Note on ways of saving: mental mechanisms as tools for self-control?

Philipp E. Otto*

Department of Psychology
University College London
Gower Street, London WC1E 6BT, UK
Fax: +44(0)20 7679 4276
E-mail: p.otto@ucl.ac.uk
*Corresponding author

Greg B. Davies and Nick Chater

Department of Psychology
University College London
Gower Street, London WC1E 6BT, UK
E-mail: g.davies@ucl.ac.uk
E-mail: n.chater@ucl.ac.uk

Abstract: With Keynes (1936), it is part of accepted theory that we have different motives for saving, including the need to secure means for the future. To bridge the gap between motives and observed behaviour, we assume it is necessary to understand how people actually try to achieve their saving goals. A new method of visualising existing saving concepts is introduced, which shows that individuals apply a range of saving strategies to organise their finances. Based on a financial personality survey it is shown how external as well as internal control for saving can be improved systematically.

Keywords: self-control; saving strategies; discounting; mental accounts.


Biographical notes: Philipp Otto worked in diverse projects on applying cognitive science to financial decision behaviour. He received his MPhil from the Free University of Berlin and then worked for the Max Planck Institute for Human Development on the learning of simple strategies. Currently, he is doing a PhD in cognitive finance at the Psychology Department of the University College London and works as a Research Analyst for Decision Technology. His research focus lies in the cognitive basis of spending, saving, and investing strategies in real world domains.

After obtaining an MPhil in Economics, Greg Davies worked for a number of years as a Strategy Consultant to the Financial Services industry (Oliver, Wyman and Co.), before returning to Cambridge to complete a PhD in Behavioural Decision Theory. He is currently an Honorary Research Fellow in the University College London Psychology Department and a Director of Decision Technology, a part-academic, part-commercial research group.

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specialising in transferring academic insights from the decision sciences to practical applications in the commercial world. His academic research interests focus on behavioural decision theory in situations of risk and uncertainty, and its applications to finance.

Nick Chater is Professor of Cognitive and Decision Sciences at the University College London. He has an MA in Experimental Psychology from Cambridge University, and a PhD in Cognitive Science from Edinburgh University. He has previously held academic positions at Edinburgh, Oxford and Warwick Universities. His research topic is cognitive science – the project of building formal mathematical and computational models of human information processing, and his work has ranged across reasoning and decision making, perception and categorisation, and language development and processing. He is co-founder of Decision Technology Ltd., a research agency that studies decision making in commercial contexts.

1 Introduction

When thinking about the use of specific sums of money, such as a Christmas bonus, we often decide to spread consumption and thus keep some portion for a later point in time. But once the day approaches and the fund becomes available we tend to spend the whole lot. This can be seen as a momentary failure and a lack of providing means for the future. In this article, we investigate the different aspects of saving and how self guiding tools can be used to improve individual commitment.

Saving behaviour is an universal activity to ensure that demands are met in the future. Humans apply different strategies to achieve this goal of uncertainty reduction. Most prominent herein is the delay of gratification, namely the issue of self-control in favour of future consumption. The classic example, for coping with the lures of the moment, is Ulysses who binds himself to the mast of his ship. More generally, environmental structures can help to achieve self-control. These self-control mechanisms and structures are focused here for the domain of saving behaviour.

1.1 Economic rationality versus self-control and mental accounting

Since Strotz (1955–1956) the standard economic model of wealth distribution over the life cycle as an overall utility maximisation (Friedman, 1957; Modigliani, 1966; Modigliani, 1986) has been challenged repeatedly (i.e., Bernheim et al., 2001; Cordes, 1990; Loewenstein, 1987; Loewenstein and Prelec, 1992; Thaler, 1980; Thaler, 1985). The two main observations contradicting the integration into one category of total discounted wealth are the additional utility of direct or anticipated consumption (self-control) and the segregation into financial categories (mental accounting). The Behavioural Life Cycle model proposed by Shefrin and Thaler (1988; 1992) generates these two effects. Also other models capturing these behavioural characteristics have been proposed. Laibson (1997; Angeletos et al., 2001; Harris and Laibson, 2001) incorporate hyperbolic discounting functions to model dynamically inconsistent preferences and asset specific spending. In contrast to the standard life cycle model it
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predicts that spending tracks income. Others explain the immediacy effect by a ‘reference point’ (Loewenstein, 1988), ‘dynamic self control’ (Gul and Pesendorfer, 2001; Gul and Pesendorfer, 2004), or ‘temporal construals’ (Trope and Liberman, 2003).

Inherent in the models is a separation into two distinct intrapersonal mechanisms which goes back to Descartes and entered modern sciences via Freud (1914/1956) who distinguished between primary processes (pleasure principle) and secondary processes (reality principle). Later, this was described as a conflict between multiple selves (i.e., Thaler and Shefrin, 1981). All models have in common the assumption of a conflict between different selves or the now and the future, reflecting a struggle between ‘a myopic doer’ versus ‘a farsighted planner’. Implicitly this follows a deficit orientation which can be seen as individual self-regulation failure (for an overview see Baumeister and Heatherton, 1996; Metcalfe and Mischel, 1999). We postulate a different conceptualisation of self-control which stresses its potential of integrating the construct of the self via action (compare Rachlin, 1995; Kivetz and Simonson, 2002). Self-control (SC) as an activity therefore can serve to foster long term saving (utilitarian goals) as well as impulsive spending (hedonistic goals). This defines SC as a mechanism for integrating the different motivational drives without favouring one or the other.

1.2 Strategies for self-control

Various patterns of SC have been described in the literature of financial behaviour. In line with Schelling (1984) and Ainslie (1975) these can be categorised into three different types. First, there is the physical or mental restriction of the decision space. Direct acts of precommitment or personal rules like budgeting describe this category. One sort of self restriction is the a priori elimination of behavioural alternatives (i.e., ‘virginity principle’). A weaker restriction is the reduction in liquidity. This describes active limitations of possible future behaviours (Bertaut and Haliassos, 2002; Gross and Souleles, 2002) or mental structuring of event categories (Benartzi and Thaler, 2001; Heath and Soll, 1996; Moon et al., 1999). A second way of controlling future behaviour is the manipulation of the environmental structure. Here the likelihood of the demanded activity is increased by adding situational components which support this activity or vice versa removing deviation-evoking stimuli. Various changes concerning the perception of the event’s cost and benefit have been discussed. These concern the elaboration of events (Gourville, 1998), the grouping of events (Soman and Gourville, 2001), and temporal factors influencing the event evaluation (Gourville and Soman, 1998; Prelec and Loewenstein, 1998; Soman, 2001). The third and most common solution is to change the contingency structure. This can be done by side bets which include behaviour contingent penalties or rewards. When altering the effect of an event, the specification of exceptions from the rule become important. The structure must be as restrictive as possible while being flexible enough to capture the respective behaviour. Ainslie stresses that to make the rule effective exceptions must be rare and uncontrollable. Controllable events can only be part of the concept if they are combined with a high level of effort (Ainslie, 1975, p.481). Softer SC mechanisms here are self manipulations which change the interpretation or the psychological meaning of an event. An individual standard can evaluate the behaviour itself or the inclination to apply effort can serve as a SC tool to create costs which bolster against less desired activities (Soman, 1998; Trope and Fishbach, 2000).
Many behavioural patterns use different mechanisms in combination to guide saving. The categorisation above illustrates the variety of possible alternatives which can be applied. External control goes hand in hand with internal preparedness and they are therefore difficult to distinguish from each other. In general internal and external mechanism go together for exerting SC. In this article we evaluate whether people actually use SC strategies to guide saving behaviour. A lack of sufficient saving for retirement could be due to missing SC devices. By contrast, it could simply be a result of limited control, reflecting human imperfection or akrasia. To evaluate these opposing views we provide a closer look at the demands in the domain of future savings and the ways with which people try to achieve them. The level of sophistication and differentiation in SC demand and SC strategy use will serve as an indicator of the willingness for saving. Goal specification is often left apart in behavioural research and commonly the general aim of value maximisation is assumed. We expect the specific goal to be essential for the selection of the SC strategy. To explore the definition and incentives people have for saving, we first analyse the dimensions of saving and the different saving structures people employ. Second, a systematic analysis of individual differences in saving behaviour is provided. This can be seen as a bottom-up approach to improve the understanding of the SC problem.

2 Saving concepts

In order to evaluate the different approaches to the savings task, it is necessary to know how people understand this problem and what their saving goal is. It has been shown that often diverse motives for saving exist (Horioka and Watanabe, 1997; Keynes, 1936; Lindqvist, 1981); so we understand saving behaviour as a motivational configuration which can serve different goals. We also see the individual definition of the saving task as crucial for decision processes. This includes the internal construction as well as the external structuring of saving. Construal or mental representation are important for the various SC initiatives and for understanding the mental representation of saving it is useful to know how people structure their finances.

In this part, we examine the understanding people have of saving by letting them describe their definition of saving and by visualising their saving structures in place. This reveals people’s dimensions for saving and illustrates what different SC mechanisms people use. The research question is twofold, covering saving construals and demands on the one hand, and existing saving features and structures on the other.

2.1 Method

We used a one-to-one interview, including a drawing board task. The participants all hold a saving product with one leading British financial institution which provided access to their customer database. The saving product allows for several ‘saving pots’ and includes the possibility for different sorts of automatic transfers. In total, 13 adults took part in the experiment: four male, nine female, with an average age of 50 years, and of which eight were full-time employed (one part time, three retired, and one unemployed). The interview, aimed at deriving the individual’s understanding of saving, took approximately
20 minutes and the drawing board procedure, to determine the individual saving structures, took approximately 40 minutes. The whole session was video taped. Compensation for the participation was £20 ($35).

The first part consisted of questions regarding the subjective understanding of saving (i.e., ‘What is saving?’), the saving motive (i.e., ‘Why are you saving?’), and the aim of saving (i.e., ‘What are you saving for?’) in a semi-structured fashion. The duration was situation dependent and varied according to the verbal fluency of the interviewee, but at least one answer per question had to be given. The interview was transcribed and the answers categorised.

In the second part, the participants visualised their existing saving structure on a drawing board. We started with explaining the task by describing different features they can use. Then they were provided with a large drawing board, different pens, and as many cards they need representing different ‘saving pots’. After possible questions were resolved they were left alone to complete the task. When finished, they were confronted with different scenarios to test their saving structure and, if necessary, missing elements were added. The scenarios consisted of general ‘what if’ questions clarifying the understanding and the functioning of the derived saving structures (like: ‘If you urgently need an extra £200 cash and your current account is empty, where do you take it from?’). The final structures were photographed and analysed according to structure differences and featured details.

### 2.2 Results

The sophistication of the understanding and structuring of the individual concept for saving varies considerably between participants. This variation demands a more systematic analysis of differences in saving concepts which is the focus of the next part. The individually driven descriptions here provide the saving problem definition and isolate the first mechanisms used for SC.

**Saving dimensions.** All participants show a clear understanding of what saving behaviour means to them and they come up with definitions capturing everything from security aspects (i.e., ‘Want to make sure that I do not run out of money.’) to purpose specific savings (i.e., ‘Save that I can afford something special in the future.’) and saving for growth (i.e., ‘Saving to generate wealth.’). This demonstrates that some sort of common understanding exists of what behaviours saving covers, as at least two of these were mentioned by most individuals (purpose = 100%; security = 58%; growth = 50%). But the definition of saving behaviour and the motives for saving go together in the individual understanding of saving. The individual saving construals seem to be driven by motives rather than actual behaviour, which underlines the prospective character of saving.

When asked for the aims of saving, participants come up with an average of 3.0 aims. These describe specific aims like saving for child education, a new car, retirement, etc. or general purposes like ‘providing a buffer’ or ‘increase choices’. They can be specific in timing and prominence or rather diffuse. Further support for the variation in saving aims can be found when considering all 350,000 customers of the provided database who hold a saving product where the different accounts (‘saving pots’) can receive individual names. The actual naming of the accounts can be seen as the labelling of this particular part of saving. Figure 1 shows the ten most frequently used saving labels.
Notes: Saving naming frequency for the different accounts of one financial provider where the saving product allows the savings to be divided into a maximum of 12 parts. The percentages for different saving categories in a total of 1 MM account labels is shown. Only the 5.2% informative names which describe specific or general purposes are included in the graph. The individual naming of saving accounts is a relatively new possibility at the researched financial service institution. As a result a majority leaves the names at their defaults. Also the labels ‘Instant’ and ‘Addition’ could be less meaningful as they reflect the former products offered by this financial provider.

Although the simultaneity of different saving categories is not illustrated, these show the variety in existing saving aims. These saving categories are representations of the three general saving motives but illustrate primary interest in specific purpose savings. The formulation of several motives and the saving descriptions together support the diversity of the saving construal. Nevertheless, it provides no information about how these goals are achieved.

Saving structures. All participants have some sort of financial structure in place to facilitate saving. But the general understanding of this structure is poor and is only revealed through the task. The derived saving structures are given in Appendix A.

Broadly the results divide into two categories: ‘tiered structures’ and ‘radial structures’ (Figure 2). The tiered structures (46% of the cases) serve as a sort of buffer with different levels. In the radial structures (54%), the income is distributed between different saving accounts. In all cases a number of accounts are linked in specific ways by tools which control or guide the transfers. The corresponding SC mechanisms and other applied SC features are listed in Figure 3.
Figure 2  Saving structures

![Diagram of saving structures]

Note: Tiered and radial structures for organising financial flows and as two different types for separating savings, derived from the photographed individual solutions.

Figure 3  SC tools in saving structures

![Diagram of SC tools]

Notes: Number of participants out of all 13 applying each of the SC tools in their saving structure. Automatic transfers describes any automatic sweeps between accounts. Elimination of alternatives covers limited access as well as liquidity restriction. Under budgeting falls only the explicit separation into several specific budgets. Supporting cues mean automatic information given by the structure to guide saving. Increase distance stands for receiving less information for parts of the structure. Rewards and costs describe mechanisms which impose one or the other for specific activities.

A large proportion use automatic transfers to ensure the desired monetary liquidity and saving levels. Named features are ‘penalties’ as well as ‘bonuses’ and ‘information suppression’ as well as ‘lock away periods’. So methods of restricting the number of decision alternatives, of changing the environmental structure, and of manipulating the contingency structure itself are used. These features serve different levels of self-control.
restriction and often the maintenance of direct final control over the system is stressed. Also, the explanation process in the guidance of the task might have supported the inclusion of these features. But in general the structures show typical everyday saving examples like building up a ‘rainy day’ reserve, keeping surplus separate, or imposing commitment by the act of manually storing money. Although participants show quite sophisticated saving structures, it is not clear if these are demand driven or rather a result of product availability. On the one side, low initial understanding of their own structures supports the assumption that they are just the result of the individual historical process of taking up products. The actual market situation with its homogeneity and limited flexibility of savings products on the other side, restricts the complexity of the saving structures in place. The influence of individual demands and environmental conditions are not separated here.

2.3 Discussion

The different construals for saving behaviour and the elicitation of the individual saving structures illustrates that multiple saving motives exists and that SC tools are used to achieve these goals. The definition of saving is mainly determined by the motives for this behaviour and actual activities seem to be less influential. The saving motives named security, growth, and purpose correspond with the three main motives or behavioural forms which are named in the literature. With for example ‘Precaution’, ‘Calculation’, and ‘Foresight’ as the corresponding first three individual saving motives listed by Keynes (1936, p.108). The formulation of several motives, the existence of simultaneous saving aims, and the number of accounts in the saving structures clearly support the existence of different mental accounts and stresses the importance of mental accounting in SC. All SC strategies found representations in the derived saving structures, although with a differing degree of retained control. The reluctance against relinquishing control to the saving system appears more prominent. What variables do support the relinquishing of control, in favour of enabling SC, is not clear. The impression is that issues of trust and reliance have to be addressed to enforce SC mechanisms.

While the relation between the derived structures and the saving motives is not established, the individual solutions indicate a possible concordance between the two. Where tiered structures are used to promote security issues and radial structures are more likely to serve specific purposes. But to support the assumption of the deliberate usage of SC tools, the relation between demands and saving structures has to be examined more systematically. Although different SC tools are in place, their origin and purpose seem not to be assured. Also, the strong inter-individual variation demand for a further examination of the different factors which influence SC and eventually the level of saving.

3 Individual differences in saving strategy

In this part, we investigate the different variables influencing the application of SC tools in more detail. Individual characteristics are important on the one hand; the individual financial situation, demographics, and saving motives influence the way of saving. Also, the sort of personal saving strategy forms the saving behaviour (Veldhoven and Groenland, 1993; Wahlund and Gunnarsson, 1996). On the other hand environmental
factors like economic conditions and financial management influence the observable behaviour. The availability of SC tools to guide saving and support in setting up as well as maintaining self-guiding structures seem equally important. This implies a clear distinction between personal demands and environmental structures.

We developed a questionnaire to tackle these different dimensions and to evaluate their relations. This enables us to measure the demand level and the need for SC tools independent of the actual realisation. Equally, SC prospects and existing behavioural patterns are evaluated based on a larger body of data, linking individual differences to SC demands and types. The questionnaire was designed in several incremental steps of constructing and evaluating suitable items, starting with the questions resulting from the interview above and generating useful additional questions for the dimensions of personal motives, SC tool interests, and individual SC demands.

3.1 Method

The SC survey was partly distributed in shopping areas and partly an online questionnaire linked to the BBC webpage. In total, 173 people took part in the survey of which 89 people answered the questionnaire online. With the online data we broadened the area of the study and due to the mixture of retrieval methods we expect a higher representativeness of the sample (compare Birnbaum, 2000). The participation was rewarded by inclusion in a prize draw for £400 ($700). Fifty-four percent of the sample were female, the average age was 36.4 years, and the average yearly household income was £32,000 ($60,000).

The SC survey included 24 items on demographics and current financial situation. Eighty-three items concern the ‘saving personality’ on a five-point Likert scale, with 15 items on personal motives, 12 items on SC tool interest, and 56 items on individual SC. The answers were analysed according to SC usage, personal differences, and group characteristics.

3.2 Results

Participants express high demand for general SC and specific SC tools. Items on overall need for SC are rated with averages above 3 (total average 3.29). The results on the SC tool interest questions also show a number of high specific demands (Figure 4).

In particular, the manipulation of contingencies via bonuses appears to be in high demand. Also guidance by environmental cues is desired, but only few interests in direct restrictions are shown. Answers on the personal saving motive questions are in line with the previous results with examples for the three main saving motives receiving the highest averages: ‘I save to ensure my income meets my needs in the future’ (security) 3.81, ‘I save for a number of different goals’ (purpose) 3.64, and ‘I would like to save an increasing amount over time’ (growth) 3.72.

A Factor Analysis conducted on the 56 SC demand questions results in ten dimensions for the inter-individual variation. The ten factors account for 51.78% of the observed variance and represent approximations for the captured differences in personal characteristics (Figure 5).
I would like to be able to divide my savings into different distinguishable saving categories.
I would like to have the option of different notice periods for withdrawing money from portions of my savings.
I would like to set up an automated financial structure and let it run.
To control my spending I would like to be able to lock money away that I could not access it for a specific period.

I would like to be regularly informed about the amount of my savings.
I would like to be continually informed about my level of debt.
I would like to have the option of different interest rates on different portions of my savings.

I would like to receive a bonus for not touching some of my savings for a longer time period.
I would be more reluctant to spend impulsively if I was being rewarded for maintaining a high saving balance.
I don't have a problem with being charged if I act against restrictions I have previously set.
Costs or penalties for withdrawal of some of my savings would help me to save more money.

Note: Average interest for specific SC tools on a scale from 1 till 5 (total average 3.07).

The first two dimensions describe general control issues, followed by more specific descriptors of saving behaviour differences. See Appendix B for details. To illustrate the factors’ meanings and to see how they link to everyday behavioural patterns, we form descriptive customer samples. Grouping the highest and lowest scorers on the first
two factors results in four different groups with corresponding demographics and saving characteristics (Table 1). Our intuitive understanding of the personality factors is reflected in the group differences. The ‘concerned’ group is the youngest with the lowest income with clear need for SC. Many people in the ‘assisted’ group already use Penalties and Bonuses in their Saving Accounts. The ‘controlling’ people as the oldest group with the highest income need the most time for their finances. ‘Unconcerned’ people are likely to simplify and integrate their finances, although keeping a number of saving accounts.

Table 1  Factor-based groups

<table>
<thead>
<tr>
<th></th>
<th>Concerned</th>
<th>Assisted</th>
<th>Controlling</th>
<th>Unconcerned</th>
<th>Total average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Sex (male) (%)</td>
<td>48</td>
<td>38</td>
<td>41</td>
<td>62</td>
<td>46</td>
</tr>
<tr>
<td>Average age</td>
<td>28.4</td>
<td>31.6</td>
<td>44.7</td>
<td>39.2</td>
<td>36.3</td>
</tr>
<tr>
<td>Average number of children</td>
<td>0.19</td>
<td>0.64</td>
<td>0.91</td>
<td>0.91</td>
<td>0.71</td>
</tr>
<tr>
<td>Average household income (£’000)</td>
<td>23.1</td>
<td>32.3</td>
<td>34.1</td>
<td>32.3</td>
<td>31.7</td>
</tr>
<tr>
<td>Average number of savings accounts</td>
<td>1.71</td>
<td>1.81</td>
<td>3.12</td>
<td>2.86</td>
<td>2.38</td>
</tr>
<tr>
<td>Saving with bonuses (%)</td>
<td>20</td>
<td>22</td>
<td>6</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Saving with penalties (%)</td>
<td>14</td>
<td>19</td>
<td>12</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>Integrate current account into a financial structure (%)</td>
<td>69</td>
<td>82</td>
<td>77</td>
<td>94</td>
<td>80</td>
</tr>
<tr>
<td>Minutes spent on finances (monthly averages)</td>
<td>51.4</td>
<td>32.2</td>
<td>77.4</td>
<td>55.0</td>
<td>56.3</td>
</tr>
</tbody>
</table>

Notes: Eight exemplary SC groups formed by the first two personality factors showing their financial characteristics. The 45% of the people with the highest respective lowest factor scores are grouped together (‘concerned’ = 31 people; ‘assisted’ = 39 people; ‘controlling’ = 34 people; ‘unconcerned’ = 35 people).

The participants’ high demands for SC leads to various sorts of behaviour which need different SC tools. People are likely to impose specific SC strategies but the willingness for self restrictions or for relinquishing control strongly depends on the individual and corresponding environmental relations. Some people (i.e., ‘assisted’ group) might directly buy into SC tools, for others (i.e., ‘controlling’ group) it is only possible via a process of trust building. The realisation of SC strongly depends on demographics, life cycle, and individual variables. The way and level of SC varies according to financial status, life stage, and personal preferences. They are interconnected and together influence the application of SC tools and the amount of savings.

3.3 Discussion

The questionnaire reveals differences in SC demands and shows relations with the financial situation and product demands. SC as the guiding factor for saving behaviour is supported. But the relation between SC demand and the actual application of SC tools needs further support. The research design here cannot prove that people in the end are
actually more controlled when provided with their specific SC tools, which is crucial for understanding and bridging the discrepancy between planning and behaviour. The existence of a high need for SC is in line with the postulation of a savings gap, a claim made at the individual level by Bernheim (1995) or Farkas and Johnson (1997), which stresses the importance of saving product designs to support SC mechanisms. This lets one assume that specific features like lock away periods or channel restrictions, but also the general service including individual planning, involvement, support, and flexibility, increase SC and enable saving.

One distinction introduced here for the better understanding of saving behaviour and its relation with SC, is the differentiation between types of ‘Financial Personality’. The proposal of individually different concepts for saving might help to understand the SC mechanism in place and could prove useful for saving increasing policies. People approach the task of saving differently, varying on important dimensions like willingness to relinquishing control, demand for involvement, and level of advice accepted. Only when understanding these individual differences, we can fully embrace the concept of SC and its conditional importance. The assumption of a Financial Personality helps to systematically analyse attitudinal differences in relation to variations in saving behaviour. Further proof is needed for establishing this claim and areas like self-awareness (O’Donoghue and Rabin, 2003) or the propensity to plan (Ameriks et al., 2003) have to be addressed. Also, the relation to social theories and personality research could be important. Existing clinical measures of SC (Rosenbaum, 1980) and the connection to other behavioural constructs like sensation seeking (Zuckerman, 1994), self-efficiency (Bandura, 1977), and locus of control (Rotter, 1966) have to be accounted for. But the construction of a general psychometric SC scale might be useful for various fields, including personalised financial services. This survey discovered first relations between individual SC, product characteristics, and saving behaviour. The dependence between differences in SC and actual saving rate has also been documented by Romal and Kaplan (1995) who demanded stronger SC strategy encouragement. A further specification of the SC construct in combination with the evaluation of direct behaviours and its changes over time, according to life cycle changes, appears necessary.

4 Conclusion and general discussion

The ecological reality of saving behaviour shows that the intra- and inter-individual variability in relation to motives, strategies, and life cycle issues has not been acknowledged accordingly. Multiple saving motives, differences in goal orientation and capacities, individual foci, and changing needs all demand an individually centred situation specific expansion of the understanding of saving behaviour. The different saving strategies in relation to each other could possibly better explain overall observed patterns of saving than behavioural deficit models.

4.1 Saving psychology

Besides similarities with a strategy of conflict between multiple selves (i.e., Schelling, 1980), we provide a positive perspective on individual saving tools as means for SC. This assumption itself is grounded in the variations of the observed behaviours but is also supported by cognitive models and neurological underpinnings.
Neural processing and the interaction of multiple cognitive systems represents an integration which can be seen as an internal communication and a problem solving process rather than a conflict. Different mental functions are complementary in intertemporal choice \textit{(i.e.}, Manuck \textit{et al.}, 2003; McClure \textit{et al.}, 2004) which is in line with consistent plans over time (Becker and Murphy, 1988; Loewenstein and Prelec, 1993). For achieving commitment over time, the actual planning of future behaviour is of importance. The influence of goal formation on behaviour has been repeatedly documented \textit{(i.e.}, Bandura and Schunk, 1981; Gollwitzer, 1999). Also the rare reversions or redistribution in saving behaviour (Skinner, 1992; Venti and Wise, 1987) support this claim. What part cognitive strategies play here and to what degree saving is influenced by mental causation \textit{(i.e.}, automation, sequential learning) or social mechanisms \textit{(i.e.}, social control, conformity) is open to future investigations. Saving behaviour probably stronger depend on cognitive and social functioning than on economic calculus.

4.2 Saving policy
The underlying mental mechanisms are mainly neglected in models of saving behaviour. We argue that the different areas of SC have direct implications for public policy issues. For the incentive structure Laibson (1996) and Thaler (1994; Thaler and Benartzi, 2004) demonstrate that variations in delay, penalties, and rewards guide the saving behaviour in saving schemes. The flexibility in individual saving, depending on the perceived decision space, is generally stressed in regard to pension plans (Choi \textit{et al.}, 2002; Madrian and Shea, 2001; Papke, 2003; Poterba \textit{et al.}, 1996). Following that the total amount allocated to retirement savings can easily be manipulated by the introduced pension plans, then there might not be the SC demand matching products available to secure saving levels. A common practice to directly restrict the decision space by using credit cards and credit limits to manipulate liquidity (Haliasos and Reiter, 2003; Soman and Cheema, 2002) illustrates that SC mechanisms are in place. Together with a supporting information structure and based on the persistence of decisions, we assume that the provision for retirement can be improved substantially and thus the lack of individual consistency diminished. The current saving gap in the Anglo-Saxon regions might then only be a mismatch between available products and individual needs.

The individual differences in SC strongly demand tailored solutions and stress design components which support the understanding, the involvement, the evolution, and the flexibility of financial products. Naturally the individual commitment to save also depends on the inclination for buying and related avoidance strategies \textit{(i.e.}, Baumeister, 2002; Benhabib and Bisin, 2005; Bernheim and Rangel, 2004; Carrillo and Mariotti, 2000; Hoch and Loewenstein, 1991; Loewenstein, 1996; O’Guinn and Faber, 1989; Wertenbroch, 1998). We focused on the side of empowerment to increase choice. To enforce saving behaviours here, tools for all three SC strategy areas have to be provided on an individual level: decision space restrictions, environmental cues, and contingency structures.
References


Notes

1 For a detailed discussion of the different aspects of pre-commitment and the relation to freedom of will and autonomy compare Elster (1979) and Mele (1995). In the economic literature, the problem of intertemporal inconsistency first appears with Strotz (1955–1956) as ‘spendthriftiness’ followed by a general overview by Ainslie (1975) labelled ‘impulse control’.

2 As participants are not paid dependent on the performance in the task and only the reported behaviour is taken into account, more direct evaluations can be asked for to support the derived conclusions. Only this would cancel out a possible misalignment between reported and actual behaviour, or the danger that specific behavioural parts are left aside.

3 The assumption of concepts stresses the importance of cognition. According to Dretske (1993) ‘mental events’ can be understood as the structuring causes of behaviour. This can equally be assumed for saving behaviour and preliminary analyses of the individual structure of the saving concept have been proposed (Groenland et al., 1996).

4 The average number of accounts per person is 2.8. This number of accounts might be an indicator for a high number of different saving aims as only one provider is considered and possible saving accounts with other providers are not captured. But it also does not necessarily represent the number of accounts in use due to a large number of dormant accounts.
Appendix A  Derived saving structures

PERSON ONE  
(35-44 year old full-time employed woman)

<table>
<thead>
<tr>
<th>Offset Mortgage</th>
<th>Current Account max. £500 min. -£500</th>
<th>Reserve max. £1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donations</td>
<td>Cash ISA</td>
<td>Family</td>
</tr>
<tr>
<td>Cash ISA</td>
<td>Cash TV</td>
<td>Holiday</td>
</tr>
<tr>
<td>Debit Card</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXPENSES</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PERSON TWO  
(45-54 year old full-time employed man)

<table>
<thead>
<tr>
<th>Mortgage</th>
<th>Current Account min. £200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holiday</td>
<td>Business Account</td>
</tr>
<tr>
<td>Cash ISA</td>
<td>Credit Card</td>
</tr>
<tr>
<td>Cash ISA</td>
<td>Credit Card (business)</td>
</tr>
<tr>
<td>Credit Card</td>
<td></td>
</tr>
<tr>
<td>EXPENSES</td>
<td></td>
</tr>
</tbody>
</table>

- Want to maximize interest.
- Would like to get notification by email.
- It is important to save for specifics without interfering with other accounts.
- Spending / Buying categories are business – private – wallet – house.
Note on ways of saving: mental mechanisms as tools for self-control?

PERSON THREE
(15-24 year old full-time employed woman)

WAGES
(and all extras)

CURRENT ACCOUNT
min. £10
max. £500

A
medium interest
min./max. £200

daily

If more is needed than this reserve, it is brought in from pot B as a informed or authorised sweep

B
high interest
min. £300

monthly

£100

Purpose
(i.e. holidays)

To be spent on a pre-specified date only and otherwise automatically transferred to pot B.

• The details are checked every month after the wages have gone in.
• Likes a yearly option to speak to a financial adviser.
• Significant extra amounts go somewhere else and would not be integrated into savings.

Savings could be leftovers to cover later necessities or savings are for leisure.
A ‘two tier system’ protects from overspending.

PERSON FOUR
(55-64 year old full-time employed woman)

CURRENT ACCOUNT
min. £100
max. £1,000

1
<feeder>
monthly

1
<feeder>
monthly

2
high interest
monthly fixed amount

Extra money
i.e. fixed rate bond

Sub drip-feed
for i.e. Holiday

Residual at end of month

If overdrawn automatic

‘Independent Financial Advisor’

‘Access on agreed date’

From a labour background and they tended to put money away on a regular basis into a building society: ‘You did save!’ or ‘the rainy-day syndrome’. Besides this habit save for specific items.

• Like to fall directly on the money if needed.
• The system should be secured ‘by the computer’. But you are still responsible for your money although you sometimes need penalties to get hold of it.
**PERSON FIVE**
(65 years or older retired woman)

- **PENSION**
  - fixed amount monthly

- **CURRENT ACCOUNT**
  - monthly fixed amount
  - 1 Rainy-days max. £1,000
  - 2 Tracker
  - 3 ISA's
  - 4 Shares

- Saving is to buy something in particular, to put money away on a regular basis or for something unexpected.

- All other transfers are made manually. I.e. if I need money for the holidays I put that specific amount from the ‘Tracker Pot’ into the Current Account.

- If overdrawn then a little more careful the next months.

- Would like to have financial advice on income as a whole to move money accordingly. Don’t want to loose money.

- Don’t want too many accounts.

---

**PERSON SIX**
(65 years or older retired man)

- **PENSION**
  - monthly

- **CURRENT ACCOUNT**
  - Tracker main saving
  - Fixed bonds access once or twice a year

- **DIRECT DEBIT**

- Saving is to put money away for things you want in the future. Save for a better value.

- Do the transfers by telephone banking when required.

- For any extra money a financial advisor needed.

- If less money is available try to cut the costs.
PERSON SEVEN
(65 years or older retired woman)

Saving is to ensure not having to rely on council care. It is to stay independent and to make sure that I am sufficiently looked after. Worried about money since husband died and has no clue.

- The most important part of the system is to transfer the money to the Building Society to get higher interest. Getting older and need it automatically.
- All investments are agreed by a financial advisor.

PERSON EIGHT
(35-44 year old full-time employed woman)

Saving provides a reserve for contingency. People from Jamaica don’t trust in banks and organise saving on their own. Would like the bank to help me to lock money away.

- The fixed transfers are changed according to the financial situation. But if a large amount it is invested somewhere else.
- If overspending sees what can be put on hold.
**PERSON NINE**  
(25-34 year old full-time employed woman)

- **SAVING** means to manage your money so that you can buy something. It is for mortgage purposes or emergencies.

- *My husband does that.*

  - **CURRENT ACCOUNT**  
    - **min. £100**  
    - **max. £500**

- **Barclaycard**  
  - **Sweep** (leftovers)

- **Account B**

- **Mortgage**

- **ISA**

- **Child (when expected)**

  - **EXTRAS**

    - *I won’t build it up but find out about another account where I can move the money to create more interest. I think the interest rate is quite good at the moment.'*

**PERSON TEN**  
(45-54 year old full-time employed man)

- **CURRENT ACCOUNT**  
  - **min. £100**  
  - **max. £500**

- **Mortgage**

- **Bills**

- **Spend**

- **EXTRAS**

  - *Besides buying antiques as an investment.*
  - *Do online banking to check if my money is still there.*
  - *Mainly interested in high interest rates.*
  - *Before decreasing monthly savings, first checks spending.*

- **Pot 1 C.J. + K.J. (joint account)**

- **Pot 2 C.J. + K.J. overflow**

- **Pot 3 C.J. 2 withdrawals p.a.**

- **Pot 4 C.J. + K.J. max. £3000**

- **ISA**  
  - *Triggers at 3K to start a new pot.*

- *High rate savings instant savings.*

- *There is flesh money on one side for the supermarket and the credit card and savings on the other side for wanted things. Or you put money away every month for i.e. a pension. Don’t keep money somewhere else and all savings are in the bank.*
Saving means putting money aside for a 'rainy-day' or purchases. It is important that the money works for you and not just sits around or is spent. But is not good with savings and does not maximise.

- Direct transfers to the credit card would be handy.
- Threshold based automatic transfers are useful.
- Don’t want to loose control over the automatic transfers.

Currently, saving is managed by the husband. The person would like to manage saving on their own.
PERSON THIRTEEN
(45-54 year old unemployed man)

CURRENT ACCOUNT
min. £0
max. £400

Eric A
Lower surplus
min. £0 max. £600

Eric B
Higher surplus
max. £900

Eric C
Direct Debit

Eric D
Savings

'SISA, mortgage, or
pension but investments
are separate.'

Saving is for the future when you
retire - for a higher interest to have a
bonus.

Automatic transfers are to budget
yourself.

- All transfers should be possible manually.
- Wants to be informed monthly about saving status.
### Appendix B  The ten factor descriptions of the Varimax rotated factor solution

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
<th>Eigenvalue</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FACTOR 1</strong></td>
<td><strong>SELF-CONTROL</strong></td>
<td>4.39</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To control my spending I would like to be able to lock money away that I could not access it for a specific period.</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>I would like to have delayed access to some savings in order to decrease spending.</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td>I would like to control my spending by limiting the ways in which I can get hold of my money.</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td>I would like to structure my finances in such a way as to help me spend less.</td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td>I would be more reluctant to spend impulsively if I was being rewarded for maintaining a high saving balance.</td>
<td>0.57</td>
<td></td>
</tr>
<tr>
<td>I want to be sure I always have money at hand.</td>
<td>-0.13</td>
<td></td>
</tr>
<tr>
<td>I would like to link investments (ISA’s, Bonds, or Stocks, etc.) within my financial structure.</td>
<td>-0.13</td>
<td></td>
</tr>
<tr>
<td>I feel uncomfortable if I do not have access to all my savings at any given time.</td>
<td>-0.13</td>
<td></td>
</tr>
<tr>
<td>Maintaining hands-on control over my finances helps me to ensure it is sufficiently flexible to cope with unforeseen events.</td>
<td>-0.19</td>
<td></td>
</tr>
<tr>
<td>I don’t want to rely on one single company for all my finances.</td>
<td>-0.26</td>
<td></td>
</tr>
<tr>
<td><strong>FACTOR 2</strong></td>
<td><strong>HANDS ON</strong></td>
<td>3.06</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I need to be constantly aware of my complete financial situation.</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td>It would be important that my financial structure is stable over time.</td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td>I would feel uncomfortable unless I understood every single part of my financial structure.</td>
<td>0.60</td>
<td></td>
</tr>
<tr>
<td>I want to be sure I always have money at hand.</td>
<td>0.44</td>
<td></td>
</tr>
<tr>
<td>Maintaining hands-on control over my finances helps me to ensure it is sufficiently flexible to cope with unforeseen events.</td>
<td>0.42</td>
<td></td>
</tr>
<tr>
<td>Being less aware of some of my money helps me to spend less.</td>
<td>-0.21</td>
<td></td>
</tr>
<tr>
<td>I feel uncomfortable working out my financial situation on my own.</td>
<td>-0.33</td>
<td></td>
</tr>
<tr>
<td>I would like to have automatic transfers to make me less aware of some of my money.</td>
<td>-0.35</td>
<td></td>
</tr>
<tr>
<td>I don’t enjoy taking care of my money.</td>
<td>-0.50</td>
<td></td>
</tr>
<tr>
<td>I want to be less involved with my finances.</td>
<td>-0.58</td>
<td></td>
</tr>
<tr>
<td><strong>FACTOR 3</strong></td>
<td><strong>ADVICE</strong></td>
<td>2.83</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would like to have independent external advice about my savings.</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td>I would like to have regular financial advice about my financial structure.</td>
<td>0.81</td>
<td></td>
</tr>
<tr>
<td>I would like to have ongoing financial advice which helps me to save more.</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>I would like to be continually informed about my flows of money.</td>
<td>0.39</td>
<td></td>
</tr>
<tr>
<td>I like to have savings even if I am in debt.</td>
<td>0.34</td>
<td></td>
</tr>
<tr>
<td>I always want to keep a specific minimum amount of money in my current account.</td>
<td>-0.05</td>
<td></td>
</tr>
<tr>
<td>I do not care how much I save as long I do not go overdrawn.</td>
<td>-0.09</td>
<td></td>
</tr>
<tr>
<td>I want to keep the effort related to my finances low.</td>
<td>-0.10</td>
<td></td>
</tr>
<tr>
<td>I would like to have automatic transfers to make me less aware of some of my money.</td>
<td>-0.11</td>
<td></td>
</tr>
<tr>
<td>Being less aware of some of my money helps me to spend less.</td>
<td>-0.14</td>
<td></td>
</tr>
<tr>
<td>FACTOR 4</td>
<td>REGULAR SAVINGS</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td><strong>Eigenvalue</strong></td>
<td>2.65</td>
<td></td>
</tr>
<tr>
<td>I would set up standing orders to save regularly.</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>I want a minimum percentage of my income to be paid into my savings accounts.</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>There is a minimum amount I would want paid monthly into my savings accounts.</td>
<td>0.71</td>
<td></td>
</tr>
<tr>
<td>I would like to automate regular payments to ensure they are paid on time.</td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>I would be more reluctant to spend impulsively if I was being rewarded for maintaining a high saving balance.</td>
<td>0.34</td>
<td></td>
</tr>
<tr>
<td>I don’t enjoy taking care of my money.</td>
<td>-0.07</td>
<td></td>
</tr>
<tr>
<td>A financial structure which was partially automated would be less secure.</td>
<td>-0.11</td>
<td></td>
</tr>
<tr>
<td>I save until I reach the amount needed for something I wish to purchase.</td>
<td>-0.13</td>
<td></td>
</tr>
<tr>
<td>I feel uncomfortable working out my financial situation on my own.</td>
<td>-0.18</td>
<td></td>
</tr>
<tr>
<td>I need to be constantly aware of my complete financial situation.</td>
<td>-0.29</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FACTOR 5</th>
<th>AUTOMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eigenvalue</strong></td>
<td>2.54</td>
</tr>
<tr>
<td>I would like to automate regular transfers to save time.</td>
<td>0.83</td>
</tr>
<tr>
<td>I would like to automate regular transfers to savings accounts to overcome forgetfulness or laziness.</td>
<td>0.65</td>
</tr>
<tr>
<td>I would like to set up an automated financial structure and let it run.</td>
<td>0.60</td>
</tr>
<tr>
<td>I would like to automate regular payments to ensure they are paid on time.</td>
<td>0.60</td>
</tr>
<tr>
<td>I would like to have automatic transfers to make me less aware of some of my money.</td>
<td>0.35</td>
</tr>
<tr>
<td>I don’t have a problem with being charged if I act against restrictions I have previously set.</td>
<td>-0.06</td>
</tr>
<tr>
<td>I restrict myself by only spending a certain amount on different types of purchases.</td>
<td>-0.10</td>
</tr>
<tr>
<td>I would feel worried that I did not have complete understanding of my financial situation if it involves automated features.</td>
<td>-0.12</td>
</tr>
<tr>
<td>I would feel uncomfortable unless I understood every single part of my financial structure.</td>
<td>-0.14</td>
</tr>
<tr>
<td>A financial structure which was partially automated would be less secure.</td>
<td>-0.16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FACTOR 6</th>
<th>LOW EFFORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eigenvalue</strong></td>
<td>2.08</td>
</tr>
<tr>
<td>I want the bank to do the work for me.</td>
<td>0.77</td>
</tr>
<tr>
<td>I would like to keep my finances as simple as possible.</td>
<td>0.73</td>
</tr>
<tr>
<td>I want to keep the effort related to my finances low.</td>
<td>0.54</td>
</tr>
<tr>
<td>I feel uncomfortable if I do not have access to all my savings at any given time.</td>
<td>0.37</td>
</tr>
<tr>
<td>I want to be less involved with my finances.</td>
<td>0.29</td>
</tr>
<tr>
<td>Maintaining hands-on control over my finances helps me to ensure it is sufficiently flexible to cope with unforeseen events.</td>
<td>-0.08</td>
</tr>
<tr>
<td>I would like to have automatic transfers to make me less aware of some of my money.</td>
<td>-0.10</td>
</tr>
<tr>
<td>I don’t want to rely on one single company for all my finances.</td>
<td>-0.16</td>
</tr>
<tr>
<td>I would set up standing orders to save regularly.</td>
<td>-0.16</td>
</tr>
<tr>
<td>I would like to reach a specific saving level at a specified time.</td>
<td>-0.20</td>
</tr>
</tbody>
</table>
### FACTOR 7
**INTEGRATION**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Eigenvalue</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would like to link all my finances into one integrated framework.</td>
<td>2.07</td>
</tr>
<tr>
<td>I would like to keep all my finances together.</td>
<td>0.75</td>
</tr>
<tr>
<td>I would like to link investments (ISA’s, Bonds, or Stocks, etc.) within my financial structure.</td>
<td>0.70</td>
</tr>
<tr>
<td>I would like to set up an automated financial structure and let it run.</td>
<td>0.58</td>
</tr>
<tr>
<td>I would like to have automatic transfers to make me less aware of some of my money.</td>
<td>0.33</td>
</tr>
<tr>
<td>I want to be less involved with my finances.</td>
<td>0.24</td>
</tr>
<tr>
<td>I don’t want to rely on one single company for all my finances.</td>
<td>-0.12</td>
</tr>
<tr>
<td>It would be important that my financial structure is stable over time.</td>
<td>-0.13</td>
</tr>
<tr>
<td>I would like to keep my finances as simple as possible.</td>
<td>-0.15</td>
</tr>
<tr>
<td>I prefer my savings and my current account to be separate.</td>
<td>-0.17</td>
</tr>
</tbody>
</table>

### FACTOR 8
**SECURITY WORRIES**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Eigenvalue</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I give the bank day to day control over my finances I would be worried that they might make errors that I never notice.</td>
<td>2.04</td>
</tr>
<tr>
<td>I would feel worried that I did not have complete understanding of my financial situation if it involves automated features.</td>
<td>0.77</td>
</tr>
<tr>
<td>A financial structure which was partially automated would be less secure.</td>
<td>0.73</td>
</tr>
<tr>
<td>I would like to be continually informed about my flows of money.</td>
<td>0.53</td>
</tr>
<tr>
<td>I restrict myself by only spending a certain amount on different types of purchases</td>
<td>0.29</td>
</tr>
<tr>
<td>I would like the savings I have available for leisure to be dependent on the overall savings I hold.</td>
<td>0.21</td>
</tr>
<tr>
<td>I would like to automate regular transfers to save time.</td>
<td>-0.10</td>
</tr>
<tr>
<td>I know exactly what I am saving for.</td>
<td>-0.10</td>
</tr>
<tr>
<td>I would like to automate regular transfers to savings accounts to overcome forgetfulness or laziness.</td>
<td>-0.10</td>
</tr>
<tr>
<td>I would like to set up an automated financial structure and let it run.</td>
<td>-0.16</td>
</tr>
</tbody>
</table>

### FACTOR 9
**PLANNED BUDGET**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Eigenvalue</th>
</tr>
</thead>
<tbody>
<tr>
<td>I restrict myself by only spending a certain amount on different types of purchases</td>
<td>2.03</td>
</tr>
<tr>
<td>I know exactly what I am saving for.</td>
<td>0.74</td>
</tr>
<tr>
<td>I feel uncomfortable if I do not have access to all my savings at any given time.</td>
<td>0.62</td>
</tr>
<tr>
<td>I need to be constantly aware of my complete financial situation.</td>
<td>0.44</td>
</tr>
<tr>
<td>I would like to be continually informed about my flows of money.</td>
<td>0.44</td>
</tr>
<tr>
<td>I would like to automate regular transfers to savings accounts to overcome forgetfulness or laziness.</td>
<td>0.30</td>
</tr>
<tr>
<td>I would like to link investments (ISA’s, Bonds, or Stocks, etc.) within my financial structure.</td>
<td>-0.16</td>
</tr>
<tr>
<td>I don’t enjoy taking care of my money.</td>
<td>-0.17</td>
</tr>
<tr>
<td>It would be important that my financial structure is stable over time.</td>
<td>-0.17</td>
</tr>
<tr>
<td>I would like to automate regular payments to ensure they are paid on time.</td>
<td>-0.22</td>
</tr>
<tr>
<td>Description</td>
<td>Score</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>I would like to be able to distribute my regular savings between different accounts.</td>
<td>0.81</td>
</tr>
<tr>
<td>I would like to be able to divide my savings into different distinguishable saving categories.</td>
<td>0.68</td>
</tr>
<tr>
<td>I would like to link investments (ISA’s, Bonds, or Stocks, etc.) within my financial structure.</td>
<td>0.34</td>
</tr>
<tr>
<td>I would like the savings I have available for leisure to be dependent on the overall savings I hold.</td>
<td>0.32</td>
</tr>
<tr>
<td>I would like to be able to specify maximum balances for specific savings accounts.</td>
<td>0.29</td>
</tr>
<tr>
<td>I would like to keep all my finances together.</td>
<td>-0.11</td>
</tr>
<tr>
<td>I would like to structure my finances in such a way as to help me spend less.</td>
<td>-0.13</td>
</tr>
<tr>
<td>I would like to have ongoing financial advice which helps me to save more.</td>
<td>-0.17</td>
</tr>
<tr>
<td>A financial structure which was partially automated would be less secure.</td>
<td>-0.20</td>
</tr>
<tr>
<td>I want to be sure I always have money at hand.</td>
<td>-0.21</td>
</tr>
</tbody>
</table>

Eigenvalue: 1.98

**Factor 10**

**DISTRIBUTED SAVINGS**