.10	.15
(TP) Past Negative							-0.13	0.13	.31
(TP) Past Positive							-0.24	0.17	.16
(TP) Present Fatalistic							0.20	0.17	.93
(TP) Present Hedonistic							0.71	0.18	**<.001**
(TP) Future							0.20	0.20	.32
F	19.70	<.001		9.75	<.001		7.68	<.001	
R^2	.09			.11			.14		

Table 5d. Predictors of ***Spendthrift***

	Step 1			Step 2			Step 3		
Variables	B	SE	p	B	SE	p	B	SE	p
(D) Gender (woman = 1)	0.27	0.17	.12	0.46	0.17	**.01**	0.44	0.17	**.01**
(D) Age	-0.04	0.01	**<.001**	-0.03	0.01	**<.001**	-0.03	0.01	**<.001**
(D) Education	0.00	0.07	.98	-0.01	0.07	.92	0.03	0.07	.73
(B5) Openness to experience				0.07	0.08	.35	-0.01	0.08	.90
(B5) Extraversion				0.00	0.08	.99	-0.01	0.08	.92
(B5) Agreableness				-0.33	0.10	.001	-0.27	0.09	.01
(B5) Conscientiousness				-0.17	0.09	**.05**	-0.08	0.09	.40
(B5) Emotional stability				0.00	0.07	.99	0.07	0.08	.36
(TP) Past Negative							-0.20	0.10	**.06**
(TP) Past Positive							-0.08	0.14	.58
(TP) Present Fatalistic							0.19	0.13	.16
(TP) Present Hedonistic							0.47	0.14	**<.001**
(TP) Future							-0.17	0.16	.28
F	15.90	<.001		9.75	<.001		8.08	<.001	
R^2	.07			.11			.15		

Source: Author's own estimation.
Note: demographics (D), Big Five personality traits (B5) and Time Perspective (TP) (regression analysis)

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Abbreviations:

CC – comprehensive cover; MSS – Money Spending Styles; MVS – Material Value Scale; SZTPI – Short Zimbardo Time Perspective Inventory; TIPI – Ten-item Personality Inventory; TP – time perspective; ZTPI – Zimbardo Time Perspective Inventory.