# Master Thesis

## *Looking good, feeling good?*

*The relationship between conspicuous goods and happiness and how personality traits influence this relationship*

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## Abstract

This study investigates the relationship between conspicuous consumption and happiness. Although earlier studies have demonstrated that consumption per se does not contribute to happiness, it is worthwhile to find out whether this holds for each composition of consumption. The main goal of this thesis is to examine whether conspicuous consumption can influence happiness positively and to see what influence the personality traits "materialism" and "pain of paying" have on this relationship. A survey has been distributed among 81 lawyers being employed at the Zuidas business center in Amsterdam. The results from the ordered logit model and structural equation modeling demonstrate that conspicuous consumption can result in experiencing happy feelings more often. This effect, however, is offset by materialism: for very materialistic people, the effect of conspicuous consumption on happiness is negative. The results do not give rise to the conclusion that tightwad and spendthrift persons experience significantly lower levels of happiness than unconflicted individuals. Hence, this study contributes to earlier findings regarding the effect of consumption on happiness: for people being not too materialistic, conspicuous consumption has a positive effect on subjective well-being.

*"And I saw that all labour and all achievement spring from man's envy of his neighbor. This too is meaningless, a chasing after the wind"*

*Ecllesiastes 4:4*

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# 1. Introduction

This thesis investigates the relationship between consumption and happiness[1]. More specifically, it examines whether various consumption patterns influence happiness differently. Does it matter for the level of happiness that someone will attain whether this person spends 500 euros on a couple of tickets for the theatre, a large supply of food or a one-week holiday trip? Surprisingly, economists have only paid attention to consumption in general during the last few decades. They generally neglected the influence of the *composition* of consumption on happiness.

The only fact which has been established in classical economic theory for long is that the level of consumption is positively correlated with utility: the more needs someone can satisfy, the higher is the utility of this person. For years, only moral philosophers and religious traditions have pointed out that pursuing a high level of consumption on itself does not necessarily result in true happiness (Dutt, 2006). These objections were generally not taken very seriously by economists: who are moralists to say what is true happiness and what not?

Only during the last few decades, economists have gained interest in establishing more specific, empirical relations between consumption and income on the one hand and happiness on the other hand. The first contribution was made by professor of economics Richard Easterlin, who proposed the Easterlin paradox (Easterlin, 1974). Because of the unexpected results of his research, many others – such as Oswald (1997), Diener and Shigehiro (2000) and Frey and Stutzer (2002) – have examined the subject ever since.

The studies that have been performed, show several regularities. Firstly, the Easterlin paradox states that within a country rich people are generally happier than poor people, but between countries this relationship does not hold. Furthermore although in most of the countries income and consumption have increased significantly, the average level of self-reported happiness within a given country did not rise over time. Finally on an individual level, studies using panel data show that large increases in income do not result in a significantly higher level of happiness.

Knowing more about the determining factors of happiness is highly relevant from an economic perspective for several reasons. First, consumers in a wide variety of socio-economic groups and societies agree that well-being is the main goal in life (Diener, 2001). Most importantly, many of them assume that consumption is the key factor determining their well-being. People exert a lot of effort in acquiring money in order to consume. Second, well-being has a large effect on someone's behavior. If a worker has a stable, positive level of happiness, this worker performs better (Wright & Staw, 1999).

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[1] In this thesis, the terms "happiness", "well-being" and "subjective well-being" (SWB) are regarded to have the same meaning. SWB will be used mostly due to its common use in the literature. In chapter 2.1 more attention will be paid to the exact definitions of these different concepts.

Feeling good generally makes people find more creative solutions for problems they encounter. In bargaining situations, happier people more often attain a favorable outcome for both parties (Mochon, Norton, & Ariely, 2008).

Third, happier people on average make less use of health programs such that a higher level of happiness on a macro level will result in lower health costs for society (Isen, 2000). Finally, knowing more about well-being can help the field of economics by clarifying the notion of utility. The problem with utility is that it immeasurable. Although utility is probably the most important concept in economics, it can only be used by approximation. If well-being can be measured effectively, it could be employed as a useful proxy for utility (Frey & Stutzer, 2002).

Now that the benefits of a high level of well-being for economics and society are demonstrated more and more, politicians have become interested in this topic. For example, nowadays most western-European states have started to include happiness into their national statistics (Hellwell, Layard, & Sachs, 2013). The idea that a larger GDP would automatically result in a society with a larger well-being is revealed to be outdated, so politicians increasingly realize that happiness can and should be a policy objective on itself.

**Figure 1: Mean Happiness and Real GDP per Capita between 1975 and 1997 for Repeated Cross-Sections of Different Americans (Di Tella & MacCulloch, Some Uses of Happiness Data in Economics, 2006)**
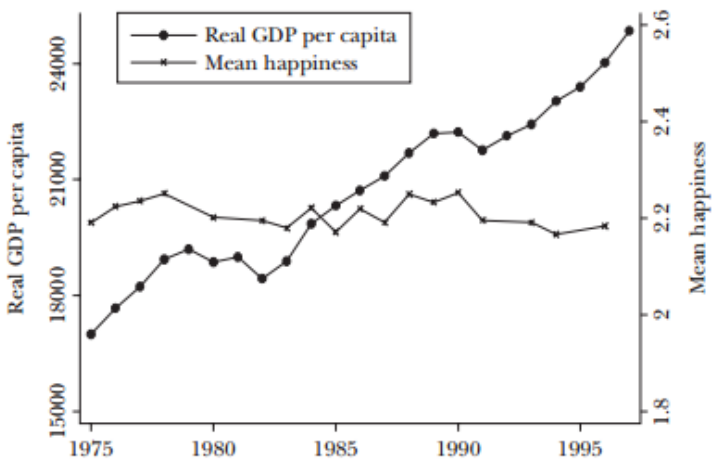


So an important question is whether the classical economic theory is wrong about the presupposed relationship between consumption (or income) and happiness. If a higher level of consumption in general does not result in a higher level of happiness, this does not necessarily imply that not any specific consumption pattern contributes to well-being. The impact of different consumption compositions on happiness is largely unexplored.

This thesis will try to find more precise consumption effects by restricting the scope of the research to the consumption of conspicuous goods. Does high consumption of conspicuous goods correspond with a high level of happiness? Especially conspicuous consumption might result in a higher level of happiness for several reasons (DeLeire & Kalil, 2010). Conspicuous goods give people the pleasure of material things. Veblen (1899) in earlier days described the positive effect of conspicuous goods: people do not buy conspicuous goods for their own sake, but mainly to impress others.

Another reason is that conspicuous goods bring status with them and as a consequence a high probability of a large social network. Especially social relationships would be important to people (Heffetz, 2011). This way, consumption would indirectly increase subjective well-being. A final explanation could be that people feel less insecure once they have a lot of conspicuous goods at their disposal, because they consider the ownership of these goods to be a proxy for general success in life.

Economic literature indicates that personality aspects can have mediating effects on the influence of consumption on happiness. The degree of materialism, for instance, could decrease the reported level of subjective well-being (Kasser, 2002). However, it is imaginable that more materialistic consumers tend to buy more (possibly) happiness increasing conspicuous goods. Another personality aspect which will be investigated is the intensity of "pain of paying". A recent study shows that emotions felt at the moment of decision making significantly influence the choice of consumption. It matters whether a person is spendthrift or tightwad (Rick, Cryder, & Loewenstein, 2008).

This research will try to find more specific contributions of consumption of conspicuous goods, materialism and pain of paying to happiness. All these factors are in play when deciding to consume conspicuous goods or not, but they probably influence each other. Hopefully, the influence of the different variables on happiness can be disentangled. The central question of this research is:

"*What is the relationship between the consumption of conspicuous goods and the level of happiness and how do materialism and pain of paying influence this relationship?*".

In the next chapter, the theoretical relationship between SWB and conspicuous goods will be described in more detail. Afterwards, the theoretical foundation of materialism and pain of paying will be provided. Chapter 4 will show the research design of the thesis: which hypotheses will be tested and which model will be used? Subsequently, the results of the model will be shown in order to draw conclusions regarding the hypotheses. The thesis will end with a conclusion and discussion in which all information will be summarized and recommendations will be made for further research.

# 2. Relationship between SWB and conspicuous goods

The most important concepts of this thesis are happiness and conspicuous goods. Subjective well-being (SWB) has been used widely as a proxy for happiness. The first part of this chapter will look more closely to the notion of SWB and to the advantages and disadvantages of its use for the purpose of this research. After this, the expected relationship between SWB and conspicuous goods that arises from the literature will be described. Furthermore, it will be clarified on which basis the list of conspicuous goods has been compiled.

### 2.1 SWB as a proxy for happiness

Many researchers have attempted to provide an adequate definition of happiness. The question of what happiness is, has been a central question for ages. Still no consensus has been established regarding the answer to this question. The Merriam-Webster Dictionary (2015) comes up with two definitions of happiness: the state of being happy and an experience that makes you happy. Philosophers and economists generally have a tendency to pay more attention to the permanent state of happiness than to temporary and transient emotions (although these play a significant role in determining the permanent state of happiness). Veenhoven – emeritus-professor of human happiness at the Erasmus University Rotterdam – for instance defines happiness as "the degree to which an individual judges the overall quality of his or her life as a whole in a favorable way" (Veenhoven, 1991).

Over time, the notion of SWB has developed into being the standard concept of happiness. Diener (1994) has come up with three criteria of SWB. First, the concept resides within the experience of the individual (i.e. is subjective). Second, the measurement should include positive aspects, not only the absence from negative ones. Finally, the notion refers to happiness in general as a global assessment of one's life.

The definition of SWB that evolves from these criteria is: "a person's cognitive and affective evaluation of his or her life" (Diener & Ryan, 2009). Because of the second criterion mentioned above, the affective evaluation is split into two parts: positive affect and negative affect. The evaluation includes both factors such as pleasure and emotional reactions to events and factors such as norms and values that one (dis)approves in culture or life and intellectual aspects of well-being (Diener, 2001). In general, a high level of SWB indicates a person who experiences frequent joy and a high level of life satisfaction and only infrequent experiences of unpleasant emotions (Cuijpers, 2009). The concepts "happiness" and "(subjective) well-being" will be used interchangeably, although several objections can be made to this decision. These objections will be discussed below.

The first objection could be that subjective well-being does not give a correct interpretation of some-one's level of happiness. Especially the subjective method of measuring via surveys has received some criticism. Most of the critique comes down to the fact that happiness has a larger objective component than subjective well-being can account for (Chekola, 2007). A substantial part of the debate with regard to the measurement of happiness concerned whether happiness is objective or subjective.

**Figure 2: Different conceptual approaches to happiness (Frey & Stutzer, 2002)**
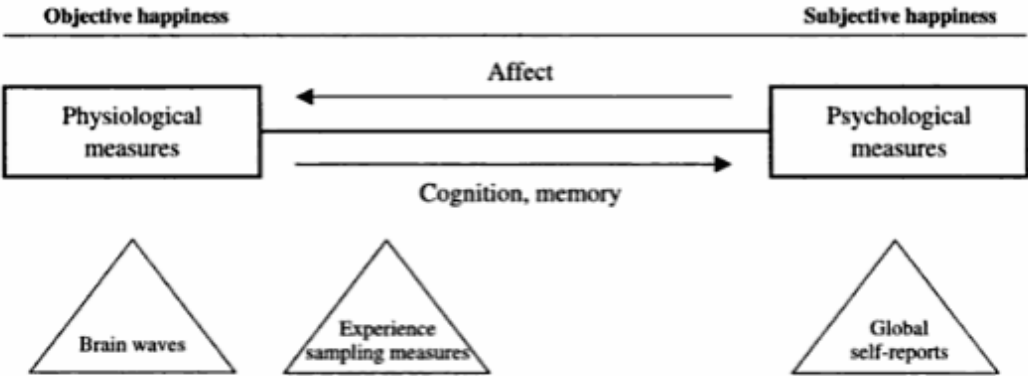


Proponents of objective happiness attach much value to brain scans and external factors such as in-come, career and health. Statistics of these factors would be enough to make an adequate estimation of someone's level of happiness. The consequence of using these objective and neutral components is that different levels of happiness are perfectly comparable to each other. The other extreme is a com-pletely subjective notion of happiness. Proponents of this view mainly use questionnaires in order to establish how happy someone is.

None of these extremes is preferable in general; it all depends on the objective of the research (Frey & Stutzer, 2002). No universal rule exists telling that only objective data is relevant for happiness. Some papers have tried to find the influence of subjective judgment on estimating well-being. Brain scans have revealed that a reasonable correlation exists between left-frontal brain activity and happi-ness answers in self-reports (Di Tella & MacCulloch, Some Uses of Happiness Data in Economics, 2006). This research investigates whether conspicuous goods make a person feel happier and this is inher-ently a matter of perception. Therefore, for the purpose of this study the use of SWB is not problematic due to its subjective character.

The second criticism is about the ability of people to reflect and evaluate their feelings during a specific period. People may encounter difficulties with recalling how happy they felt in the last 30 days. Gilovich, Griffin and Kahneman (2002) have described several systematic biases that occur when people have to reflect on past feelings: for example, they adapt themselves to changes in circum-stances and they are subject to framing effects. He describes the phenomenon that happiness re-

searchers take a different approach than economists: economists usually infer preferences from ob-served choices (revealed preference approach), whereas happiness researchers infer happiness from self-reports (stated preference approach).

Gilovich, Griffin and Kahneman compare the answers that respondents give in surveys to an-swers provided when respondents have to indicate their level of happiness at several moments instan-taneously. Doing this has its own disadvantages as well. In these situations, people have not yet re-flected on their circumstances. However, this evaluation could well be an important part of someone's durable happiness level, so their alternative has one essential drawback as well (Stanovich & West, 2008). Therefore, it is uncertain whether their study can and should serve as a proof of failure of SWB.

The final objection concerns the fact that subjective well-being does not capture the full notion of happiness. Spirituality or impersonal circumstances (such as environment, weather etc.) influence someone's level of happiness, but are not taken into account when indicating SWB (Kittiprapas, Sawangfa, Fisher, Powdthavee, & Nitnitiphrut, 2007). Happiness may be broader than SWB and in this sense it is problematic that SWB and happiness are treated as synonyms. Though critics have a point in saying that happiness may involve more factors than components of SWB, the correlation between the two concepts is so high that it should not be considered a problem. For example, a climate which makes the temperature in a country unpleasantly high is likely to influence the answers that respond-ents give to the question how many times they have experienced negative feelings during the last month. Considering this, this point of critique becomes merely a terminological one.

Now it has been shown that SWB could be used as a proxy for happiness, it is important to consider how SWB will be measured. Which questions will be asked for each of the three components of SWB (cognitive aspect, positive and negative affect) to reveal the level of well-being of the respondents? Each of the components could be derived  from an extensive list of questions. However, an important drawback is that people will not take the questions seriously, because they have to fill out too many questions. Therefore, the questionnaire consists of three items regarding SWB with probably only a minimal decline in statistical power compared to a more extensive questionnaire. Zimmermann (2014) was the first to use these three items to measure SWB:

1.  How satisfied are you with your life in general, all things considered? (Cognitive aspect)
2.  How happy have you been in the last 30 days? (Positive affect)
3.  Overall in the last 30 days, how much of a problem did you have with feeling sad, low, or de-pressed? (Negative affect)

All questions are answered on a 5-point Likert scale. For example with regard to the first question, the answer possibilities range from "very dissatisfied" to "very satisfied".

## 2.2 Conspicuous goods

Veblen (1899) has coined the term "conspicuous goods" for the first time. Since then, it has been used in a large variety of studies. The Merriam-Webster Dictionary defines a 'conspicuous good' as follows: "lavish or wasteful spending thought to enhance social prestige"[2]. In terms of this study, conspicuous goods are those goods which are visible for or in some other way knowable to people in the environment, especially with the purpose to impress them. They should be contrasted with basic goods which are mainly bought for their own sake as they fulfill basic and security needs in the Maslow's need pyramid.

Several reasons can be given why conspicuous goods would increase happiness. First, conspicuous goods signal a certain level of status. Status generally increases the amount of relationships that people have. If a person is engaged in more social relationships, this increases his or her level of happiness (Heffetz, 2011). DeLeire & Kalil (2010) have found that only one component of consumption would contribute to happiness in a significant positive way: leisure consumption. This contribution can be attributed to the relational component on the one hand and to the conspicuous character on the other hand.

The second effect of conspicuous goods on happiness runs through self-reward. Individuals tend to read the degree of success in their lives partially by the conspicuous wealth they have acquired (O'Cass & Frost, 2004). Their self-esteem is to some extent dependent on conspicuous goods. So these goods are bought for both internal and external reasons.

The third reason why people who consume more conspicuous goods tend to be happier than individuals who do not, has to do with the fact that this consumption is a zero-sum game (Eaton & Eswaran, 2009). The owners of conspicuous goods are better off (or at least they think they are), but all the others are left with a worse feeling because they cannot afford such goods. The value of Veblen goods depends on the degree of equality in society: the more possibilities to stand out in the crowd, the higher the value is. So even if conspicuous goods would not really make a difference when it comes to happiness, the general perception that they do already causes a gap between owners of conspicuous goods and others.

The measurement of conspicuous goods can be organized in several ways. Survey items vary from quite abstract to rather concrete items. Dubois & Dequesne (1993) asked respondents to evaluate the acquisition of luxury goods by questions such as: "Have you bought (...) a bottle of wine worth more than 20 euros?" and "(...) a watch worth more than €500?" So the experimenters have decided on both the product and the value of the product. Although this survey was about luxury goods instead of

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[2] Merriam-Webster Online Dictionary

conspicuous goods, it is a useful referent as many luxury goods contain a lot of information regarding someone's status. Two years later, Dubois & Laurent (1995) conducted an experiment in which no values were attached to the given product categories. Instead, they asked questions such as: "Have you bought a second home?" and "(…) a gold watch?"

One important concern with questionnaires asking for luxury goods is that the perception of luxury by one person can be quite different from the perception by someone else. Hudders & Pandelaere (2012) therefore tried to emphasize the subjective component of luxury by leaving out both the product and the product value. Their questionnaire only summarized product categories. Respondents were asked to think of what they deemed luxury within each of the categories and fill out the survey accordingly.

This approach, however, is still far from optimal. Comparison between subjects becomes rather difficult, as each subject is given the freedom to decide on what is a luxury good or experience. The most important characteristic of luxury goods for the purpose of this study is that they are visible. Therefore, a selection of product categories is made on the basis of their visibility as indicated by an index by Heffetz (2011) (Appendix A).

The most visible goods are considered conspicuous goods. The categories with an index lower than 0.5 are too invisible to include in this research. An important advantage of this selection criterion is that an objective rule decides which goods are conspicuous (this was not the case in the studies about luxury goods). So conspicuous goods in this research should at least have a visibility larger than 0.5. The conspicuous goods to be considered are therefore: *cars, clothing, furniture, jewelry, recreation, food out, alcohol home, barbers, alcohol out, books, food home, home.*

Just for the reason that this study focuses on lawyers in their working environment, not all of these categories are applicable (furniture e.g.). Furthermore, not all of them are expected to be discussed at length during work (food home e.g.), so these categories have been excluded. The rest of the categories will be incorporated in the survey.

# 3. Personality aspects

Personality traits are very relevant factors in determining someone's level of well-being. DeNeve & Cooper (1998) have shown that SWB is significantly correlated with especially the personality traits extraversion, neuroticism and conscientiousness. Weiss, Bates & Luciano (2008) have established that subjective well-being is linked to personality in general by testing twins with common genes. Two of these personality traits have been chosen to include in the model: materialism and pain of paying. These two factors in particular are expected to have an influence on the relationship between consumption and well-being.

## 3.1 Materialism

The first personality trait to be discussed is the degree of materialism. Kasser (2002) has evaluated several studies to find an answer to the question whether more materialistic individuals report different levels of happiness than less materialistic ones. Materialism was considered to consist of three aspects. The first aspect is financial success, which amounts to striving for money and possessions. The second aspect is social recognition and means having the "right" image. The final aspect is appealing appearance and should be interpreted as being well known socially.

Kassers report showed that individuals focusing on materialistic values reported lower levels of self-actualization and were depressed more often than individuals caring less about these values. Negative effects occurred both on a physical and a mental level. The conclusion in this study was that in all experiments people who are more oriented toward the consumption of market goods for the sake of materialism appeared to report lower levels of subjective well-being than people who are less oriented toward this. As more materialistic consumers are expected to have a higher level of (conspicuous) consumption, this personality aspect is likely to influence both consumption decisions and subjective well-being. Therefore, it is included in the survey.

One of the studies which has been evaluated by Kasser, is the study by Richins & Dawson (1992). They had the intention to develop a scale in order to develop the degree of materialism. This scale is presented in appendix B. The scale is centered around three components: acquisition centrality, acquisition as the pursuit of happiness and possession-defined success. "Acquisition centrality" denotes to what extent a person deems possessions important in his or her life. "Acquisition as the pursuit of happiness" indicates how much a person thinks a possession will influence his or her well-being. "Possession-defined success" shows to what degree a person evaluates others on the basis of possessions.

The materialism scale (a Likert scale) will be used in the survey of this thesis, but it has two disadvantages. First, the materialism scale consists of eighteen items, which is rather lengthy. For the

purpose of this study, a lower amount of items is preferable. Richins (2004) has evaluated the scale and investigated scale lengths of nine, six and three items. The conclusion of this research was that the questionnaire of nine items appeared to have an equal performance as the original questionnaire with eighteen items. The surveys with six and three items lost much explanatory power as each of the three types of materialism is only measured by one or two items. Therefore, the scale with nine items will be inserted in the questionnaire.

Second, one item of the scale refers directly in terminology to happiness which could bias the results as people tend to be consistent in their answers. In this case it is doubtable whether people will notice the similarity, because the item coining the term 'happier' is item number eight in the list with nine items. Respondents will therefore probably regard this set of questions as something different. Furthermore, it is not straightforward in what direction these statements would steer the participants if they would see the similarity.

## 3.2 Pain of paying

Another potentially influential factor in making consumption decisions is the pain of paying. Economic models of decision making are consequentialist in nature, i.e. they assume that emotions felt at the moment of decision making do not matter for the decisions consumers make. Literature however indicates that consumers rely on an immediate "pain of paying" in order to control their spending behavior (Rick, Cryder, & Loewenstein, 2008).

People probably differ in the intensity of feeling "pain of paying". Tightwads are consumers who spend less because of a high intensity of pain of paying than they would do when they would deliberately consider forgone pleasures. The opposite holds for spendthrifts: they consume more due to low levels of pain of paying than they would do when they would think consequentially.

This research will investigate whether the (in)ability to control spending significantly alters the attitude of people regarding the consumption of conspicuous goods. When someone is very spendthrift, this person might not buy conspicuous goods for the sake of image, but rather because of irrepressible impulses. To measure this personality aspect, the ST-TW scale is used (Appendix C). The theoretical expectation is that tightwad and spendthrift individuals encounter difficulties in their purchase behavior and experience lower level of happiness accordingly compared to unconflicted consumers.

Although the research regarding the effects of pain of paying is relatively scarce at this point in time, there are good reasons to include the variable in the model. Pain of paying is expected to influence both the consumption of (conspicuous) goods and subjective well-being. The consumption is influenced, because the pain of paying plays a role at the moment of decision making. The level of subjective well-being is expected to be affected, because the pain of paying influences the evaluation of purchase decisions.

# 4. Research design

In this section, the research design will be discussed. First, an overview will be provided of the research question and hypotheses. The ordered logit model will be discussed in the third section of this chapter. Afterwards, the variables included in the model are summed up. Finally, some information will be given on the data collection with the corresponding descriptive statistics.

## 4.1 Research question and hypotheses

The research question is: "*What is the relationship between the consumption of conspicuous goods and the level of happiness and how do materialism and pain of paying influence this relationship?*" As happiness consists of three indicators, three hypotheses are constructed. The first hypothesis refers to the general satisfaction with life (cognitive subjective well-being). The second hypothesis investigates the variables of interest in relation to feeling happy (positive affect). The final hypothesis searches for relevant factors related to feeling sad (negative affect).

*Main hypothesis 1: relationship of conspicuous goods, materialism and pain of paying on the one hand and cognitive happiness on the other hand.*

- The more conspicuous goods an individual consumes, the higher someone's level of cognitive happiness is.
- The more materialistic an individual is, the lower someone's level of cognitive happiness is.
- Tightwad and spendthrift consumers have a lower level of cognitive happiness than unconflicted consumers.

*Main hypothesis 2: relationship of conspicuous goods, materialism and pain of paying on the one hand and positive affective happiness on the other hand.*

- The more conspicuous goods an individual consumes, the higher someone's level of positive affective happiness is.
- The more materialistic an individual is, the lower someone's level of positive affective happiness is.
- Tightwad and spendthrift consumers have a lower level of positive affective happiness than unconflicted consumers.

*Main hypothesis 3: relationship of conspicuous goods, materialism and pain of paying on the one hand and negative affective happiness on the other hand.*

- The more conspicuous goods an individual consumes, the higher someone's level of negative affective happiness is.

- The more materialistic an individual is, the lower someone's level of negative affective happiness is.

- Tightwad and spendthrift consumers have a lower level of negative affective happiness than unconflicted consumers.

## 4.2 Model: ordered logit model

The dependent variable of the model is subjective well-being. This is an ordinal variable. Therefore, the ordered logit model seems most fit for the analysis. The coefficients to be estimated indicate the propensity someone fills in one of the possible outcomes 1 to 5 for each of the dependent variables. Cognitive subjective well-being, positive affective subjective well-being and negative affective subjective well-being will be estimated through three models. The formulas underlying these models are depicted below:

$$Cognitive\ SWB =$$
$$\beta_0 + \beta_1 * ownership + \beta_2 * desirability + \beta_3 * materialism + \beta_4 * tightwad$$
$$+ \beta_5 * spendthrift + \beta_6 * age + \beta_7 * health + \beta_8 * social\ relationships + \beta_9 * partner + \varepsilon$$

$$Positive\ affective\ SWB =$$
$$\beta_0 + \beta_1 * ownership + \beta_2 * desirability + \beta_3 * materialism + \beta_4 * tightwad$$
$$+ \beta_5 * spendthrift + \beta_6 * age + \beta_7 * health + \beta_8 * social\ relationships + \beta_9 * partner + \varepsilon$$

$$Negative\ affective\ SWB =$$
$$\beta_0 + \beta_1 * ownership + \beta_2 * desirability + \beta_3 * materialism + \beta_4 * tightwad$$
$$+ \beta_5 * spendthrift + \beta_6 * age + \beta_7 * health + \beta_8 * social\ relationships + \beta_9 * partner + \varepsilon$$

The assumption underlying the ordered logit model is that the ordered response is a latent, continuously distributed random variable representing the propensity to agree with the given statement (McKelvey & Zavoina, 1975). The model performs better than linear regression models as it does not assume the difference between ' strongly agree' and 'agree' on the one hand and between ' agree' and ' neither agree nor disagree' on the other hand to be the same. Another advantage is that two respondents filling in the same response are not assumed to have exactly the same attitude (the underlying latent variable can still differ between respondents).

The formulas depicted above show the variables included in the so-called basic model. For each of the indicators of happiness a second model will be estimated. In this second model, interactions are included of materialism, pain of paying and conspicuous goods to see whether the effects of these independent variables are intertwined. In the next section, a list will be provided of each variable in the model (both the variables of interest and the control variables) as well as a clarification of how these variables are constructed from the data.

**4.3 List of variables**

*Dependent variable*

The dependent variable used in the ordered logit model is subjective well-being. This variable is constituted by three items: cognitive evaluation, positive affect and negative affect. In the questionnaire, a reference to each of these factors is included. Each answer is recorded on a 5-point Likert scale:

- *How satisfied are you with your life in general, all things considered?*
- *How happy have you been in the last 30 days?*
- *Overall in the last 30 days, how much of a problem did you have with feeling sad, low or depressed?*

*Independent variables*

The ordered logit model has three different variables of interest. The first variable is called "conspicuous goods" or "conspicuousness". This variable consists of two variables in the model(s): ownership and desirability. Ownership indicates the amount of times that a respondent filled out that (s)he owned a conspicuous good from the list of conspicuous goods in the survey. The range of possible values for ownership is from 0 to 11. The same range is applicable to desirability: this variable demonstrates the amount of times a respondent answered (s)he desired for a conspicuous good from the list. This could mean that a respondent really deems one of his or her conspicuous goods important or that a respondent would like to have a conspicuous good (s)he does not own yet.

The intuition is that the more conspicuous goods someone owns, the happier this person is. It is not to be expected in advance that a nonlinear relationship will arise between these factors. Desiring for conspicuous goods could theoretically have both positive and negative effects on happiness. The desire for a conspicuous good could have a positive effect insofar it gives people a goal to strive for. The counterpart is that the desire could make people less happy or satisfied with the status quo.

Desirability also has been included in order to check whether the materialism answers are socially desirable or reveal true preferences. If the survey works perfectly, the extent to which people

deem the material items important corresponds perfectly with the degree of materialism of this person. More materialistic persons fill in significantly more often that they find the item important than less materialistic persons. This will be dealt with in the upcoming correlational analysis.

The degree of materialism is the second variable of interest and will be derived from the answers to nine statements. Here again, a 5-point Likert scale is used. The possible scores range from 9 to 45 points. The higher the amount of points on this scale someone acquires, the more materialistic this person is. The answer to statement 4 has been reversed for the total score: a high score on this statement means that you are *less* materialistic instead of more (a high score indicates that you try to live life as simple as possible).

The final variable of interest is the pain of paying. For this purpose, the four-item Spendthrift-Tightwad Scale will be used. The item scores have to be summed up to form an overall score ranging from 4 to 26. These scores are divided into three categories. People having a score between 4 and 11 are considered to be "tightwad". A score that ranges from 12 to 18 indicates an unconflicted consumer (so neither tightwad nor spendthrift). A score between 19 and 26 shows that someone is "spendthrift" (Bearden, Netemeyer, & Haws, 2010). Bearden et al. have found out that a trichotomy worked out better than a continuous scale for this variable.

*Control variables*

Dolan, Peasgood and White (2008) have summarized all factors that potentially influence subjective well-being according to literature in the field of economics. Not all of these factors will be included in the model as some are already captured by other variables. For example, asking for the income of the respondents would not have much additional value considering the fact that their spending behavior is already asked for and the fact that only lawyers working in high status law firms fill in the survey. The variance of the variable 'income' is expected to be (too) small.

For the sake of these two arguments (variance is expected to be too small and the variable can already be derived from earlier responses), 'unemployment', 'type of work', 'hours worked', 'gender', 'ethnicity', 'personality' and 'education level' are left out. Other variables such as 'religion' are left out, because this factor appears to have a significant influence on SWB in the United States, but not in Europe (Smith, 2003).

A factor which is included in the model is *age*. Several studies have been performed to examine the relationship between age and SWB (Blanchflower & Oswald, 2004) (Ferrer-i-Carbonell & Gowdy, 2007). The relationship is not entirely clear and differs from study to study. Most of the studies find a slightly negative relationship between age and SWB. However, there are also some studies that find that SWB is the highest when people are young and when they are old and the lowest when people

have an age between 30 and 50. This indicates a quadratic relationship. For the purpose of this thesis, a linear relationship between age and happiness has been included.

Another very influential control variable is *health*, referring to both physical and mental health. Part of the relationship between health and SWB can be caused by the impact of SWB on health, so several studies have been performed to find a causal effect instead of a correlation. Even taking into account the effect of SWB on health, health has a substantial effect on SWB (Dolan & White, 2007) (Gerdtham & Johannesson, 2001). The variable is measured on a 5-point scale[3].

In general, being part of a close relationship significantly increases the level of SWB (Blanchflower & Oswald, 2004). Being married is the best possible relationship status and being separated is the worst status (worse than being divorced for instance). Less close relationships have less impact on SWB than a caring relationship. To make clear this distinction to respondents, the variable *partner* is incorporated in the model. It reflects the answer to the question: "Do you have a partner?". This variable can either take the value '1' or '0'.

The final control variable to be included is *social relationships*. Socializing with family and friends generally increases SWB (Lelkes, 2006) (Pichler, 2006). This effect remains equally strong for people of different ages. It does not appear to make a large difference whether friends or family are frequently contacted (Martin & Westerhof, 2003). This variable is measured on a 7-point scale [4].

## 4.4 Data collection and descriptive statistics

The data have been acquired through a survey which will be distributed among lawyers working at the Zuidas in Amsterdam: the most well-known district of the Netherlands where many law firms can be found. Lawyers are a relatively homogenous group with on average a sufficient level of income. Because the group is quite specific, it has been possible to construct a conspicuous goods list that is considerably adapted to the target group. The questions are the same for all respondents, as the group has not been divided into a treatment and a control group. The exception is question 6, as it has been split up for males and females.

The surveys are distributed both on paper and online in order to maximize the response rate. On paper, the surveys are distributed in a business restaurant of the WTC-Tower of the Zuidas. The offices themselves have not been willing to let me distribute surveys in their departments. The amount of responses gathered this way is equal to 45. The actual number of responses was somewhat higher (51), but six responses have been removed from the sample as it turned out to be the case in the end that they were not lawyers themselves.

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[3] How is your health in general? 1 = Very good, 2 = Good, 3 = Fair, 4 = Bad, 5 = Very bad
[4] How often do you meet with friends or family? 1 = Never, 2 = Less than once a month, 3 = Once a month, 4 = Several times a month, 5 = Once a week, 6 = Several times a week, 7 = Every day.

Using the web software 'Qualtrics' ([www.qualtrics.com](www.qualtrics.com)), the questionnaire has also been distributed online. The amount of responses was equal to 47, although 11 participants did not finish the questionnaire. Therefore, 36 complete responses are recorded online. The invitation with the link to the survey has been sent to approximately 30 law firms by using the contact mail address published on their websites. Furthermore, two trainees currently working at "De Brauw" and "Loyens & Loeff" have been approached to help me distribute the link in their department. All in all, the total amount of responses is equal to 81.

52 males (64.2 percent) and 29 females (35.8 percent) have filled out the questionnaire. 18 respondents (22,2 percent) are single; 77.8 percent of the respondents have a partner. Almost half of the lawyers (44,4 percent) does not see their family and friends each week. The distribution of age is shown in the figure below. The youngest respondent was 24 and the oldest 74 years old, thus working beyond the retirement age. The peak at 25-29 could be explained by the fact that relatively young persons have responded to the online questionnaire.

**Figure 3: Age dispersion of the respondents**
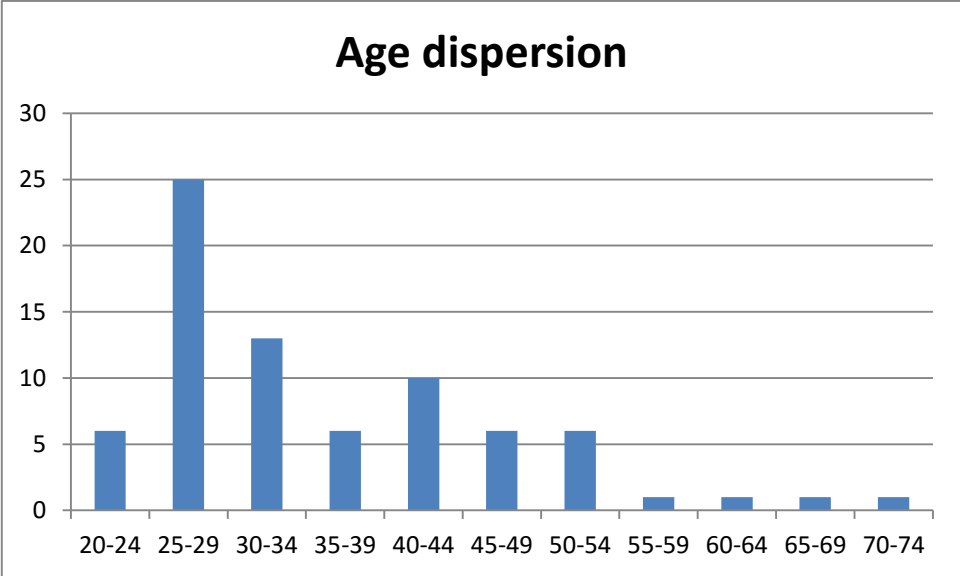


The health level of the respondents is typically high: 88.9 percent of the respondents indicated their health to be good or very good. Only 1 respondent answered that his or her health was bad and again nobody said the health level was very bad. This is not unexpected, since the questionnaires are all filled out during working hours. People in a bad health state probably decide not to work.

Most of the respondents indicated themselves to be very satisfied with their lives. 93 percent of the respondents either answered they were very satisfied or satisfied. When asked whether they felt happy during the last 30 days, 80 percent answered to experience (very) happy feelings. 73 percent

of the respondents had (almost) no problem with feeling sad, low or depressed in the last month. The worst option in each question (very much of a problem, not happy at all, not satisfied at all) has not been chosen by any of the respondents. The distribution over the alternatives is presented below.
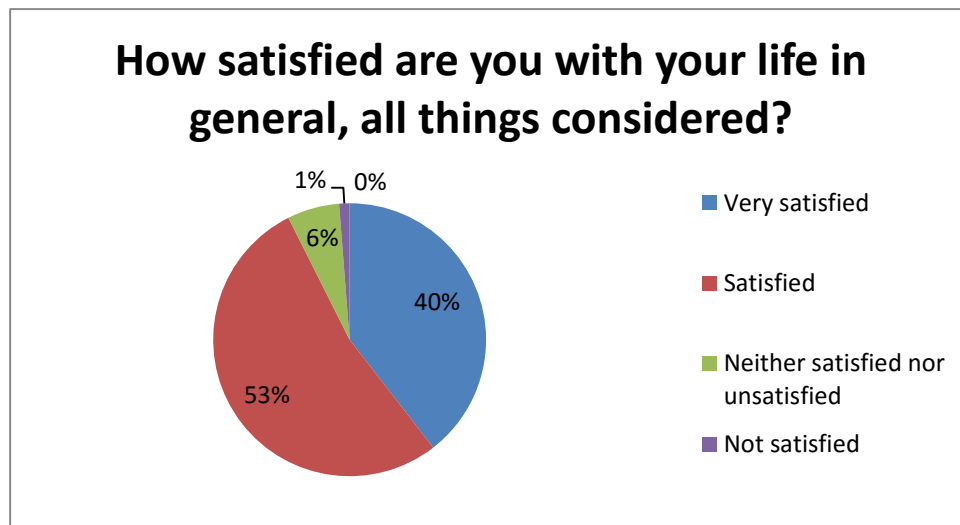


**Figure 4: Distribution of responses to question about satisfaction with life**
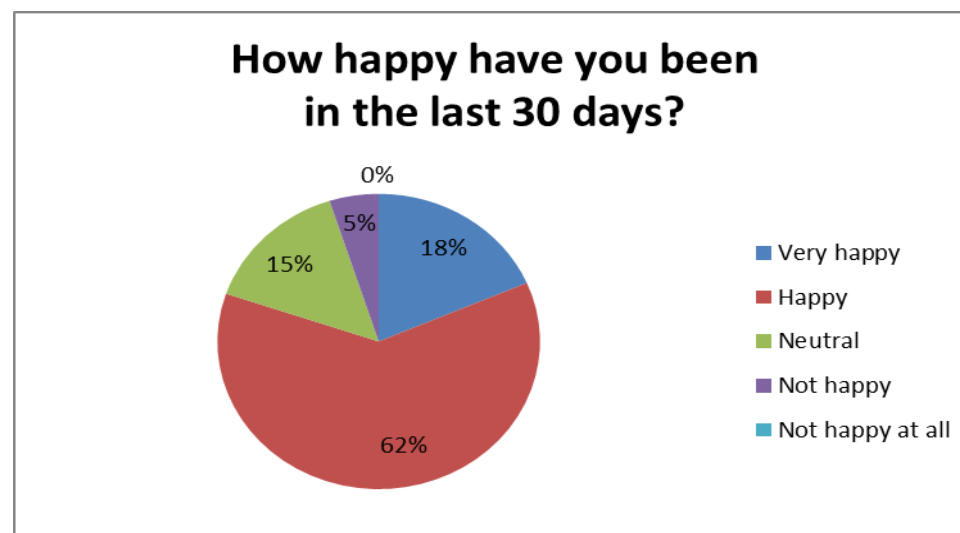


**Figure 5: Distribution of responses to question about feeling happy in the last month**
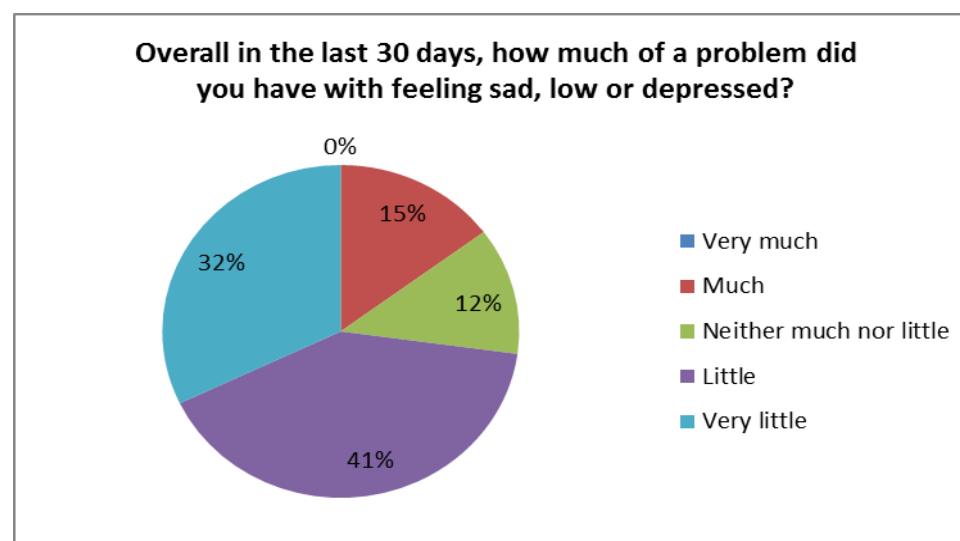


**Figure 6: Distribution of responses to question about feeling sad, low or depressed in the last month**

The maximum amount of conspicuous goods that respondents could have according to the survey was 11. The maximum amount that respondents *actually* have, is 8. This is relatively high since the goods in the list are randomly chosen. Half of the respondents have 3 or more conspicuous goods which is attractive in order to measure the influence of conspicuous goods on SWB. Only 1 in 5 respondents does not have any of the mentioned conspicuous goods from the list.

**Figure 7: dispersion of amount of conspicuous goods over the respondents**



Each of the items on the list with conspicuous goods was owned by at least one respondent. Among women, the perfumery and clothes were most popular. Approximately half of them found the item important. The most desired item – if not owned – was a second home abroad. Among men, dinners in a first class restaurant, suits and sun glasses were popular. Men indicated to desire a BMW and a second home abroad. For more detailed descriptive statistics, see Appendix E.

**4.5 Correlational analysis**

In order to have a general overview of the data, a correlational analysis has been performed with regard to the different variables in the dataset. The responses to the survey give evidence to a moderate positive relationship between the three outcome variables which together constitute 'happiness' (see Table 1 on the next page). The variable 'conspicuousness' consists of two parts: ownership (owning conspicuous goods) and desirability (desiring conspicuous goods). Ownership and desirability are positively related to materialism indicating that individuals who own and desire many conspicuous goods are more materialistic in general. Desirability is negatively related to age which means that older people tend to desire less conspicuous goods.

**Table 1: Correlation matrix**

| | Satisfied | Happy | Sad | Owner-ship | Desirabil-ity | Material-ism | Tight-wad | Spend-thrift | Age | Health | Partner | Social rela-tion-ships |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Satisfied** | 1.0000 | | | | | | | | | | | |
| **Happy** | 0.5450*** (0.0000) | 1.0000 | | | | | | | | | | |
| **Sad** | -0.3319*** (0.0025) | -0.4951*** (0.0000) | 1.0000 | | | | | | | | | |
| **Ownership** | -0.0811 (0.4716) | -0.0117 (0.9175) | -0.0052 (0.9630) | 1.0000 | | | | | | | | |
| **Desirability** | 0.0210 (0.8526) | 0.0558 (0.6209) | -0.0259 (0.8188) | 0.0637 (0.5722) | 1.0000 | | | | | | | |
| **Material-ism** | -0.2513** (0.0236) | -0.2733** (0.0136) | 0.2129* (0.0563) | 0.2996*** (0.0066) | 0.3225*** (0.0033) | 1.0000 | | | | | | |
| **Tightwad** | 0.1569 (0.1618) | 0.2548** (0.0217) | -0.0222 (0.8440) | -0.0607 (0.5906) | -0.1241 (0.2697) | -0.3003*** (0.0065) | 1.0000 | | | | | |
| **Spendthrift** | -0.0454 (0.6874) | -0.1287 (0.2523) | 0.0740 (0.5113) | 0.1314 (0.2422) | 0.0530 (0.6384) | 0.1884* (0.0921) | -0.1131 (0.3148) | 1.0000 | | | | |
| **Age** | 0.0579 (0.6077) | 0.1760 (0.1161) | -0.2212** (0.0472) | -0.1707 (0.1276) | -0.3087*** (0.0051) | -0.2444** (0.0279) | 0.1407 (0.2102) | -0.1661 (0.1385) | 1.0000 | | | |
| **Health** | 0.1759 (0.1162) | 0.1816 (0.1047) | -0.1066 (0.3437) | 0.0183 (0.8711) | 0.1074 (0.3398) | 0.0040 (0.9714) | 0.0901 (0.4239) | 0.0576 (0.6097) | 0.0010 (0.9929) | 1.0000 | | |
| **Partner** | 0.2574** (0.0204) | 0.1182 (0.2934) | -0.0065 (0.9540) | -0.0533 (0.6367) | -0.1289 (0.2513) | -0.2511** (0.0237) | -0.0152 (0.8927) | -0.1077 (0.3384) | 0.1025 (0.3627) | 0.1867* (0.0952) | 1.0000 | |
| **Social rela-tionships** | 0.0975 (0.3866) | -0.0804 (0.4757) | 0.1480 (0.1873) | 0.1153 (0.3055) | 0.1038 (0.3565) | 0.1574 (0.1606) | -0.0613 (0.5867) | 0.0659 (0.5589) | -0.1593 (0.1556) | -0.1490 (0.1845) | -0.1532 (0.1721) | 1.0000 |

Each cell in the table indicates the correlation between variable x and y. Between brackets the P-value is shown. *** = significant at 1%-level, ** = sign. at 5%-level, * = sign. at 10%-level.

A significant relationship has been found between materialism and pain of paying: materialistic persons are more often spendthrift and less often tightwad than non-materialistic persons. This corresponds with commons sense. Almost none of the variables is directly (significantly) related to cognitive, positive affective or negative affective happiness. Only materialism is negatively related to them: materialistic persons are in general less satisfied and happy. Furthermore, they experience a higher frequency of negative affect. Contrary to what has been found in studies of Hudders & Pandelaere (2012) concerning the influence of luxury consumption on happiness, owning many conspicuous goods does not contribute positively to happiness.

Together, these results support the contention that being materialistic negatively influences subjective well-being. Being materialistic negatively correlates with being tightwad which is positively correlated with positive affective happiness. The same holds for conspicuousness: this is (weakly) related to materialism as well and seems to have (small and insignificant) negative effects on happiness. As mentioned in previous section 4.3, a check would be carried out in order to see whether more materialistic persons indeed (as expected) desire more conspicuous goods. According to the correlation matrix, a significant but weak positive correlation exists between these two factors which corresponds with the expectations.

# 5. Results

In this section of the thesis, the results will be presented of each indicator of happiness mentioned in the previous chapter. Three ordered logit models will be estimated in order to investigate relations between variables such as conspicuous goods, materialism and pain of paying on the one hand and cognitive, positive affective and negative affective SWB on the other hand.

### 5.1 Hypothesis 1: cognitive SWB

The first hypothesis scrutinizes the relationship between the variables included in the model and the answers of respondents to the question: "How satisfied are you with your life in general, all things considered?" Because the model is an ordered logit model it is impossible to directly interpret the magnitude of the effects of the variables. In order to measure this magnitude, the marginal effects should be calculated. In table 2 (on the next page) the results of the basic model which includes conspicuousness, materialism, pain of paying and the control variables are shown[5]. The only significant factor is having a partner: individuals having a partner have a significant (at a 10%-level) higher probability of being satisfied. All other variables are insignificant. The likelihood ratio chi-square test takes a value of 13.50. The probability of obtaining the chi-square statistic or a more extreme one when in fact the null hypothesis is true (no effect of the independent variables taken together) is 0.1411. So the overall model is statistically insignificant.

The second model that is estimated, includes the interactions of the two components of conspicuousness (ownership and desirability) with either materialism or pain of paying. Adding these interactions is beneficial for the power of the model: the value of the likelihood ratio chi-square test has increased to 25.02 with a corresponding probability of obtaining this value or a more extreme one while the null hypothesis is true of 0.0497. This means that the model has become significant at a 5%-level. Having a partner still has a positive effect on the probability of a high score on cognitive happiness. Furthermore, desiring to have conspicuous goods has become significant.

The interactions are insignificant except for the interaction of desirability and materialism. This interaction shows a negative coefficient indicating that materialistic persons experience less positive effects of desirability on the probability of being satisfied than non-materialistic persons. A reason for this negative coefficient could be that the desire within materialistic persons takes the form of jealousy: for instance, a neighbor who owns a BMW while you do not. Materialistic persons probably put too much emphasis on this shortage with the corresponding negative effects for being satisfied.

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[5] In all tables showing the results of models each cell indicates the coefficient between variable x and the dependent variable. Between brackets the standard error is shown. *** = significant at 1%-level, ** = sign. at 5%-level, * = sign. at 10%-level.

**Table 2: Effects of conspicuous goods, materialism and pain of paying on being satisfied**

| | (1) | (2) | (3) |
|---|---|---|---|
| **Ownership** | -0.014 | -0.089 | 0.021 |
| | (0.099) | (0.508) | (0.102) |
| **Desirability** | 0.087 | 1.020$^{**}$ | 0.945$^{**}$ |
| | (0.095) | (0.483) | (0.407) |
| **Materialism** | -0.070 | 0.026 | 0.037 |
| | (0.047) | (0.089) | (0.065) |
| **Tightwad** | 1.341 | -88.22 | 1.844 |
| | (1.327) | (7176.00) | (0.147) |
| **Spendthrift** | -0.004 | -0.563 | 0.147 |
| | (0.570) | (1.057) | (0.575) |
| **Age** | 0.009 | 0.009 | |
| | (0.021) | (0.023) | |
| **Health** | 0.367 | 0.368 | |
| | (0.363) | (0.394) | |
| **Social relationships** | 0.159 | 0.172 | |
| | (0.174) | (0.186) | |
| **Partner** | 1.178$^{*}$ | 1.288$^{*}$ | 1.190$^{**}$ |
| | (0.628) | (0.680) | (0.616) |
| **Ownership # Tightwad** | | 34.571 | |
| | | (2905.83) | |
| **Ownership # Spendthrift** | | 0.339 | |
| | | (0.254) | |
| **Ownership # Materialism** | | 0.001 | |
| | | (0.020) | |
| **Desirability # Tightwad** | | 17.564 | |
| | | (1522.80) | |
| **Desirability # Spendthrift** | | -0.123 | |
| | | (0.238) | |
| **Desirability # Materialism** | | -0.036$^{**}$ | -0.033$^{**}$ |
| | | (0.017) | (0.015) |
| **LR-Chi^2** | 13.50 (9) | 25.02 (15) | 16.24 (6) |
| **Prob> Chi^2** | 0.1411 | 0.0497 | 0.0230 |
| **Pseudo R^2** | 0.0897 | 0.1662 | 0.1079 |

The third model is limited to the variables of interest (ownership, desirability, materialism and pain of paying) and the significant control and interaction variables from model 2 (partner and desirability # materialism). Leaving out the insignificant control and interaction variables does not have any effect on the coefficients or significance of the remaining variables. The model is significant at a 5%-level and will be used to calculate the marginal effects of each variable. The average marginal effects with respect to being satisfied are shown in Table 3 below.

**Table 3: Marginal effects analysis w.r.t. Satisfied**

|  | Model 3 |
| --- | --- |
|  |  |
| **Ownership** | 0.004 |
|  | (0.021) |
|  |  |
| **Desirability** | 0.195** |
|  | (0.079) |
|  |  |
| **Materialism** | 0.008 |
|  | (0.013) |
|  |  |
| **Tightwad** | 0.381* |
|  | (0.212) |
|  |  |
| **Spendthrift** | 0.031 |
|  | (0.121) |
|  |  |
| **Desirability # materialism** | -0.007** |
|  | (0.003) |
|  |  |
| **Partner** | 0.245** |
|  | (0.121) |

Having a partner significantly increases the probability that an individual is very satisfied with life (cognitive happiness = 5) compared to not having a partner ceteris paribus. The average marginal effect of a partner is 24.5 percentage points. This effect is larger in absolute terms than the positive effect of desiring conspicuous goods. Desiring one extra conspicuous good results in an increase in the probability of being very satisfied of 19.5 percentage points.

The effect is mediated by the level of materialism that the individual has. Assuming the mean level of materialism (23.62), for an average person the effect of desirability is equal to 3.0 percentage points. The highest value of materialism in this dataset was 40; for this person desiring conspicuous goods influences the probability of being very satisfied negatively (-8.5 percentage points). All in all, having a desire for conspicuous goods is only beneficial in terms of happiness when these goods do

not adopt a central place in the determination of someone's level of happiness (i.e. when someone is not very materialistic).

The relation between cognitive SWB and pain of paying deserves more attention. The theoretical expectation was that unconflicted consumers would experience a higher level of cognitive SWB than either tightwad or spendthrift consumers. Although the results from the ordered logit model do not seem to support this contention, a one-way ANOVA has been performed in order to look more closely to cognitive SWB in relation to pain of paying. Below one can see a graph with the average of the values of satisfaction with life for respectively tightwad, unconflicted and spendthrift consumers and a table with the ANOVA-results:
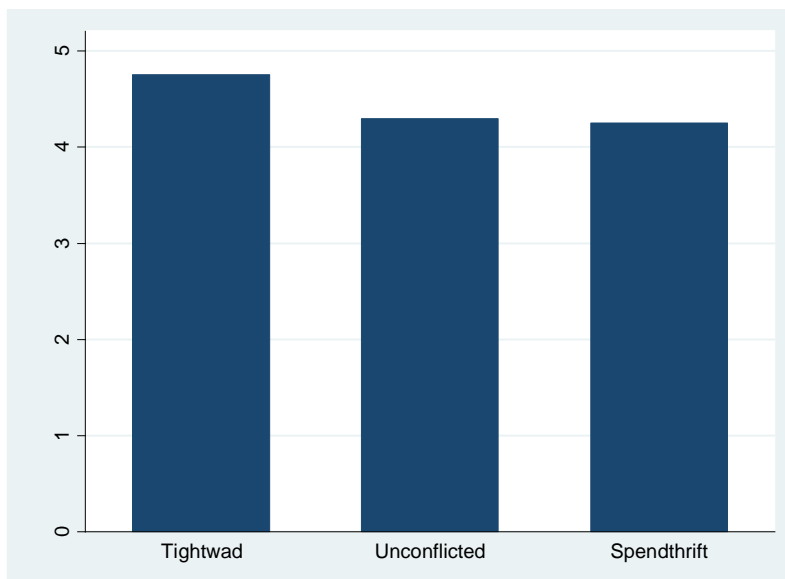


**Figure 7 & Table 4: Average level of satisfaction with life in general for tightwad, unconflicted and spendthrift consumers & ANOVA-output.**

| Source | Sum of squares | Degrees of freedom | Mean of squares | F-value | Significance |
|---|---|---|---|---|---|
| **Between groups** | 0.845426027 | 2 | 0.422713014 | 1.02 | 0.3666 |
| **Within groups** | 32.4385246 | 78 | 0.41587852 | | |
| **Total** | 33.2839506 | 80 | 0.416049383 | | |

There appears to be no significant difference in the average values of satisfaction for tightwad, unconflicted and spendthrift consumers (P=0.3666). The expected lower averages for tightwad and spendthrift consumers do not appear in the dataset which has been used[6]. Eventual differences in the average values for tightwad compared to the other two categories should be interpreted with care as only four respondents are considered to be tightwad.

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[6] The expected lower averages do not occur in the case of feeling happy or sad neither. Therefore, the ANOVA-results for these two indicators of happiness are not discussed in the main text and can be found in Appendix F.

**5.2 Hypothesis 2: positive affective SWB**

This second hypothesis is about establishing an eventual relationship between the different variables of the model and the answers that respondents gave to the question "How happy have you been in the last 30 days?" Again, the first model to be estimated is the basic model with the variables 'conspicuousness', 'materialism', 'pain of paying' and the control variables without the interaction variables. The results are shown on the page below in Table 5. The model as a whole is highly significant: the likelihood ratio chi-square test value is 21.03 with a corresponding probability of obtaining this value or a more extreme one while the null hypothesis is true of 0.0125.

According to these results, desiring conspicuous goods again has a significant (at a 10%-level) positive influence on someone's level of happiness. To the contrary, materialism exerts a significant (at a 5%-level) negative influence. The variable 'tightwad' is on the verge of being significant ($p=0.101$) and is positive indicating that people being tightwad have a significant higher probability of experiencing positive affect than unconflicted individuals. The final significant (at a 10%-level) contributor to positive affect is 'health', so healthy individuals tend to have a higher probability of experiencing happy feelings than unhealthy individuals. This result is in line with common sense.

In model 2 the interaction variables are added. As was the case with the first hypothesis the addition of the interaction variables increases the explanatory power of the model and the significance of it. Dramatic changes have taken place with regard to the significance of the variables included in the model. 'Ownership' has become significant indicating that owning conspicuous goods has a significant positive effect on the probability of experiencing happy feelings. The interaction of ownership with materialism is almost significant. Therefore, this variable will be included in the third model. The interaction of desirability and materialism is significant as well at a 10%-level. The effect of this interaction is negative. 'Tightwad' and 'materialism' are far from being significant ($p=0.991$ respectively $p=0.969$). The only unchanged variable is 'health' which is still significant and positive.

The third model consists of the variables of interest and the significant control and interaction variables (health, ownership # materialism and desirability # materialism). This smaller model makes the model more significant (prob > chi2 = 0.0040). Owning conspicuous goods is still significant as well as the interaction of this variable with materialism. 'Materialism' itself has turned insignificant which could be explained by the fact that materialism on itself does not exert a direct negative influence positive affective happiness but only indirectly influences it by diminishing the delight of owning conspicuous goods. Being tightwad is significant again; the heavy fluctuations in significance of this term are due to the fact that only 4 out of 81 respondents are considered to be tightwad. Based on this third model, the marginal effects are calculated (see Table 6).

**Table 5: Effects of conspicuous goods, materialism and pain of paying on feeling happy**

|  | (1) | (2) | (3) |
|---|---|---|---|
| **Ownership** | 0.150 | 0.954[*] | 0.986[**] |
|  | (0.103) | (0.495) | (0.460) |
| **Desirability** | 0.168[*] | 0.317 | 0.103 |
|  | (0.096) | (0.395) | (0.105) |
| **Materialism** | -0.111[**] | 0.004 | 0.001 |
|  | (0.049) | (0.092) | (0.079) |
| **Tightwad** | 2.093[(*)] | -93.29 | 2.425[*] |
|  | (1.277) | (8261.495) | (1.300) |
| **Spendthrift** | -0.416 | -0.451 | -1.077 |
|  | (0.587) | (1.050) | (0.897) |
| **Age** | 0.025 | 0.032 |  |
|  | (0.023) | (0.025) |  |
| **Health** | 0.663[*] | 0.688[*] | 0.518 |
|  | (0.369) | (0.405) | (0.357) |
| **Social relationships** | -0.169 | -0.169 |  |
|  | (0.174) | (0.186) |  |
| **Partner** | 0.183 | 0.061 |  |
|  | (0.606) | (0.669) |  |
| **Ownership # Tightwad** |  | 36.465 |  |
|  |  | (3246.83) |  |
| **Ownership # Spendthrift** |  | -0.392 |  |
|  |  | (0.258) |  |
| **Ownership # Materialism** |  | -0.030[(*)] | -0.036[*] |
|  |  | (0.020) | (0.018) |
| **Desirability # Tightwad** |  | 18.757 |  |
|  |  | (1971.21) |  |
| **Desirability # Spendthrift** |  | 0.462[*] | 0.243 |
|  |  | (0.239) | (0.218) |
| **Desirability # Materialism** |  | -0.007 |  |
|  |  | (0.015) |  |
| **LR-Chi^2** | 21.03 (9) | 33.23 (15) | 22.53 (8) |
| **Prob> Chi^2** | 0.0125 | 0.0044 | 0.0040 |
| **Pseudo R^2** | 0.1246 | 0.1969 | 0.1335 |

**Table 5: Marginal effects analysis w.r.t. Happy**

|  | Model 3 |
|---|---|
|  |  |
| **Ownership** | 0.115$^{**}$ |
|  | (0.054) |
|  |  |
| **Desirability** | 0.012 |
|  | (0.012) |
|  |  |
| **Materialism** | 0.000 |
|  | (0.001) |
|  |  |
| **Tightwad** | 0.458$^{*}$ |
|  | (0.256) |
|  |  |
| **Spendthrift** | -0.104 |
|  | (0.072) |
|  |  |
| **Health** | 0.061 |
|  | (0.043) |
|  |  |
| **Ownership # Materialism** | -0.004$^{*}$ |
|  | (0.002) |
|  |  |
| **Desirability # Spendthrift** | 0.028 |
|  | (0.026) |

Owning one extra conspicuous good significantly (at a 5%-level) increases the probability of having experienced happy feelings very often (positive affective happiness = 5) during the last 30 days with 11.5 percentage points ceteris paribus. Just as was the case in hypothesis 1, materialism exerts a negative influence on a positive relationship with happiness. For a person with an average level of materialism (23.62), owning conspicuous goods only contributes to the probability of experiencing positive affect with 1.6 percentage points. And again, the contribution of owning conspicuous goods to happiness is negative for a very materialistic person.

Being tightwad increases the probability of feeling happy with a very large extent: 45.8 percentage points compared to being an unconflicted consumer. However, this number should be interpreted with great care: because only 4 consumers in the dataset are considered to be tightwad, the higher level of happiness could be the consequence of mere coincidence. Especially since this result does not stroke with the effects of being tightwad on happiness found in earlier literature, it seems best to not take this result too seriously.

**5.3 Hypothesis 3: negative affective SWB**

This final hypothesis aims to establish the relationship between the variables included in the model and the answers of respondents to the question: "Overall in the last 30 days, how much of a problem did you have with feeling sad, low or depressed?" A higher score here is in fact negative for the concerned respondent: the higher the level of negative affect, the lower the level of this person's happiness is considered to be. The results for the three models with respect to 'sad' are shown in Table 7.

The basic model for 'sad' is insignificant: the likelihood ratio chi-squared test value is 12.77 with a corresponding probability that this value or a more extreme one occurs while in fact the null hypothesis is true of 0.1734. The only significant factors are 'materialism' and 'age'. Being materialistic significantly (at a 5%-level) increases the probability of experiencing negative affect. Being older, to the contrary, decreases this probability significantly at a 10%-level. Social relationships would have the same positive effect, but is slightly insignificant (p=0.105).

Including interactions in the model does not have the same effect as was the case for hypothesis 1 and 2. Model 2 is even more insignificant than model 1. All interactions are insignificant as well as the other variables. The only exception is 'age' which still has the effect of lowering the probability of experiencing negative affect. Social relationships is still on the verge of significance. Therefore, only the variables of interest and 'age' and 'social relationships' are transferred to the third model.

This model is the first model with respect to negative affect that is significant: the likelihood ratio chi-squared test value is 12.70 with a corresponding probability that this value or a more extreme one occurs while in fact the null hypothesis is true of 0.0798. The significant variables and the corresponding effects are exactly the same as in the first model. This explains why this model is significant whereas the first model was not: two coefficients have been removed from the model, but the explanatory power has barely decreased. This model will therefore be used to estimate the marginal effects (see Table 8).

It is the first time that materialism exerts a direct negative influence on the dependent variable: one extra point on the materialism-scale results in a 2.1 percentage point increase in the probability of experiencing negative affect ceteris paribus. Being one year older decreases this probability with 0.7 percentage points. Seeing family and friends more often has a positive influence as well on the level of someone's negative affective happiness as well: the decrease in the probability of experiencing negative affect is equal to 5.2 percentage points ceteris paribus.

In general one could say that the variables of the model are not perfectly suited for determining the decisive factors for sadness. The explanatory power of the model is relatively low compared to the power of the model in the case of the explanation of being satisfied or feeling happy. However, the results that have been found with regard to feeling sad are in line with earlier literature: social relationships are beneficial and materialistic persons more often experience negative affect.

### Table 7: Effects of conspicuous goods, materialism and pain of paying on feeling sad

| | (1) | (2) | (3) |
|---|---|---|---|
| **Ownership** | -0.088 | 0.442 | -0.086 |
| | (0.094) | (0.442) | (0.093) |
| **Desirability** | -0.116 | -0.160 | -0.117 |
| | (0.086) | (0.391) | (0.085) |
| **Materialism** | 0.108** | 0.058 | 0.108** |
| | (0.044) | (0.082) | (0.043) |
| **Tightwad** | 0.802 | 7.034 | 0.788 |
| | (0.977) | (7.254) | (0.968) |
| **Spendthrift** | -0.026 | 0.418** | -0.038 |
| | (0.570) | (1.010) | (0.564) |
| **Age** | -0.036* | -0.043** | -0.036* |
| | (0.019) | (0.020) | (0.019) |
| **Health** | -0.092 | 0.033 | |
| | (0.354) | (0.394) | |
| **Social relationships** | -0.256(*) | -0.260(*) | -0.265* |
| | (0.158) | (0.164) | (0.154) |
| **Partner** | 0.029 | 0.197 | |
| | (0.507) | (0.546) | |
| **Ownership # Tightwad** | | -2.319 | |
| | | (2.367) | |
| **Ownership # Spendthrift** | | 0.140 | |
| | | (0.240) | |
| **Ownership # Materialism** | | 0.014 | |
| | | (0.017) | |
| **Desirability # Tightwad** | | 0.708 | |
| | | (1.339) | |
| **Desirability # Spendthrift** | | -0.307 | |
| | | (0.233) | |
| **Desirability # Materialism** | | 0.003 | |
| | | (0.015) | |
| **LR-Chi^2** | 12.77 (9) | 16.33 (15) | 12.70 (7) |
| **Prob> Chi^2** | 0.1734 | 0.3605 | 0.0798 |
| **Pseudo R^2** | 0.0620 | 0.0793 | 0.0616 |

**Table 8: Marginal effects analysis w.r.t. Sad**

|  | Model 3 |
|---|---|
|  |  |
| **Ownership** | -0.017 |
|  | (0.018) |
|  |  |
| **Desirability** | -0.023 |
|  | (0.016) |
|  |  |
| **Materialism** | 0.021*** |
|  | (0.008) |
|  |  |
| **Tightwad** | 0.134 |
|  | (0.141) |
|  |  |
| **Spendthrift** | -0.008 |
|  | (0.111) |
|  |  |
| **Age** | -0.007** |
|  | (0.003) |
|  |  |
| **Social relationships** | -0.052* |
|  | (0.029) |

## 5.4 Structural equation modeling

Structural equation modeling (SEM) has been applied in order to investigate the relations between conspicuousness, materialism, pain of paying and happiness simultaneously. It is a causal modeling approach that explores correlations within a defined set of variables and is also known as "path analysis". The main goal of SEM is to understand patterns of correlations among the different variables and it can show each individual relation between two variables in one and the same diagram. In this thesis, SEM is used in order to check whether the results of the previous sections correspond with the results to be found in the SEM-framework. The SEM-diagram and corresponding formulas are shown on the next page.

The only variable showing significant relations with other variables is 'materialism'. Being materialistic has some direct negative effects on the three indicators of happiness. If materialism increases by one standard deviation from its mean, the expected 'value' of cognitive happiness would be expected to decrease by 0.0289 times its own standard deviation from its own mean keeping all other factors fixed. The value of positive affective happiness even decreases with 0.0355 times its own standard deviation from its own mean. The strongest negative effect, however, can be found for negative affective happiness: an increase in materialism results in an increase of the value for negative affective happiness with 0.0489 times its own standard deviation from its own mean.

**Structural equation modeling: formulas and diagram**

- *Cognitive happiness = 4.8969 – 0.0016 * Ownership + 0.2774 * Tightwad + 0.0144 * Spend-thrift + 0.0278 * Desirability – 0.0289 * Materialism*

- *Positive affective happiness = 4.5624 + 0.0257 * Ownership + 0.6288 * Tightwad – 0.1352 * Spendthrift + 0.0456 * Desirability – 0.0355 * Materialism*

- *Negative affective happiness = 4.8652 – 0.0365 * Ownership + 0.2251 * Tightwad + 0.1113 * Spendthrift – 0.0403 * Desirability + 0.0489 * Materialism*

- *Ownership = -0.0940 + 0.1249 * Materialism + 0.4704 * Spendthrift + 0.3921 * Tightwad – 0.0306 * Desirability*

- *Desirability = 0.4656 – 0.3787 * Tightwad – 0.0664 * Spendthrift + 0.1465 * Materialism*

- *Tightwad = 0.3152 – 0.0113 * Materialism*

- *Spendthrift = -0.1089 + 0.0130 * Materialism*

**Figure 8: Structural equation modeling diagram**
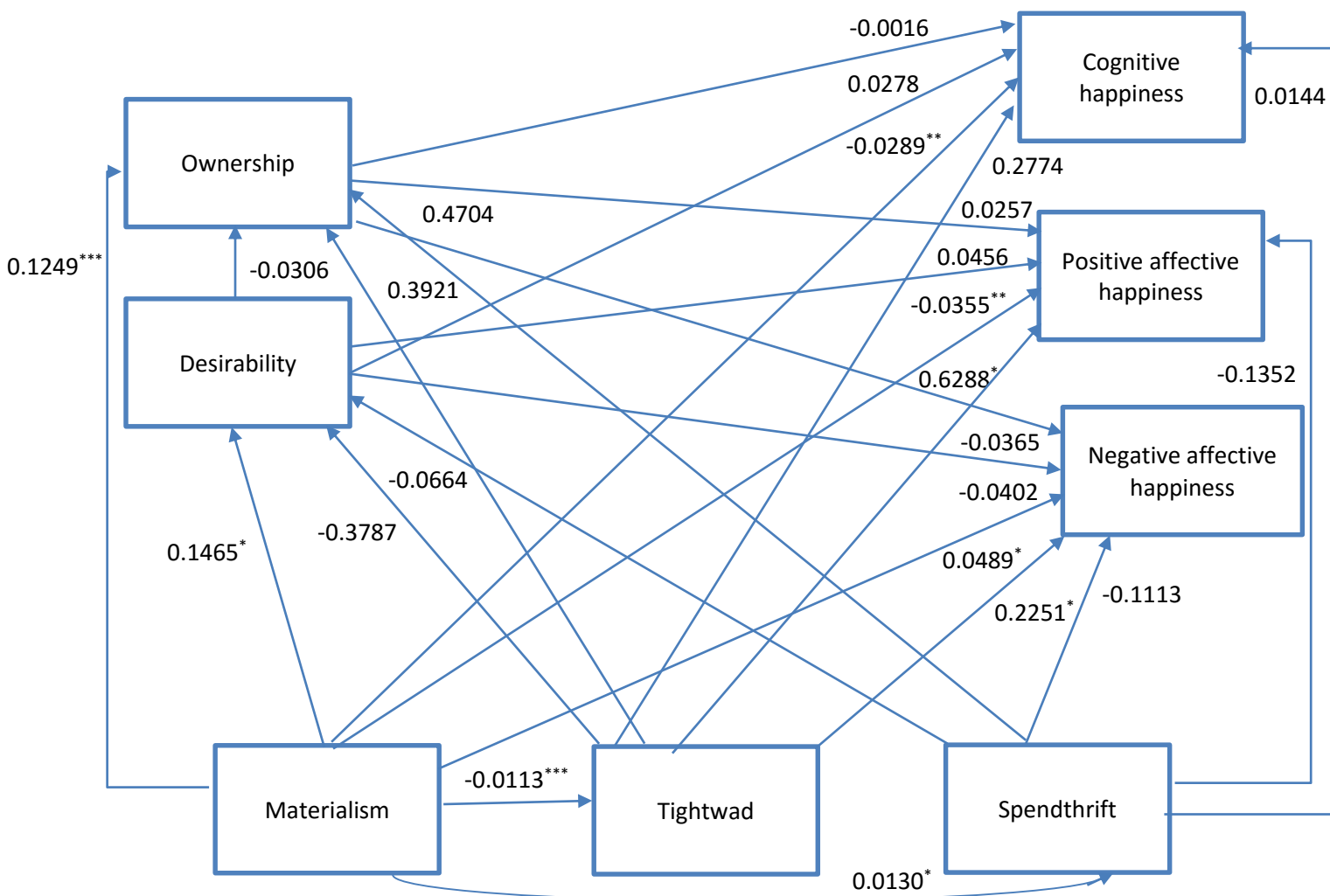
Using SEM it is possible to establish indirect negative effects of materialism as well. However, the other relations in the SEM-diagram are insignificant. The relations between being tightwad and experiencing positive and negative affect are an exception. The first relationship shows that being tightwad increases the probability of experiencing positive affect. On the other hand, being tightwad negatively influences happiness by increasing the probability of experiencing negative affect. Just as was the case with the ordered logit models, the results with respect to being tightwad should be interpreted with care as the amount of respondents indicating they are tightwad is only four.

If the relationship between being tightwad and negative affective happiness is still considered to be correct, materialism also has a positive indirect effect on happiness. This is because there is a negative relation between being materialistic and being tightwad. The effect of materialism on feeling sad via being tightwad (so: Materialism > Tightwad > Negative affective happiness) is equal to -0.0113 * 0.2251 = -0.0025. It turns out to be the case that this indirect effect is rather small and cannot compensate for the negative direct effect of materialism.

A comparison of the results from SEM with those of the ordered logit model reveals that there is no contradiction between them. Materialism is the variable with the largest effect on the three indicators of happiness. The other variables are insignificant for a large part although the interaction of materialism with them is significant in most of the cases. The results show heavy fluctuations with regard to being tightwad, but this is due to the fact that only four respondents are considered to be tightwad. More relations were significant in the ordered logit model than in the SEM-framework which is caused by the more correlational nature of the ordered logit model.

**5.5 Conclusions regarding the hypotheses**

The first main hypothesis investigated the relationship of the variables of interest (conspicuous goods, materialism and pain of paying) and cognitive happiness. The final model explaining cognitive happiness was significant and contained two significant variables: desiring conspicuous goods, having a partner and the interaction of desiring conspicuous goods with materialism. The most decisive factor for being satisfied is having a partner. The desire for conspicuous goods only increases the value for cognitive happiness for someone who is not too materialistic. A check has been carried out in order to see whether tightwad and spendthrift persons experience lower levels of happiness than unconflicted persons, but differences were not statistically significant.

The second main hypothesis dealt with positive affect subjective well-being. Having more conspicuous goods appeared to result in a significantly higher probability of experiencing positive affect. However, very materialistic persons do not reap the fruits of this: ownership in their case can result in a *lower* probability of positive affect. The ordered logit model demonstrated a positive effect for being

tightwad as well, but this result can hardly be taken seriously: only four respondents in the dataset are considered to be tightwad.

The final main hypothesis tried to find out which factors significantly influence the probability of negative affect. Materialism has a *direct* negative effect here for the first time. Becoming older decreases the probability of experiencing negative affect as well as having many social relationships. This corresponds with results from earlier studies. In absolute terms, the positive effect of having social relationships is the largest and the effect of age very small.

Finally, structural equation modeling has been applied in order to better understand the correlational patterns found using the ordered logit model. SEM makes it even clearer that materialism is the most influential variable among the variables included in the dataset. It shows significant direct negative effects on all three indicators of happiness. The only positive influence of materialism on happiness is this: materialistic persons are less often tightwad than non-materialistic persons and being tightwad increases the probability of negative affect. So SEM confirms the earlier described negative effects of materialism with respect to happiness and does not invalidate the direction of impact of the other variables on happiness.

## 5.6 Accepting or rejecting the hypotheses

| COGNITIVE HAPPINESS | |
|---|---|
| The more conspicuous goods an individual consumes, the higher someone's level of cognitive happiness is. | **REJECTED** |
| The more materialistic an individual is, the lower someone's level of cognitive happiness is. | **ACCEPTED** |
| Tightwad and spendthrift consumers have a lower level of negative affective happiness than unconflicted consumers. | **REJECTED** |

| POSITIVE AFFECTIVE HAPPINESS | |
|---|---|
| The more conspicuous goods an individual consumes, the higher someone's level of positive affective happiness is. | **ACCEPTED** |
| The more materialistic an individual is, the lower someone's level of positive affective happiness is. | **ACCEPTED** |
| Tightwad and spendthrift consumers have a lower level of positive affective happiness than unconflicted consumers. | **REJECTED** |

| NEGATIVE AFFECTIVE HAPPINESS | |
|---|---|
| The more conspicuous goods an individual consumes, the higher someone's level of negative affective happiness is. | **REJECTED** |
| The more materialistic an individual is, the lower someone's level of negative affective happiness is. | **ACCEPTED** |
| Tightwad and spendthrift consumers have a lower level of negative affective happiness than unconflicted consumers. | **REJECTED** |

# 6. Discussion

**6.1 General conclusions**

For many people in Western European societies, happiness is an important goal to strive for. Many of them think that consumption is key in becoming happy. Although several earlier studies have shown that consumption per se does not contribute to happiness, it is worthwhile to figure out whether specific kinds of consumption lack positive effects as well (Dutt, 2006). This thesis contributes to the existing literature by investigating whether conspicuous consumption has positive effects for someone's level of happiness. The research question is: "*What is the relationship between the consumption of conspicuous goods and the level of happiness and how do materialism and pain of paying influence this relationship?*"

The results of the survey distributed among 81 lawyers being employed at the "Zuidas" World Trade Center of Amsterdam show that conspicuous consumption increases the probability of experiencing a high level of positive affect. It does not significantly influence someone's cognitive happiness or negative affective happiness. Overall, conspicuous consumption can thus contribute positively to happiness.

Conspicuous consumption does not necessarily result in a higher level of happiness. It depends on how materialistic this person is: very materialistic persons enjoy less benefits from conspicuous consumption than nonmaterialistic persons. Materialism can have direct negative effects as well. The more materialistic someone is, the more often this person experiences sad or depressed feelings. This finding is consistent with the results from Kasser (2002). In this study was already established that individuals focusing on materialistic values were depressed more often than nonmaterialistic persons.

It may appear paradoxical that it is the materialistic persons being less happy when having conspicuous goods at their disposal than nonmaterialistic persons as it is probable that materialistic people will derive some benefits from their consumption behaviour. However, these benefits are likely to be offset by the negative consequences of their attitude: neglecting the benefits of a large social network (not investing enough effort in it), being jealous about stuff owned by others and bothering about not being able to afford buying particular items.

Another expectation was that people suffering from pain of paying would report lower levels of happiness than unconflicted persons. This hypothesis was derived from a study by Rick, Cryder and Loewenstein (2008). The ANOVA-tests which have been carried out do not give rise to the conclusion that the levels of happiness as well as the impact of other variables on happiness differ significantly for tightwad and spendthrift persons compared to unconflicted individuals. However, the results with respect to pain of paying are not very reliable (see section 6.2: limitations).

The final interesting finding of this study concerns the constitution of happiness. In the survey for this thesis, happiness consists of cognitive, positive affective and negative affective happiness. This is different from the variable 'happiness' in most of the other studies where it was considered to be a unidimensional variable. The correlational analysis which has been performed shows that the three indicators of happiness used in this thesis are indeed correlated with each other. It is useful to split up the variable into three components nonetheless, because the influence of external factors on them is different.

**6.2 Limitations of the research**

The current thesis does not only yield insights, but also raises several issues. The first drawback is the measurement of conspicuous goods. It is very difficult to find an objective way of measuring the real consumption pattern of respondents. In this research has been chosen for eleven categories of items with some brands mentioned as a benchmark. I did not control for general preferences of respondents; if someone filled in (s)he did not have luxury cigars and did not want to have these, the conclusion for the research was that this person did not care so much about conspicuous goods in general and did not desire conspicuous goods in general either. Another explanation of the given answer, however, is much simpler: this person hates smoking.

The same kind of misinterpretation could occur in the case that someone owns a conspicuous good. No explanation for this ownership has been provided. Possibly people differ in their perception of what is a status item and what not. The theoretical background that people buy conspicuous goods in order to impress others has not been checked with the respondents. People can have many reasons to purchase the goods which are mentioned in the survey.

The setting in which people are asked for conspicuous goods restricted the list of these goods that was included in the survey. The visibility index by Heffetz (2011) was used, but most of the categories mentioned in it were left out due to the fact that these goods are not visible in the working environment where the survey was distributed. Asking for more categories however could provide valuable information and give a more nuanced image of how "conspicuous" someone really is: the degree of conspicuousness depends less on chance.

The distribution of the surveys in the business restaurant of a working place has another effect as well: the control variable "health" could not function properly. Earlier studies support the contention that health significantly influences someone's level of happiness. Because the surveys were distributed during working hours, the lowest categories of health (very bad and bad health) were underrepresented. Very ill people stay at home and do not work.

The fifth limitation is that this research was not able to find accurate effects of pain of paying on happiness. This could well be the reason why most of the coefficients concerning pain of paying

appeared to be insignificant. Only four respondents in the sample are considered to be tightwad which is far too low in number to be able to draw conclusions regarding the effects of being tightwad. A larger sample size could help to improve this and / or a different target group than lawyers (probably this group is less tightwad than the population as a whole).

The analysis performed in this thesis is correlational in nature, not causal. Controlling for omitted variables and endogeneity could turn the analysis into a causal one. Although the literature indicates that income does not contribute positively to happiness (Easterlin, 1974) (Frey and Stutzer, 2002), this is one important variable that is not included in the model for example. Furthermore, experimental settings could help to demonstrate that the effects which are observed in this thesis are attributable to the fact that respondents have interpreted questions differently.

**6.3 Recommendations for future research**

This research method only takes into account a static measurement of someone's happiness and consumption behaviour. More insights can be acquired by using panel data: distributing the survey among the same lawyers during several years. For instance, being materialistic could reinforce the consumption of conspicuous consumption in the future and could this way have an even larger effect on happiness than the effect found in this thesis. The effects of personality traits and consumption on happiness over time would be an interesting topic for future research.

A second recommendation for future research is to distribute surveys among lawyers in several places of the Netherlands in order to exclude eventual typical characteristics of lawyers working in the "Zuidas"-area. The research could even be extended further to other countries or continents in order to find cultural differences in the effects of conspicuous goods to happiness. The effects of materialism and pain of paying as well as the prevalence of these personality traits in the society could differ widely as well.

Furthermore, the relative characteristic of conspicuous consumption could be explored more thoroughly. It is likely that people derive less benefits from conspicuous goods when others own more of these goods than they do. A study in which respondents are asked to rank each other on the basis of the amount of conspicuous goods could reveal new and relevant information. Is the person who is considered to have the most conspicuous goods indeed the happiest person of the group?

Finally, in this study the focus was on respondents who with a certain degree of certainty have the financial capacity to purchase conspicuous goods. It might also be interesting to examine the effect of these goods at lower income groups. It is true that people from these income groups cannot afford buying many conspicuous goods, but this could be compensated by the fact that the impact of one extra conspicuous good may be much stronger. This impact could incite people to put much money aside for an additional conspicuous good.

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# Appendix A: Visibility index (Heffetz, 2001)

| Category | Normalized Mean | | | Response 1 or 2 | | | Response 4 or 5 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Index | (S.E.) | [Rank] | Index | (S.E.) | [Rank] | Index | (S.E.) | [Rank] |
| Cig (cigarettes) | 0.76 | (0.01) | [ 1] | 0.81 | (0.02) | [ 1] | 0.87 | (0.02) | [ 2] |
| Car (cars) | 0.73 | (0.01) | [ 2] | 0.71 | (0.02) | [ 3] | 0.89 | (0.01) | [ 1] |
| Clo (clothing) | 0.71 | (0.01) | [ 3] | 0.72 | (0.02) | [ 2] | 0.84 | (0.02) | [ 5] |
| Fur (furniture) | 0.68 | (0.01) | [ 4] | 0.66 | (0.02) | [ 4] | 0.86 | (0.02) | [ 3] |
| Jwl (jewelry) | 0.67 | (0.02) | [ 5] | 0.63 | (0.02) | [ 6] | 0.80 | (0.02) | [ 7] |
| Ot1 (recreation 1) | 0.66 | (0.01) | [ 6] | 0.64 | (0.02) | [ 5] | 0.85 | (0.02) | [ 4] |
| FdO (food out) | 0.62 | (0.01) | [ 7] | 0.58 | (0.02) | [ 7] | 0.82 | (0.02) | [ 6] |
| AlH (alcohol home) | 0.61 | (0.01) | [ 8] | 0.57 | (0.02) | [ 8] | 0.76 | (0.02) | [12] |
| Brb (barbers etc) | 0.60 | (0.01) | [ 9] | 0.54 | (0.02) | [ 9] | 0.77 | (0.02) | [ 8] |
| AlO (alcohol out) | 0.60 | (0.01) | [10] | 0.52 | (0.02) | [10] | 0.77 | (0.02) | [ 9] |
| Ot2 (recreation 2) | 0.58 | (0.01) | [11] | 0.51 | (0.02) | [11] | 0.76 | (0.02) | [10] |
| Bks (books etc) | 0.57 | (0.01) | [12] | 0.48 | (0.02) | [13] | 0.76 | (0.02) | [11] |
| Edu (education) | 0.56 | (0.01) | [13] | 0.49 | (0.02) | [12] | 0.73 | (0.02) | [13] |
| FdH (food home) | 0.51 | (0.01) | [14] | 0.40 | (0.02) | [16] | 0.68 | (0.02) | [14] |
| Hom (rent/home) | 0.50 | (0.02) | [15] | 0.41 | (0.02) | [14] | 0.60 | (0.02) | [16] |
| Cel (cell phone) | 0.47 | (0.02) | [16] | 0.40 | (0.02) | [15] | 0.58 | (0.02) | [18] |
| Air (air travel) | 0.46 | (0.01) | [17] | 0.35 | (0.02) | [17] | 0.62 | (0.02) | [15] |
| Htl (hotels etc) | 0.46 | (0.01) | [18] | 0.33 | (0.02) | [19] | 0.60 | (0.02) | [17] |
| Bus (public trans.) | 0.45 | (0.02) | [19] | 0.34 | (0.02) | [18] | 0.57 | (0.02) | [19] |
| CMn (car repair) | 0.42 | (0.01) | [20] | 0.29 | (0.02) | [21] | 0.55 | (0.02) | [20] |
| Gas (gasoline) | 0.39 | (0.02) | [21] | 0.31 | (0.02) | [20] | 0.48 | (0.02) | [21] |
| Med (health care) | 0.36 | (0.01) | [22] | 0.23 | (0.02) | [23] | 0.44 | (0.02) | [22] |
| Cha (charities) | 0.34 | (0.01) | [23] | 0.22 | (0.02) | [25] | 0.43 | (0.02) | [23] |
| Lry (laundry) | 0.34 | (0.02) | [24] | 0.24 | (0.02) | [22] | 0.41 | (0.02) | [24] |
| Utl (home utilities) | 0.31 | (0.02) | [25] | 0.23 | (0.02) | [24] | 0.36 | (0.02) | [25] |
| Tel (home phone) | 0.30 | (0.02) | [26] | 0.20 | (0.02) | [26] | 0.36 | (0.02) | [26] |
| Fee (legal fees) | 0.26 | (0.01) | [27] | 0.13 | (0.02) | [28] | 0.29 | (0.02) | [27] |
| CIn (car insur.) | 0.23 | (0.01) | [28] | 0.16 | (0.02) | [27] | 0.25 | (0.02) | [28] |
| HIn (home insur.) | 0.17 | (0.01) | [29] | 0.09 | (0.01) | [29] | 0.17 | (0.02) | [29] |
| LIn (life insur.) | 0.16 | (0.01) | [30] | 0.07 | (0.01) | [31] | 0.16 | (0.02) | [30] |
| Und (underwear) | 0.13 | (0.01) | [31] | 0.07 | (0.01) | [30] | 0.12 | (0.01) | [31] |

**Source:** author's visibility survey (480 respondents).

# Appendix B: Items for the measurement of materialism (Richins & Dawson, 1992)

**Success**

1. I admire people who own expensive homes, cars, and clothes.
2. Some of the most important achievements in life include acquiring material possessions.
3. I don't place much emphasis on the amount of material objects people own as a sign of success.
4. The things I own say a lot about how well I'm doing in life.
5. I like to own things that impress people.
6. I don't pay much attention to the material objects other people own.

**Centrality**

7. I usually buy only the things I need.
8. I try to keep my life simple, as far as possessions are concerned.
9. The things I own aren't all that important to me.
10. I enjoy spending money on things that aren't practical.
11. Buying things gives me a lot of pleasure.
12. I like a lot of luxury in my life.
13. I put less emphasis on material things than most people I know.

**Happiness**

14. I have all the things I really need to enjoy life.
15. My life would be better if I owned certain things I don't have.
16. I wouldn't be any happier if I owned nicer things.
17. I'd be happier if I could afford to buy more things.
18. It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like.

# Appendix C: The spendthrift – tightwad scale by Rick, Cryder & Loewenstein

1. Which of the following descriptions fits you better?

1 2 3 4 5 6 7 8 9 10 11 Tightwad (difficulty spending money) - About the same or neither - Spendthrift (difficulty controlling money)

2. Some people have trouble limiting their spending: they often spend money—for example on clothes, meals, vacations, phone calls—when they would do better not to. Other people have trouble spending money. Perhaps because spending money makes them anxious, they often don't spend money on things they should spend it on.

   a. How well does the first description fit you? That is, do you have trouble limiting your spending?

1 2 3 4 5 Never - Rarely - Sometimes - Often - Always

   b. How well does the second description fit you? That is, do you have trouble spending money?

1 2 3 4 5 Never - Rarely - Sometimes - Often - Always

3. Following are two scenarios describing the behavior of two shoppers. After reading about each shopper, please answer the question that follows.

   Mr. A is accompanying a good friend who is on a shopping spree at a local mall. When they enter a large department store, Mr. A sees that the store has a "one-day-only-sale" where everything is priced 10–60% off. He realizes he doesn't need anything, yet can't resist and ends up spending almost $100 on stuff.

   Mr. B is accompanying a good friend who is on a shopping spree at a local mall. When they enter a large department store, Mr. B sees that the store has a "one-day-only-sale" where everything is priced 10–60% off. He figures he can get great deals on many items that he needs, yet the thought of spending the money keeps him from buying the stuff. In terms of your own behavior, who are you more similar to, Mr. A or Mr. B?

1 2 3 4 5 Mr. A Neither Mr. B

# Appendix D: Survey (translated)

*Thank you for your interest in my survey, it will help me a lot! My name is Maikel Samsom and I am a master student "Behavioral economics" at the Erasmus University of Rotterdam. The results of this survey will be used for my master thesis. Probably needless to say, all answers will be recorded anonymously. Answering the survey will take approximately 5 – 10 minutes. Good luck with answering the questions!!*

1. On a scale from 1 to 5, indicate the answers to the following questions.

**How satisfied are you with your life in general, all things considered?**

☐ Very satisfied

☐ Satisfied

☐ Neither satisfied nor not satisfied

☐ Not satisfied

☐ Not satisfied at all

**How happy have you been in the last 30 days?**

☐ Very happy

☐ Happy

☐ Neutral

☐ Not happy

☐ Not happy at all

**Overall in the last 30 days, how much of a problem did you have with feeling sad, low or depressed?**

☐ Very much

☐ Much

☐ Neither much nor little

☐ Little

☐ Very little

2. To what extent do these statements apply to you?

| Statement | Very much | Much | Neither | Little | Very little |
|---|---|---|---|---|---|
| I admire people who own expensive homes, cars and clothes. | | | | | |
| The things I own say a lot about how well I'm doing in life. | | | | | |
| I like to own things that impress people. | | | | | |
| I try to keep my life simple, as far as possessions are concerned. | | | | | |
| Buying things gives me a lot of pleasure. | | | | | |
| I like a lot of luxury in my life. | | | | | |
| My life would be better if I owned certain things I don't have. | | | | | |
| I'd be happier if I could afford to buy more things. | | | | | |
| It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like. | | | | | |

3. **Which of the following descriptions fits you better?** Score yourself between 1 and 11 and encircle the answer which is most applicable to you.

| Tight-wad (difficulty spending money) | | | | | About the same or neither | | | | Spend-thrift (difficulty controlling spending) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

4. Some people have trouble limiting their spending: they often spend money—for example on clothes, meals, vacations, phone calls—when they would be better off not to. Other people have trouble spending money. Perhaps because spending money makes them anxious, they often don't spend money on things they should spend it on.

| Question | I do not all | I do not | A bit | I do | I really do |
|---|---|---|---|---|---|
| Do you have trouble limiting your spending? | | | | | |
| Do you have trouble spending money? | | | | | |

5. Below are two scenarios describing the behavior of two shoppers. After reading about each shopper, please answer the question that follows.

Mr. A is accompanying a good friend who is on a shopping spree at a local mall. When they enter a large department store, Mr. A sees that the store has a "one-day-only-sale" where everything is priced 10–60% off. He realizes he doesn't need anything, yet can't resist and ends up spending almost $100 on stuff.

Mr. B is accompanying a good friend who is on a shopping spree at a local mall. When they enter a large department store, Mr. B sees that the store has a "one-day-only-sale" where everything is priced 10–60% off. He figures he can get great deals on many items that he needs, yet the thought of spending the money keeps him from buying the stuff.

| Question | Mr. A | | Neither | | Mr. B |
|---|---|---|---|---|---|
| To whom are you more similar, Mr. A or Mr. B? | | | | | |

6. Below several products and services are summarized. When a brand is mentioned, you should ask yourself whether you own a product of this brand _or a comparable brand_ and if not, what you think of this product. The brand is shown only as a suggestion and should not be interpreted too strictly. Below is the table to be filled out by men; the table for women is on the next page.

*For men:*

| Product / service for men | I own (/do) this and this is important to me | I own this, but it's not important to me | I do not own this, but I would like to have it | I do not own this and I do not want to have it |
|---|---|---|---|---|
| Vacation / second home abroad | | | | |
| HUGO Boss / OGER (suit) | | | | |
| Rolex / Patek Philippe (watch) | | | | |
| 1 million / Paco Rabanne (perfumery) | | | | |
| Paul Smith /Calvin Klein (wallet) | | | | |
| Cohiba (cigar) | | | | |
| BMW / Porsche (car) | | | | |
| RayBan / Versace (sun glasses) | | | | |
| Samsung Modus (headset) | | | | |
| Designer tie | | | | |
| Having (non-business) dinners in a first class restaurant | | | | |

*For women:*

| Product / service for women | I own (/do) this and this is important to me | I own this, but it's not important to me | I do not own this, but I would like to have it | I do not own this and I do not want to have it |
|---|---|---|---|---|
| **Vacation / second home abroad** | | | | |
| **Armani/ Burberry (clothes)** | | | | |
| **BMW Mini / Cabrio (car)** | | | | |
| **Tiffany's / Cartier (jewelry)** | | | | |
| **Michael Kors / Louis Vuitton (handbag)** | | | | |
| **Dolce & Gabbana / Dior (sun glasses)** | | | | |
| **Samsung Modus (headset)** | | | | |
| **Designer dress** | | | | |
| **Shabbies / Isabel Marant (shoes)** | | | | |
| **Chanel / Jean Paul Gaultier (perfumery)** | | | | |
| **Having (non-business) din ners in a first class restaurant** | | | | |

**7. PERSONAL DETAILS**

**What is your age?**  _____

**How is your health in general?**
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Bad
- ☐ Very bad

**Do you have a partner?**
- ☐ Yes
- ☐ No

**How often do you meet with friends and family?**
- ☐ Never
- ☐ Less than once a month
- ☐ Once a month
- ☐ Several times a month
- ☐ Once a week
- ☐ Several times a week
- ☐ Every day

# Thank you very much for filling out this survey!!

# Appendix E: Descriptive statistics – details

|  | Satisfied | Happy | Sad | Materialism | Pain of paying | Ownership |
|---|---|---|---|---|---|---|
| **Mean** | 4,31 | 3,94 | 3,9 | 23,62 | 16,36 | 2,88 |
| **Median** | 4 | 4 | 4 | 23 | 17 | 3 |
| **Mode** | 4 | 4 | 4 | 27 | 17 | 0 |
| **Standard deviation** | 0,645 | 0,731 | 1,02 | 5,817 | 3.112 | 2,368 |
| **Skewness** | -0,678 | -0,693 | -0,668 | 0,357 | -0.093 | 0,533 |
| **Kurtosis** | 0,836 | 0,897 | -0,609 | -0,393 | 0,533 | -0,656 |
| **Range** | 3 | 3 | 3 | 27 | 17 | 8 |
| **Minimum** | 2 | 2 | 2 | 13 | 8 | 0 |
| **Maximum** | 5 | 5 | 5 | 40 | 25 | 8 |

|  | Desirability | Age | Health | Partner | Social relationships |
|---|---|---|---|---|---|
| **Mean** | 2,96 | 37,12 | 4,23 | 0,78 | 4,88 |
| **Median** | 2 | 32 | 4 | 1 | 5 |
| **Mode** | 1 | 26 | 4 | 1 | 4 |
| **Standard deviation** | 2,704 | 12,021 | 0,676 | 0,418 | 1,409 |
| **Skewness** | 1,176 | 0,867 | -0,571 | -1,362 | -0,243 |
| **Kurtosis** | 0,813 | -0,103 | 0,345 | -0,15 | -0,778 |
| **Range** | 11 | 51 | 3 | 1 | 5 |
| **Minimum** | 0 | 23 | 2 | 0 | 2 |
| **Maximum** | 11 | 74 | 5 | 1 | 7 |

# Appendix F: ANOVA-output for pain of paying in relation to positive affective SWB and negative affective SWB

**Figure 9: Average level of positive affective SWB for tightwad, unconflicted and spendthrift consumers**
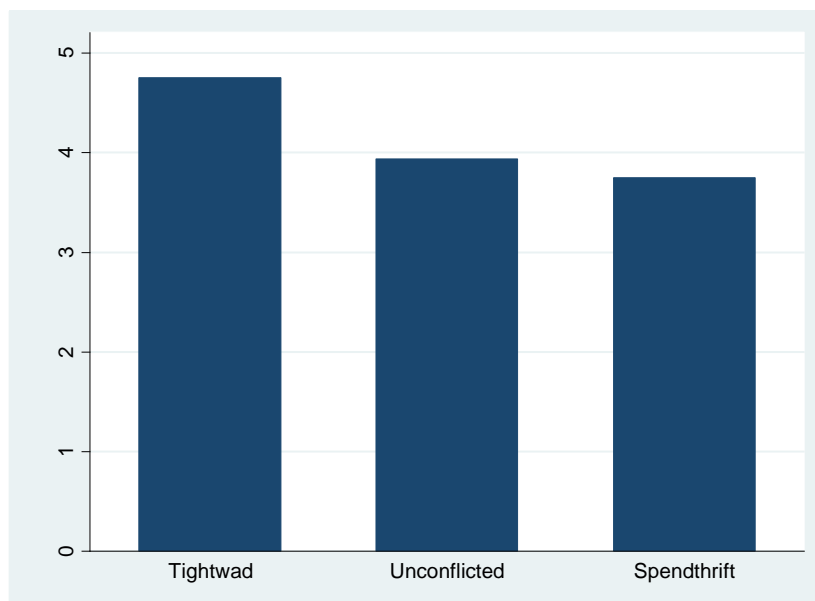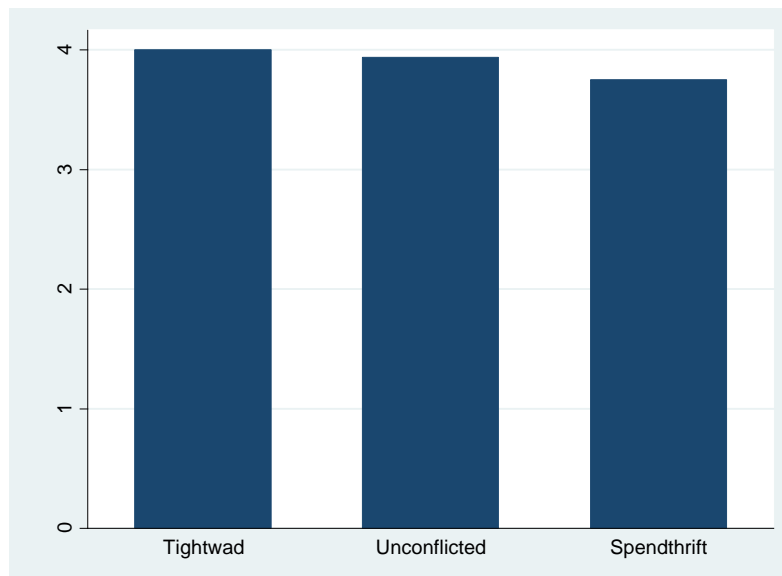


**Table 9: ANOVA-output for the difference in average values of feeling happy for tightwad, unconflicted and spendthrift consumers**

| Source | Sum of squares | Degrees of freedom | Mean of squares | F-value | Significance |
|---|---|---|---|---|---|
| **Between groups** | 3.20365311 | 2 | 1.60182655 | 3.16 | 0.0477 |
| **Within groups** | 39.4877049 | 78 | 0.506252627 | | |
| **Total** | 42.691358 | 80 | 0.533641975 | | |

**Figure 10: Average level of negative affective SWB for tightwad, unconflicted and spendthrift consumers**



**Table 10: ANOVA-output for the difference in average values of feeling sad for tightwad, unconflicted and spendthrift consumers**

| Source | Sum of squares | Degrees of freedom | Mean of squares | F-value | Significance |
|---|---|---|---|---|---|
| **Between groups** | 0.472171625 | 2 | 0.236085813 | 0.22 | 0.8010 |
| **Within groups** | 82.7377049 | 78 | 1.06073981 | | |
| **Total** | 83.2098765 | 80 | 1.04012346 | | |