

Segmentation Based on Consumer Shopping Behavior

From Shopping Avoiders to Impulsive Hedonics



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Management Summary

Current research is conducted for CentERdata, a non-profit research institution located in Tilburg (the Netherlands), which supports and contributes to research on scientific, social and business relevant topics. The aim of the study was to examine which relevant consumer segments could be distinguished based on differences in consumer shopping behavior in a large panel which represented the Dutch population (study 1). Besides, in study 2, the practical utility of the segmentation analysis was investigated in a financial context (emotional responses towards future financial situation). First, relevant constructs regarding shopping behavior were introduced and elaborated. While earlier studies typically focused on one construct only (e.g. consumer decision making style or hedonic versus utilitarian shopping orientation), current study included several constructs and typologies in an extensive analysis simultaneously. Moreover, current study shows the usefulness of including personality traits surrounding shopping behavior (e.g. attitude towards advertising, susceptibility to normative influence and consumer empowerment) in the segmentation, which were not used in earlier studies. The analysis itself was performed by conducting a factor analysis, followed by a cluster analysis. Based on the results, six consumer clusters were identified, two of which were not found in similar research conducted by Mitchell and Bates (1998). The found clusters were labeled based on their scores on the factors surrounding their shopping behavior: the 'Low Standard Shopping Avoiders', 'Impulsive Hedonics', 'Balanced Comparison Shoppers', 'Insecure Brand Loyals', 'Task Oriented Shoppers' and 'Recreational Brand Seekers'. Next, expectation and hypotheses regarding the emotional response towards the future financial situation of the cluster were tested in a second study. Partially confirming results were found for the hypotheses that clusters who were insecure while shopping have a stronger negative response towards their future financial situation compared to clusters who score low on shopping insecurity. While negative associations with future financial situation have been linked to changes in purchase behavior, can interfere with personal relationships and affect work performance negatively (Hira & Mugenda, 2000; Sherman et al., 1997), these results form an opening for further research. Besides, the results of this research form a basis for further academic research regarding this topic, in which the focus could for instance be on examining whether the distinguished clusters differ in reaction to actual marketing interventions.

Preface

Masterscriptie, de laatste horde die ik als 22 jarige student moest nemen na het behalen van mijn Bachelor diploma (Communicatie/Informatie Wetenschappen) en Premaster Marketing Management. En ook de hoogste, zo zou later wel blijken.

Elke dag opende ik hetzelfde Word bestand en begon ik te lezen. Gek genoeg haal je zelfs wanneer je hetzelfde bestand ontelbaar keren leest, toch telkens weer kleine foutjes uit de tekst. Soms denk je dan, ‘wie heeft dit zó opgeschreven?’. Totdat je je realiseert dat dat maar één iemand kan zijn... Ik zou nu clichématig kunnen beweren dat deze scriptie me bloed zweet en tranen gekost heeft, maar dan zou ik liegen. Wat heeft deze scriptie me dan wel gekost? *1. Tijd*; Ik kan met recht zeggen dat dit de eerste keer is dat ik gebaseerd op het aantal studiepunten wat je voor een masterscriptie krijgt, het voorgeschreven aantal uren in een project heb gestoken¹. *2. Geduld*; Gaat hand in hand met tijd, maar laat geduld nou net iets zijn waar ik van nature geen overdreven grote proporties mee heb gekregen. Soms wil je te snel naar je doel en vergeet je kleine, maar toch belangrijke dingen. Uiteindelijk kom je daar dan achter en moet je weer van alles veranderen. Dit kost, ja u raadt het al, meer tijd en geduld dan wanneer je alles gewoon netjes stap voor stap en geordend gedaan zou hebben. Dit is dan ook een van de dingen die dit proces me geleerd heeft. *3. Een vakantie met mijn vriendin*; Aangezien mijn vakantie grotendeels opging aan het schrijven van een scriptie zat dat er helaas niet meer in... Desalniettemin heeft dit proces me ook een aantal zeer belangrijke lessen geleerd. Deze zijn echter een stuk moeilijker onder woorden te brengen dan de kosten. Daarom wil ik me graag beperken tot het bedanken van de mensen die dat verdienen. Te beginnen bij mijn (universiteit en bedrijfs-) begeleidster Roxanne van Giesen, die altijd zeer bruikbare feedback gaf en waarbij ik altijd terecht kon voor vragen. Millie Elsen, en iedereen bij CentERdata, voor de kans die ze me gaven om namens deze stichting mijn scriptie te schrijven en voor de prettige stageperiode die volgde. Annick Bosmans (tweede lezer van deze scriptie) voor haar tijd en verschaft feedback. En ten slotte iedereen (familie, vrienden, vriendin etc.) die me gedurende het proces gesteund heeft. Aangezien het behalen van mijn Masterdiploma zeer waarschijnlijk het einde van mijn studentenleven markeert, kijk ik met vertrouwen uit naar de toekomstige uitdagingen in de volgende fase van mijn leven.

Jop Lavrijssen, Tilburg 30 augustus 2016

¹ Een zoektocht op google leerde me dat 1 ECTS (European Credits Transfer System) gelijk staat aan 28 uur studielast. Aangezien een voldoende afgesloten scriptie 18 ECTS oplevert, leert een snelle rekensom vervolgens dat een scriptie ongeveer $28 * 18 = 504$ uren studielast zal opleveren. @Toekomstige Masterscriptieschrijvers, dit is geen overdreven hoge schatting dus keep that in mind!

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Chapter 1. Introduction

1.1. Problem indication

“So many people, so many wishes”, a famous expression in the Netherlands. It stresses the fact that people are different and have different things they want and need. A field for which the assumption that people are different is a fundamental one is the marketing practice (Allenby & Rossi, 1998). Since one of the primary objectives of a marketer is to expand the sales or reach of a company, it is important to take consumer behavior and preferences into thorough consideration. These consumer preferences have become more and more divers over time (Allenby & Rossi, 1998). Therefore, the knowledge regarding the differences in wishes, needs and behaviors of individual consumers can be extremely valuable for firms and also for academics. Identifying customer level characteristics can namely provide economic incentives to anticipate and offer different products for different groups of consumers, promoted, priced and placed in the market tailor made for the target group (Babin, Barry, Darden and Griffin, 1994). Besides, insights into the differences between consumers groups can provide academics with openings for further research into the behaviors and beliefs of these groups.

The goal of current study is to identify consumer segments based on differences regarding their shopping behavior. This goal will be investigated by means of a segmentation analysis. It will be examined which consumers groups can be segmented based on unobservable (e.g. attitudes and motives) and observable (e.g. demographic variables) surrounding consumer shopping behavior. If consistent differences between the consumer clusters are found, this forms support for the use of the segmentation tool to tailor make marketing strategies to the target segments. Consumer groups with a negative attitude towards advertising could for instance then be approached differently than consumer groups who think advertising is a useful source of information.

Next, in study 2 the relevance of the identified consumer clusters is tested in a financial context, and it is investigated whether the identified clusters differ in their emotional response towards their future financial situation. If consistent differences between clusters are indeed found, this provides more support for the assumption that a segmentation based on shopping behavior has practical and academic relevance.

In marketing research, clustering methods are often used to identify and define market segments (Wedel & Kamakura, 2012). Therefore this method will also be used in current study. “*Market segmentation involves viewing a heterogeneous market as a number of smaller homogenous markets, in response to differing preferences, attributable to the desires of consumers for more precise satisfaction of their varying wants*” (Smith, 1956 p. 6). In other words, it is the practice which tries to distinguish homogeneous subgroups in heterogeneous markets based on a preselected number of dimensions and constructs. Ideally, the difference between consumers within a segment is as small as possible, whereas the difference between consumers from different segments is as large as possible (Wedel & Kamakura, 2012). The chance that consumers in different segments actually differ from each other is namely the highest when within segment differences are small and big differences between segments are present.

Prior to carrying out the segmentation analysis, relevant constructs regarding the shopping behaviors and motivations are identified as segmentation bases. Unobservable variables like shopping orientation, consumer decision style, personality traits and purchase environment preference will be assessed. Shopping orientation forms an important construct for current study. According to Babin et al. (1994 p. 647), “shopping *with* a goal (utilitarian) can be distinguished from shopping *as* a goal (hedonic)”. The main difference between these types of shopping orientations is that utilitarian oriented consumers focus solely on the outcome of the shopping task whereas hedonic oriented shoppers also value the shopping activity itself as an enjoyable experience (Babin et al, 1994; Patel & Sharma, 2009). Earlier studies show that hedonic oriented consumers have different motivations and characteristics compared to utilitarian oriented consumers (e.g. Teller, Reutterer and Schnedlitz, 2008; Arnold & Reynolds, 2003).

Another construct closely related to shopping behavior is the purchase decision style of consumers. Important product attributes on which consumers base their purchase decisions are at the center of this construct. Much research regarding the purchase decision making style of consumers has been conducted (e.g. Sprotles & Kendall, 1986; Mitchell & Bates, 1998; Mokhlis, 2009; Durvasula, Lysonski & Andrews, 1993; Lysonski, Durvasula & Zotos, 1996; Siu, Wang, Chang & Hui, 2001). The results of these studies show that differences in the decision making style of consumers are present. Some customers for instance focus mainly on the price of products they buy, whereas others are more quality focused and therefore require a detailed

comparison of the pros and cons of a product (Mitchell & Bates, 1998). This shows that different groups of consumers can have different product attributes on which they focus while shopping.

Besides, several important consumer personality traits will be assessed in current study (e.g. susceptibility to normative influence, attitude towards advertising and consumer empowerment). It is expected that by including these constructs, a more detailed and distinctive image of the identified clusters will be revealed. To see whether significant differences between the cluster regarding socio-demographic variables (e.g. gender, age and educational level) are also present, this information is also gathered. This information is important while profiling the consumer groups after the segmentation analysis is made, which will give a more detailed image of the respondents in the identified clusters.

1.2. Problem statement and research questions

In this thesis, research is conducted for a non-profit research institution into the possibility of identifying different consumer segments based on unobservable as well as observable variables surrounding consumers' shopping (purchase) behavior. Besides, the practical utility of the segmentation analysis is investigated in a financial context by assessing emotional responses towards future financial situation and purchase intentions. In order to investigate these issues, the following research questions will be answered.

- RQ1: Which relevant consumer segments can be identified by performing a segmentation analysis based on differences in shopping behavior of the Dutch consumer population (study 1)?
- RQ2: How do the identified clusters differ with regards to the emotional responses towards the future financial situation of the household (study 2)?

1.3. Relevance of the thesis

To date few studies have investigated the decision making style (or shopping behavior) of the Dutch consumer population extensively. Research indicates that there are cross-country differences in consumers' decision making styles, which is an important pillar of shopping behavior (Lyonski, Durvasula & Zotos, 1996; Walsh, Mitchell & Hennig-Thurau, 2001; Fan & Xiao, 1998). Most of these studies used the eight factor model introduced by Kendall and Sprotles (1986) labeled the Consumer Style Index (CSI) to measure decision making styles. The

general trend found in these studies is that although most of the eight factors can be confirmed in all countries, inter-country differences are present. Moreover, a segmentation study based on decision making style of a student sample from the United Kingdom has been conducted by Mitchell and Bates (1998). Four consumer segments were identified in this study. The indication that there are cross-country differences in decision making styles raises the question to what extent the UK consumer segments found by Mitchell and Bates (1998) from different countries are comparable and/or different. Moreover, earlier studies often focused on consumer decision making style only (e.g. Mitchell and Bates 1998; Lyonski et al., 1996; Walsh et al., 2001). Other studies focused specifically on the difference between hedonic and utilitarian shopping value (e.g. Patel & Sharma, 2009; Babin et al., 1994). Current study however, is not solely interested in decision making style or shopping orientation, but focuses on several aspects of consumer shopping behavior simultaneously. Besides, current study shows the usefulness of including constructs and typologies which surround shopping behavior from other studies, such as attitude towards advertising, consumer assertiveness and susceptibility to normative influence. Moreover, demographic differences and purchase environment preference (online versus offline) will also be assessed. It is expected that including constructs from different typologies simultaneously in a segmentation analysis will lead to a richer and more distinctive image of the consumer shopping segments. This, in turn, leads to the expectation that current research may also find new clusters which have not been found in earlier research. Besides, Mitchell & Bates (1998) pointed out that the practical utility of a segmentation based on shopping behavior should be assessed in future research. Therefore, study 2 of current paper will focus on this practical utility, by testing the relevance of the segmentation in a financial context. Finally, the survey used in current study is administered to a large panel which is based on a true probability sample of the Dutch population drawn by Statistics Netherlands (LISS panel). Earlier studies were mostly administered to student samples or convenience samples like people who were shopping in a shopping center (e.g. Lyonski et al., 1996; Mitchell & Bates, 1998; Mokhlis, 2009; Patel & Sharma, 2009). However, the use of student samples has been the topic of many debate. Moreover, based on the results of their research James and Sonner (2001, p. 69) argue that “traditional college students have a perspective that is quite different from adult consumers”. The use of a true probability sample in current research is unique and therefore another important difference compared to earlier studies.

For the sake of clarity, the constructs included in current study are divided in three dimensions. Focus will be on unobservable variables such as purchase decision style and shopping orientation and motivations (1), which focus mostly on the purchase decision. Besides, personality traits surrounding shopping behavior and the socio-demographics of respondents will be assessed (2). Finally, the environment in which consumers purchase their products (offline versus online) will be taken into account (3).

To summarize, the goal of the study 1 is to identify and characterize different consumer segments based on the following constructs:

- 1) Shopping motivation and orientation (e.g. consumer decision making style and hedonic versus utilitarian shopping orientation)
- 2) Personality traits and demographics (e.g. diffusion of innovativeness, susceptibility to normative influence, age and gender)
- 3) Purchase environment preference (online versus offline purchase preference)

1.4. Structure of the thesis

In chapter 2 (Theoretical Framework) an overview and explanation of all the included dimensions and constructs will be provided. Followed by chapter 3, in which the research methodology will be further elaborated. Next, in chapter 4 an overview of the results from the segmentation analysis (factor analysis and cluster analysis) will be provided. Consequently, the relevance of the identified consumer clusters will be assessed in a financial context in chapter 5. In this chapter it will be examined whether the identified clusters differ in their emotional response towards their future financial position. In chapter 6, a discussion of the results and the contributions of the research will be provided. Furthermore, limitations of the research and recommendations for further research will be given. Finally, the thesis will end with references and appendices.

Chapter 2. Theoretical Framework

Current study involves the segmentation of consumer groups based on their shopping behavior. The constructs are divided in three dimension, namely Purchase orientation and motivation (1), Personality traits and demographics (2) and Purchase environment preference (3) and will be introduced and elaborated in the next section. In contrast to earlier studies focus is not on one specific typology (e.g. decision making style or hedonic versus utilitarian orientation). By also including personality traits like attitude towards advertising, consumer empowerment, online versus offline purchase preference and demographics of the respondents, it is attempted to provide a more complete image of the shopping behavior of the identified clusters compared to earlier studies. Moreover, this might also reveal consumer clusters which have not been found in earlier research.

2.1. Purchase orientation and motivation

The reasons why consumers purchase certain products are often very divers and not always clearly identifiable. Two typologies used in many consumer motivation or decision making studies will be introduced in the next section, namely the distinction between hedonic versus utilitarian shoppers and consumer decision making style.

2.1.1. *Hedonic versus utilitarian shopping orientation*

The first typology makes a distinction between hedonic and utilitarian oriented consumers.

Hedonic shoppers value the experience of shopping itself, whereas utilitarian shoppers are more task-oriented (Overby & Lee, 2006). Hedonic consumers are defined as shoppers for whom shopping is fun and who view the shopping activity itself as a positive and emotionally satisfying experience (Patel & Sharma, 2009). Even if they do not purchase anything they can still enjoy the shopping activity. In contrast, utilitarian consumers compare shopping with ‘work’, often only make the necessary purchases and are happy to ‘just get through it all’ (Babin et al, 1994). Despite the dual nature of shopping orientation (every consumer can have both hedonic and utilitarian motives), earlier studies show that many consumers have a tendency to either one or the other (e.g. Westbrook & Black, 1985 as cited in Teller et al. 2008; Teller et al. 2008).

Typologies of hedonic and utilitarian shoppers based on the study of Rintamäki, Kanto, Kuusela and Spence (2006, as cited in Teller et al. 2008), are included in table 1. This typology shows that the Hedonists consider shopping an end in itself and are also looking for emotional

entertainment, whereas the utilitarian shoppers see shopping as a mean to some predefined end and focused on economical outcomes.

Table 1. Typologies of utilitarian and hedonic shoppers (Teller et al. 2008, p286)

<i>Characterization</i>	Shopper type	
	Utilitarian	Hedonist
<i>Perspective/view</i>	Cognitive Information-processing	Experiential
<i>Purpose of consumption (shopping)</i>	Means to some predefined end	An end in itself
<i>Criterion benefits</i>	Economical Monetary savings, convenience	Emotional entertainment, exploration
<i>Sacrifices Synonym</i>	Money, time and effort	Stress, negative emotions

Research shows that a distinction between hedonic and utilitarian shoppers can be made based on shopping motives (Arnold & Reynolds, 2003). This distinction is displayed in the fact that hedonic shopping motives found in research differ in nature from utilitarian motives. Examples of hedonic motives are ‘idea shopping’ and ‘gratification shopping’ (Arnold & Reynolds, 2003). Idea shopping refers to shopping to keep up with the latest fashion and trends or to be exposed to new technologies and innovations, whereas gratification shopping is defined as shopping as a special gift to oneself or to relieve stress and other negative emotions (Arnold & Reynolds, 2003). In contrast, examples of utilitarian motives are achievement shopping (referring to the achievement of goals set prior to shopping) and economic shopping (referring to the monetary incentives of for instance discounts) (Patel & Sharma, 2009). Again, these findings show that utilitarian oriented shoppers solely care for the outcome of the shopping activity, whereas hedonic shoppers consider the shopping activity as an end in itself. As these motivations and perspectives of hedonic and utilitarian shoppers differ, it is expected that some consumers are more prone to be hedonic (respectively utilitarian) oriented.

This expectation is confirmed by the fact that research suggests that hedonic shoppers (compared to utilitarian shoppers) are more often female than male, earn lower incomes, have more time apart from work and that they have more frequent and longer shopping trips (Teller et al., 2008). With these results in mind, it is expected that the dichotomy between utilitarian and hedonic shoppers is relevant for current study. To be able to make a distinction between the two shopper types, items regarding the shopping enjoyment of consumers will be included in the

survey. Respondents who score high on the shopping enjoyment construct are proven to be the more hedonic oriented consumers (Sprotles & Kendall, 1986).

2.1.2. Decision making style (DMS)

Consumer decision making style is another construct which surrounds the purchase and shopping behavior. This is an important construct for current segmentation because it captures “the mental orientation characterizing a consumers’ approach to making choices” (Sprotles & Kendall, 1986 p.268). In other words, it captures on which attributes of products consumers place emphasize while shopping. One consumer may for instance place more emphasize on the price of a product, whereas another consumer may be more interested in the quality of a product while shopping.

A frequently used instrument to measure consumer decision-making style is the Consumer Style Index (CSI) (Sprotles & Kendal, 1986). First, this instrument measures the amount of focus consumers place on different attributes (e.g. price, quality, brand and novelty) of the products that they buy. A consumer scoring high on the ‘brand consciousness’ factor is likely to buy more expensive and well known national brands. Besides they also appear to prefer the more advertised brands that are selling the best. Similarly, consumers that score high on the ‘novelty consciousness’ factor are likely to gain excitement and pleasure from shopping for new products and keeping up-to-date with recent trends. Consumers scoring high on ‘price consciousness’ look for value for money and focus primarily on the price of products, whereas ‘quality conscious’ shoppers search for the best quality in products and are likely to shop more carefully, more systematically or by comparison (Sprotles & Kendal, 1986).

Second, the CSI also measures four factors related to the behavior or cognitions of the consumer. ‘The recreational/hedonic’ factor relates to the earlier mentioned hedonic shopper (the enjoyment of the shopping activity itself). High scores on the ‘habitual or loyalty’ factor indicate that these consumers are likely to have favorite brands and stores and have formed habits in choosing these. The final two factors relate to ‘impulsiveness’ (high scorers do not plan their shopping and are less concerned about best price or quality) respectively ‘confusion by over choice’ (high scorers have difficulty making choices and often experience information overload). Previous research showed that females tend to buy on impulse more frequently compared to males (Verplanken & Herabadi, 2001). Additionally, impulse buying tendencies were found to have a negative correlation with age, indicating that younger consumers buy more products impulsively compared to older consumers (Verplanken & Herabadi, 2001).

In the study of Mitchell and Bates (1998), an adapted version of the CSI was used to cluster consumer segments. This study succeeded in clustering different consumer segments by combining the eight factors of the CSI in a segmentation analysis. Four segments were identified, namely the “trend setters”, “the shopping avoiders”, “the recreational quality seekers”, and the “cautious brand loyals”. ‘Trend setters’ view shopping as a recreational (hedonic) activity and are likely early adopters of new products. ‘Cautious brand loyals’ are likely to be late adopters and require a detailed appraisal of pros and cons of a product. ‘Shopping avoiders’ are likely to be price focused and prefer shops with a simple shopping experience, suggesting that they are more utilitarian shoppers. Finally, the ‘recreational quality seekers’ enjoy their shopping experience and focus on quality as well as price (Mitchell & Bates, 1998).

Differences in decision-making styles are expected to be relevant for current study because earlier studies show that different consumers place focus on different attributes (e.g. Mitchell & Bates, 1998). Therefore, the decision-making style of respondents will be measured using items from the Consumer Style Index. Besides, environmental focus of consumers (e.g. energy efficiency and biological products) will also be measured.

2.2. Personality traits and Demographics

2.2.1. Consumer empowerment

Several constructs regarding personality traits of consumers can be linked to their purchase or shopping behavior. Consumer empowerment is such a personality trait. “*Consumers vary in the degree to which they express their rights without infringing up on those of others (assertiveness) and use verbal or nonverbal noxious stimuli to maintain their rights (aggressiveness)*” (Polyorat, Jung & Hwang, 2013, p. 738). Consumers who are assertive are more likely to stand up for themselves (by for instance initiating requests or expressing justified anger and annoyance) while still respecting others (Richins, 1983). In contrast, aggressive consumers make use of coercive power such as threats or punishments to claim the assistance they want (for instance the use of abusive language or causing a stir to attract attention of other consumers) (Mauger & Atkinson, 1980, as cited in Fray & Hector, 1987). According to Polyorat et al. (2013), these constructs are relevant in the process prior to the purchase moment (information seeking phase) and after the purchase process (return or make complaints about disappointing products). To obtain information about respondents from all phases of the shopping process (e.g. information seeking,

purchase decision and possible complaints after purchase), consumer empowerment (assertiveness and aggressiveness) of respondents will also be measured.

2.2.2. Diffusion of innovativeness

Not all adopters of new technologies or products adopt these technologies or products at the same time (Mahajan, Muller and Srivastava, 1990; Rogers, 2010). Instead, these adopters can be categorized in five categories ranging from people who adopt very early (innovators) to those who adopt late or not at all (laggards) (Rogers, 2010). Moreover past research has showed that earlier and later adopters differ with regards to their economic status, personality variables and communication behavior (Rogers, 2010). Some examples are that early adopters tend to have higher income, higher education, and a more professional occupation (Mahajan et al., 1990). Early adopters are for instance also expected to be more novelty focused, since they are usually the first ones that buy new technologies. In contrast, cautious shoppers are more likely to be late adopters because they do not like taking risks while shopping. Since some shopping types seem more prone to be early (respectively) late adopters, the innovativeness of respondents will be measured as well.

2.2.3. Susceptibility to normative influence

Another personality trait which is expected to influence the shopping behavior of consumers is the susceptibility to normative influence. This construct is defined as the tendency to conform to the expectation of others (Burnkrant & Cousineau, 1975). According to the theory of reasoned action (TORA) as well as the theory of planned behavior (TPB), the behavior of consumers is influenced by a subjective norm (Fishbein, 1979; Ajzen, 1985). This subjective norm is composed by the perceived beliefs of others regarding certain behaviors (1) and the motivation to comply with these perceived beliefs of others (2). This second component is the susceptibility to normative influence and is assumed to differ between individuals (Mourali, Laroche & Pons, 2005; Bearden, Netemeyer, & Teel, 1989). Consumer who have a high motivation to comply with the opinion of others are expected to behave differently while shopping then those who care less about the opinion of others. Compliers might for instance be more insecure and influenced by trends and mass communication compared to non-compliers. Therefore, the susceptibility to normative influence will be measured as well.

2.2.4. Attitude towards advertising

Finally, the attitude towards advertising of consumers will also be measured in current study.

Wang, Zhang, Choi and D'eredita (2002) argue that understanding consumers' attitude towards

advertising can help marketers and designers to make a better advertising strategy and design. Consumers who are more insecure while shopping, may for instance be more prone to value the information given in advertising, compared to consumers who are very confident while making choices. Since advertising and commercials are costly marketing instruments, it is relevant to monitor consumers' attitudes towards these instruments. Besides, it is advisable to approach consumer who have a negative attitude towards advertising differently than those who have a more positive attitude about advertisements. Therefore attitude towards advertising seems a relevant construct to measure within current research.

2.2.5. Demographics

The main target of study 1 is to identify consumer segments based on their shopping behavior. Since the differences between consumer clusters are object of focus, demographic variables are also taken into account. By gathering the socio-demographic information, the identified clusters can be profiled based on demographic variables. This will provide a richer image of the clusters. Besides, many of the described variables have already been proven to differ with regards to demographic variables. Females for instance, have been proven to be more hedonic oriented and more impulsive (Teller et al., 2008; Verplanken & Herabadi, 2001). Another example is that impulsiveness has a negative correlation with age, indicating that younger consumers are more impulsive compared to older consumers (Verplanken & Heabadi, 2001).

To summarize, above introduced personality traits together with the socio-demographics of the respondents will form the basis for the second dimension. The personality traits will serve as basis for the cluster analysis, whereas the socio-demographics will enable the provision of a more complete image of the identified clusters after the cluster analysis.

2.4. Purchase environment

Within this last dimension focus was on the environment in which consumers make their purchases (offline versus online). The difference between consumers who prefer to purchase products online (offline) frequently and those who do not, forms a relevant construct because the environments are associated with different attributes, (dis)advantages and motivations. These differences are for instance reflected in consumer evaluations regarding the different environments. Research showed that shopping quickly, a large selection of products and best price are attributes which consumers evaluate as being better in an online environment. In

contrast, personal service, speedy delivery (immediate possession), no hassle during exchange and opportunity to see, touch and handle the product were evaluated better in the offline environment (Levin, Levin & Heath, 2005).

Frequently given reasons to shop online are the ability to find cheaper products, time savings, easy price comparison and ability to order at any time of the day (European Commission, 2012). Similarly, the most given reasons for *not* buying products over the internet are a preference for shopping in person and concerns regarding payment, security, making complaints and returning of products (Eurostat, 2015). As motivations and evaluations for online versus offline shopping environments differ, some consumers are expected to be more prone to be more frequent online shoppers. This expectation is confirmed by the fact that research shows that gender (males slightly more online purchases compared to females), age (younger consumers make more online purchases), level of education (higher educated costumers make more online purchases), employment situation (employed customers make more online purchases) and income (customers with higher income make more online purchases) all affected online purchase behavior (Eurostat, 2015; Swinyard & Smith, 2003; Bellman, Lohse & Johnson, 1999).

Another interesting result shows that participants rated the enjoyment of the shopping experience as better achieved in an offline compared to an online context for almost every product category (Levin et al., 2005). Utilitarian and hedonic values have frequently been examined in combination with the online (purchase) behavior and motives of consumers (e.g. O'Brien, 2010; Overby & Lee, 2006; Bridges & Florsheim, 2008). Rohm and Swaminathan (2004) stressed the fact that online retailers may find it difficult to replicate the sensory effects (touching and feeling of products) and product trial experiences which consumers can have in a normal shop. They therefore argue that it may be harder for online retailers to attract recreational (hedonic oriented) shoppers. As it is expected that some consumers have a higher preference for an online purchase environment than others and that motivations to buy products online also differ between consumers, purchase environment preference and motivations will also be assessed.

2.5. Overview of dimensions and constructs

Table 2 provides an overview of the dimensions and corresponding constructs included in study

1. It is expected that the cluster analysis will reveal homogeneous consumer segments with

differing scores on the identified constructs. In Chapter 3 the method used for the segmentation will be further elaborated.

Table 2. Segmentation dimensions with corresponding measurement constructs

Segmentation dimensions			
	Purchase orientation and motivation	Personality traits and demographics	Purchase environment
Measurement construct(s)	1. Decision-making style (DMS) 2. Hedonic vs. utilitarian shopping orientation	1. Demographics 2. Adoption behavior/ innovativeness 3. Consumer empowerment 4. Attitude towards advertising 5. Susceptibility to normative influence	1. Overall online versus offline purchase preference 2. Motives for engaging in online shopping 3. Motives for engaging in offline shopping

Chapter 3. Method

3.1. Sample

The questionnaire was administered to LISS (Longitudinal Internet Studies for the Social sciences) panel members in March 2015. The LISS panel is the principal component of the MESS (Measurement and Experimentation in the Social Sciences) project. It consists of 7366 individuals (4500 households) and is based on a true probability sample of households drawn from the Dutch population register by Statistics Netherlands. The panel is designed to give academic researchers from the Netherlands and abroad the opportunity to field their surveys in a representative sample. Computers are provided for households that otherwise would not be able to participate. One of the household members provides household data and keeps this information up to date monthly. Moreover, the demographics and other general background information on the households and respondents are updated each month. This results in an extensive and up to date knowledgebase with regards to the panel members.

Current questionnaire was completed by 5995 respondents, which led to a response rate of 81%. Only fully completed responses were included in the analysis. The final sample consisted of 3185 (53.1%) females and 2810 (46.9%) males. The mean age of the sample of females was 51.47 (SD = 17.87), whereas the males were slightly younger (M = 49.08, SD = 17.80), which led to a mean age of the total sample of 50.20 (SD = 17.87). Table 3 provides an overview of the distribution of age categories among the respondent sample.

Table 3. Distribution of respondents with respect to age categories

Age category (in years)	Percentage in total sample (N = 5995)
15 – 24	10.7
25 – 34	12.0
35 – 44	14.8
45 – 54	18.0
55 – 64	19.1
65+	25.5

3.2. Measures²

All answers to the statements discussed in the following section were recorded on five-point Likert scales ranging from totally disagree to totally agree, *except* for the items regarding the

² Because of the fact that multiple dimensions and constructs were object of interest within this research, multiple scales have been drawn upon to generate correct and relevant items. However, the broad interest also caused some

purchase environment. The items regarding purchase environment could not practically be measured by using the ‘disagree – agree’ scale and were, as will be discussed, measured otherwise. It was decided to measure all the remaining constructs with the same scale while keeping in mind that using different answer scales can cause confusion among respondents and for the benefit of consistent data. All constructs, with the corresponding scales on which they are based, will be discussed in the following section. Furthermore, an overview of the complete questionnaire (with the Dutch items used for current research) is provided in appendix A.

3.2.1. Purchase orientation and motivation

Purchase orientation and motivations were assessed in two parts. First, the extent to which a respondent was a hedonic (respectively a utilitarian) oriented shopper was measured by three items generated based on the ‘shopping enjoyment’ items from the earlier work of Sprotles and Kendall (1986). Secondly, respondents were asked for their decision-making style based on Consumer Styles Index (CSI) items (Kendall and Sprotles, 1986) and the impulsive purchase behavior scale from the study of Verplanken and Herabadi (2001). For an example question on quality focus see example 1.

Example 1. Item regarding decision-making style (quality focus)

“Good quality is important to me”

disagree entirely 0 0 0 0 0 agree entirely

3.2.2. Personality traits

Four relevant personality traits were assessed in the current study. First, diffusion of innovativeness (see example 2) was measured based on earlier work on the diffusion of innovativeness (Baumgartner & Steenkamp, 1996; Feick and Price, 1987). Secondly, susceptibility to normative influence was assessed with two items based on the study of Bearden et al. (1989). Respondents’ consumer empowerment (assertiveness and aggressiveness) was measured with items based on earlier studies (Polyorat et al., 2013; Richins, 1983). Finally,

practical issues. Since all the constructs of interest had to be measured but the survey could not be disproportionately long, the decision was made to generate subsets of items based on the scales developed in original research. To be sure that the most relevant items would be included, special attention was dedicated to use the items with the highest factor loadings in the original research. Next to the factor loadings, attention was dedicated to the possibility to translate the items from original studies into a correct and understandable Dutch item. Therefore the chosen subsets of items are a combination of items with a high factor loading in the original (or more recent) research, which were also translatable into an understandable Dutch item.

attitudes towards advertising were assessed based on earlier research (Pollay & Mittal, 1993; Muehling, 1987).

Example 2. Item regarding the personality traits of respondents (diffusion of innovativeness)
“In general, I am among the first to buy new products when they appear on the market”

disagree entirely 0 0 0 0 0 agree entirely

3.2.3. Purchase environment

The purchase environment dimension was measured in two ways. First, the overall purchase preference for online versus offline shopping was measured on a five point scale ranging from ‘strong preference for offline store’ to ‘strong preference for online store’. Second, respondents were consecutively presented with eight motives for purchasing offline (see example 3) and seven for motives for shopping online. Respondents were asked to pick a maximum of three of the presented motives based on which they found most important in both environments. The presented motives were generated based on the most given motives in the large scale survey conducted by Eurostat (Eurostat, 2015). An ‘other, namely’ option was provided alongside the other motives. All the items in combination with the answer options regarding purchase environment are presented in Appendix B.

Example 3. Item regarding motives to engage in an offline environment (respondents picked a maximum of three motives)

“What are the most important reasons for you to buy in a regular shop??”

You can choose 3 answers maximally

- 0 I like to see and compare products in real life
- 0 In a regular store I think it is easier to compare prices
- 0 I think shopping is a fun activity
- 0 Out of loyalty to retailers
- 0 Out of habit
- 0 For personal assistance
- 0 I can take the product home immediately
- 0 In a regular store I can find better offers
- 0 Other, namely...

3.3. Procedure

Data was obtained by distributing an online survey among the members of the LISS panel. Respondents were instructed that the purpose of current survey was to identify consumer types, which could later be used for extended research regarding difference in the reaction to other interventions of these varying consumer types. The different constructs and dimensions were then asked. If necessary, respondents received an explanation regarding the statements. ‘Online

stores' were for instance classified as 'web shops', whereas 'normal stores' were defined as 'stores were one could go to with a physical establishment'. Besides, respondents were informed that there were no 'wrong' or 'right' answers regarding the opinion sensitive statements. After completing the survey panel members were thanked for participation. Respondents needed on average 17.04 minutes (SD = 9.65) to complete the survey.

3.4. Analysis

In order to verify that the generated items tapped into the corresponding constructs (as identified in the Theoretical Framework), a factor analysis was conducted first. All items of the questionnaire presented in Appendix A were included in the factor analysis, except the items regarding the purchase environment, because they were measured with different scales. Despite the fact that 14 constructs were identified (purchase environment preference not included, see Appendix A), it was taken into account that less factors could be extracted by the analysis. Novelty focus and the diffusion of innovativeness (adoption behavior) for instance seem to be closely related. Therefore, it was expected that they could possibly be extracted into the same factor. Similarly, consumer assertiveness and aggressiveness were expected to be extracted in a broader consumer empowerment factor. After analyzing the results of the factor analysis, a ten-factor solution was chosen for further analysis.

After conducting the factor analysis, the ten extracted factors were included as basis for a hierarchical cluster analysis. The purpose of this cluster analysis was to group respondents with similar scores on the extracted factors surrounding their shopping behavior. Based on the results of the cluster analysis, six consumer segments were identified. Consequently, the clusters were profiled on the 10 factors regarding shopping behavior (with ANOVA's) and socio-demographic variables (with crosstabs and Pearson χ^2 tests). Finally, a typology of the six cluster was introduced based on results of these analyses.

Chapter 4. Results

4.1. Factor analysis

A principle component exploratory factors analysis (EFA) was conducted, with eigenvalue > 1 criterion and a Varimax rotation. The final solution used for further analysis consisted of 10 factors and is presented in table 4 (p. 19). Item 15 (see Appendix A) was excluded from further analysis because it did not load above the cut-off point (.40) on any of the factors. In addition, items 29 and 31 were excluded, because they did not load on the corresponding factor (factor 1, 'novelty focus') and would cause ambiguity while interpreting the results. Total variance explained by the final factor solution was 57.2%.

4.1.1. Extracted factors

Factors 2 (Impulsiveness), 3 (hedonic orientation/shopping enjoyment), 4 (negative attitude towards advertising), 8 (price focus), 9 (consumer empowerment) and 10 (environmental focus) exclusively extracted one single construct (as introduced in the Theoretical Framework), see table 4 (p. 19). Despite a few exceptions (price focus and environmental focus), these factors formed reliable constructs with $\alpha \geq .70$. In contrast, as expected some factors extracted combinations of (parts of) constructs. Factor 1 (Novelty focus) for instance, is a combination of the novelty focus and diffusion innovativeness constructs. Besides, one item of the susceptibility to normative is also grouped in factor 1. Factor 5 (Brand Focus) consists of all the items related to brand focus, one item related to quality focus and the product/brand loyalty item. Therefore, respondents scoring high on the Brand focus factor value quality brands and are more prone to be loyal to these brands. Factor 6 (Insecurity) consists of the items regarding the overwhelmed by over choice construct and one item regarding susceptibility to normative influence. Since all three items focus on the difficulty of making choices while shopping (e.g. ask advice and being overwhelmed by over choice) the factor is interpreted as the 'Insecurity' factor. Finally, the remaining three items regarding quality focus were grouped together in factor 7 (Best choice). Since these items focus on making the best choice after an extensive search or careful comparison (and one reversed item), it was interpreted as the 'best choice' factor. The (partially) combined factors formed slightly less, but in most cases still acceptable constructs with $\alpha \geq .60$. However, because of the fact that these factors are mostly combinations of different constructs, the slightly lower alpha values are reasonably explainable. Therefore, the 10-factor model was used for further analysis.

Table 4. Overview of final factor solution with constructs, items and statistic results

Factors / items	Factor loading	Communalities	Cronbach's alpha (factor)
Factor 1. Novelty focus (DMS Novelty Focus + Diffusion of innovativeness + Susceptibility to Normative Influence)			.76
<i>I always try to stay on top of the latest trends</i>	.72	.60	
<i>Fashionable attractive styling is very important to me</i>	.70	.60	
<i>In general, I am among the first to buy new products when they appear on the market</i>	.67	.54	
<i>I like introducing new brands and products to my friends</i>	.63	.52	
<i>I achieve a sense of belonging by purchasing the same products and brands that others purchase</i>	.59	.55	
Factor 2. Impulsiveness (DMS)			.76
<i>I sometimes cannot suppress the feeling of wanting to buy something</i>	.71		
<i>Often I make careless purchases I later wish I had not</i>	.67	.56	
<i>I find it difficult to pass up a bargain</i>	.64		
<i>I usually think carefully before I buy something (r)</i>	-.70	.63	
<i>I usually only buy things I intended to buy (r)</i>	-.72	.61	
Factor 3. Hedonic orientation (DMS Shopping enjoyment)			.88
<i>Shopping is a pleasant activity to me</i>	.89	.84	
<i>I enjoy shopping just for the fun of it</i>	.88	.83	
<i>Shopping the stores wastes my time (r)</i>	-.84	.71	
Factor 4. Attitude towards Advertising (Negative)			.70
<i>Consumers would be better off if advertising was prohibited</i>	.77	.65	
<i>Most advertisements contain claims that are not true</i>	.67	.48	
<i>There should be stricter regulations for advertisements</i>	.65	.51	
<i>Most advertisements give consumers important information (r)</i>	-.59	.56	
<i>I think a lot of advertisements are fun (r)</i>	-.63	.48	
Factor 5. Brand focus (DMS Brand Focus + DMS Quality focus + DMS Loyalty)			.64
<i>I prefer to buy well-known A-brands</i>	.76	.66	
<i>Getting very good quality is very important to me</i>	.69	.59	
<i>I usually choose the more expensive brands</i>	.65	.65	
<i>Once I've found a product or brand that I like, I stick to it</i>	.47	.34	
Factor 6. Insecurity (DMS Confusion by over choice + Susceptibility to Normative Influence)			.70
<i>There are so many brands to choose from that often I feel confused</i>	.82	.72	
<i>The more I learn about products, the harder it seems to choose the best</i>	.82	.71	
<i>When I want to buy something, I often ask others to help me choose the best option</i>	.64	.55	
Factor 7. Best Choice (DMS Quality focus)			.52
<i>When I buy a product, I really try to make the best possible choice</i>	.63	.58	
<i>I really make an effort to find the best price-quality ratio</i>	.59	.60	
<i>I like to shop quickly and will buy the first product that seems good enough to me (r)</i>	-.60	.47	
Factor 8. Price Focus (DMS Price focus)			.49
<i>I buy as much as possible during the sales weeks</i>	.70	.56	

<i>I usually choose the cheapest products</i>	.69	.64	
Factor 9. Consumer Empowerment (Consumer assertiveness + consumer aggressiveness)			.53
<i>I am probably more likely to return an unsatisfactory product than most people I know</i>	.76	.61	
<i>I'll make a scene at the store if necessary to get a complaint handled to my satisfaction</i>	.72	.57	
<i>If a defective product is inexpensive, I usually keep it rather than put up a fuss or complain (r)</i>	-.64	.49	
Factor 10. Environmental Focus			.51
<i>If I have the option of choosing an organic product, then I prefer that option</i>	.80	.69	
<i>I find it important to buy products that are energy-efficient (r)</i>	.74	.66	

(r) = Items with (r) were recoded for further analysis

4.2. Cluster analysis

Hierarchical agglomerative cluster analysis was conducted with Ward's method as cluster method and the 10 factors as cluster variables. A predetermined set range of to be extracted clusters between 4 (minimum) and 10 (maximum) was set. After analyzing the results, six respondent clusters were distinguished³. The resulting six clusters were then profiled on the ten shopping behavior factors (with ANOVA's⁴) and the socio-demographic variables (crosstabs with Pearson χ^2), see table 5. All statistics presented in table 5 (F-statistics and Pearson χ^2) were significant at the $p < .001$. Besides, results of the item regarding overall purchase environment preference (online versus offline) are also included in table 5 (with ANOVA's). Tables 6 and 7 provide the results regarding the motivations to choose for an offline respectively an online purchase environment (with crosstabs and Pearson χ^2). In the next section the clusters will be described in more detail.

³ The choice to distinguish six consumer clusters was made while distinguishing more than 6 clusters seemed to decrease distinctiveness of the clusters and distinguishing less than 6 clusters seemed to cause loss of important information which could distinguish the clusters.

⁴ Levene's test for homogeneity of variances for the scores on all ten factors was significant at the $p = .001$ or $p < .001$ level. Since unequal variances were assumed, a Games-Howell post-hoc test was conducted to investigate which clusters differed significantly on which factors (see table 5).

Table 5. Factor means, purchase environment preference, gender, age and education by cluster

Factor	Cluster						ANOVA
	1. Low standard shopping avoiders (N = 605)	2. Impulsive Hedonics (N = 907)	3. Balanced Comparison Shoppers (N = 832)	4. Insecure Novelty Seekers (N = 878)	5. Task Oriented Shoppers (N = 1797)	6. Recreational Brand Shoppers (N = 976)	
							F(5,5989)
1. Novelty	1.85 ^a	2.48 ^b	2.05 ^c	2.72 ^d	1.81 ^a	1.96 ^e	332.24
2. Impulse	2.09 ^a	2.81 ^b	1.76 ^c	2.49 ^d	1.83 ^e	1.98 ^f	426.43
3. Hedonic	2.47 ^a	4.42 ^b	4.10 ^c	3.57 ^d	2.53 ^a	4.08 ^c	1264.01
4. Att_Ad	3.43 ^a	3.27 ^b	3.31 ^b	3.09 ^c	3.68 ^d	3.29 ^b	113.92
5. Brand	2.84 ^a	3.03 ^b	3.15 ^c	3.40 ^d	3.24 ^e	3.37 ^d	70.42
6. Insecure	1.91 ^a	2.38 ^b	1.85 ^a	3.06 ^c	2.50 ^d	1.91 ^a	334.29
7. BestChoice	3.24 ^a	3.49 ^b	4.08 ^c	3.59 ^d	3.77 ^e	3.76 ^e	139.97
8. Price	2.75 ^a	3.38 ^b	3.27 ^c	3.17 ^c	2.99 ^d	2.50 ^e	159.816
9. Empower	2.36 ^a	2.45 ^a	3.08 ^b	2.74 ^c	2.57 ^d	2.06 ^e	189.62
10. Environ	2.45 ^a	2.59 ^b	3.33 ^c	2.92 ^d	3.48 ^e	3.14 ^f	187.84
Purchase environment preference*	2.14 ^a	1.88 ^b	1.70 ^c	2.03 ^a	1.81 ^{b,c}	1.55 ^d	36.166
Mean Age	45.87 ^a	40.22 ^b	53.41 ^c	44.37 ^a	55.43 ^d	55.03 ^{c,d}	149.25
							Pearson χ^2
Socio-demographic variables							p
Male (%)	59.5	22.4	47.1	49.4	57.5	39.7	46.9
Standardized residuals ()	(4.5)	(-10.8)	(1)	(1.1)	(6.6)	(-3.3)	
Female (%)	40.5	77.6	52.9	50.6	42.5	60.3	53.1
Standardized residuals ()	(-4.3)	(10.1)	(1)	(-1.0)	(-6.2)	(3.1)	
Age 15 - 24 years (%)	12.6	25.4	5.2	19.2	4.1	5.2	10.7
Standardized residuals ()	(1.4)	(13.5)	(-4.9)	(7.7)	(-8.6)	(-5.2)	
Age 25 - 34 years (%)	16.2	17.6	8.7	15.7	9	8.9	12
Standardized residuals ()	(3.0)	(4.9)	(-2.8)	(3.2)	(-3.6)	(-2.8)	
Age 35 - 44 years (%)	19.2	17.2	14.1	17.7	12.4	12.1	14.8
Standardized residuals ()	(2.8)	(1.9)	(-5)	(2.2)	(-2.6)	(-2.2)	

Table 5. (Continued)

Age 45 - 54 years (%)	19.7	16.6	19.8	16.6	16.6	20.3	18
Standardized residuals ()	(1.0)	(-9)	(1.3)	(-9)	(-1.3)	(1.7)	
Age 55 - 64 years (%)	16.7	12.6	24.5	11.7	23.6	20.2	19.1
Standardized residuals ()	(-1.3)	(-4.5)	(3.6)	(-5.0)	(4.4)	(0.8)	
Age 65+ (%)	15.7	10.6	27.8	19	34.2	33.3	25.5
Standardized residuals ()	(-4.8)	(-8.9)	(1.3)	(-3.8)	(7.3)	(4.8)	$\chi^2(25)$ 751.05 < .001
<i>Edu Basisonderwijs (%)</i>	10.6	9.7	8.5	12.6	6.5	7.6	8.7
Standardized residuals ()	(1.6)	(1.0)	(-2)	(3.8)	(-3.3)	(-1.2)	
<i>Edu VMBO (%)</i>	21.3	20.2	22.6	23.1	20.6	26.3	22.2
Standardized residuals ()	(-5)	(-1.3)	(.3)	(.6)	(-1.4)	(2.7)	
<i>Edu HAVO/VWO (%)</i>	9.3	17.9	9.1	11.6	10.8	11.2	11.7
Standardized residuals ()	(-1.7)	(5.5)	(-2.1)	(-1)	(-1.1)	(-4)	
<i>Edu MBO (%)</i>	24.1	25.3	25.9	25.2	22.6	24.2	24.2
Standardized residuals ()	(-1)	(.7)	(1.0)	(.6)	(-1.4)	(-1)	
<i>Edu HBO (%)</i>	23.9	19.3	24.7	17.9	26	23.1	22.9
Standardized residuals ()	(.5)	(-2.3)	(1.0)	(-3.1)	(2.7)	(.1)	
<i>Edu WO (%)</i>	10.8	7.5	9.1	9.6	13.6	7.6	10.2
Standardized residuals ()	(0.4)	(-2.5)	(-1.0)	(-6)	(4.5)	(-2.6)	$\chi^2(25)$ 142.79 < .001
<i>Cluster size (%)</i>	10.1	15.1	13.9	14.6	30	16.3	100

*: (1) strong preference for offline – (5) store strong preference for online store

**: With regards to the tests for the demographic variables, the standardized residuals were assessed to investigate inter-cluster differences regarding expected and actual values. Values with standardized residuals of over or equal to 2 (positive and negative) were considered to be significantly different from the expected values.

Notes: a-f. In each row, different superscripts indicate significantly different cluster means (p < .05)

Table 6. Most important motives for shopping in an online environment by cluster (respondents were asked to pick the 3 they found most important)

	Cluster							$\chi^2(5)$	Pearson
	Low standard shopping avoiders N = 428	Impulsive Hedonics N = 716	Balanced Comparison Shoppers N = 559	Insecure Novelty Seekers N = 667	Task Oriented Shoppers N = 1176	Recreational Brand Shoppers N = 613	Total N = 4159		
<i>Most important motives for online</i>									
<i>Cheaper (%)</i>	59.1 (-.3)	58.9 (-.5)	62.8 (.8)	61.3 (.3)	62.3 (.9)	55.5 (-1.5)	60.3	10.56	.061
<i>Standardized residuals ()</i>									
<i>Time savings (%)</i>	51.6 (3.3)	42.5 (.4)	34.3 (-2.6)	43.3 (.7)	41.2 (-.2)	38.5 (-1.2)	41.5	33.41	< .001
<i>Standardized residuals ()</i>									
<i>Easier price comparison (%)</i>	35.0 (-2.3)	40.1 (-.9)	48.1 (2.1)	42.6 (.1)	45.2 (1.5)	38.7 (-1.4)	42.3	25.70	< .001
<i>Standardized residuals ()</i>									
<i>Every moment of every day (%)</i>	51.2 (-1.1)	62.8 (2.8)	53.1 (-.6)	52.5 (-.9)	53.7 (-.6)	56.1 (.3)	55.1	23.92	< .001
<i>Standardized residuals ()</i>									
<i>Some product only online (%)</i>	25.7 (-2.6)	34.5 (.8)	33.3 (-.2)	34.0 (.6)	31.5 (-.8)	36.5 (1.6)	32.8	16.09	.007
<i>Standardized residuals ()</i>									
<i>Easy delivery location (%)</i>	11.4 (-.3)	13.0 (.8)	12.0 (.0)	11.8 (-.1)	11.4 (-.6)	12.4 (.3)	12.0	1.30	.935
<i>Standardized residuals ()</i>									
<i>Dislike shopping in normal store (%)</i>	7.7 (6.9)	0.4 (-3.5)	0.7 (-2.6)	3.0 (.9)	3.2 (1.7)	0.7 (-2.8)	2.5	81.00	< .001
<i>Standardized residuals ()</i>									

Table 7. Most important motives for shopping in an offline environment by cluster (respondents were asked to pick the 3 they found most important)

	Cluster							$\chi^2(5)$	P
	Low standard shopping avoiders N = 595	Impulsive Hedonics N = 904	Balanced Comparison Shoppers N = 832	Insecure Novelty Seekers N = 871	Task Oriented Shoppers N = 1788	Recreational Brand Shoppers N = 976	Total N = 5965		
<i>Most important motives for offline</i>									
<i>Touch and compare in real life (%)</i>	81.3 (-1.9)	91.7 (1.0)	90.2 (.5)	87.6 (-.4)	87.8 (-.4)	91.8 (1.0)	88.7	54.15	<.001
<i>Easter price comparison (%)</i>	14.6 (1.2)	9.2 (-3.1)	14.1 (1.0)	15.6 (2.3)	12.9 (.1)	11.5 (-1.2)	12.8	21.20	.001
<i>I enjoy the shopping experience (%)</i>	7.1 (-8.9)	56.6 (18.6)	35.8 (5.9)	26.6 (.7)	6.3 (-16.0)	33.0 (4.7)	25.5	991.26	<.001
<i>Loyalty towards shopkeepers (%)</i>	16.1 (-1.8)	12.5 (-4.7)	17.4 (-1.3)	14.0 (-3.6)	25.1 (5.4)	24.2 (3.4)	19.4	100.64	<.001
<i>By habit (%)</i>	27.9 (5.2)	13.4 (-3.7)	13.3 (-3.6)	21.4 (1.8)	20.1 (1.4)	17.8 (-.6)	18.7	72.42	<.001
<i>To receive personal help (%)</i>	34.8 (-.5)	24.4 (-5.8)	34.9 (-.6)	34.7 (-.7)	43.1 (4.9)	37.2 (.6)	36.1	93.13	<.001
<i>Immediate possession (%)</i>	50.3 (1.7)	49.7 (1.8)	44.4 (-.5)	45.0 (-.3)	44.6 (-.6)	42.4 (-1.5)	45.6	16.68	.005
<i>Ability to find better offers (%)</i>	6.9 (-.6)	7.0 (-.6)	9.1 (1.7)	9.1 (1.7)	6.5 (-1.5)	7.5 (.0)	7.5	9.305	.097

4.2.1. Cluster 1, Low Standard Shopping Avoiders (LSSA, 10.1 per cent)

Cluster 1 was the smallest of the six clusters. It is characterized by *low scores* on the *hedonic* ($M = 2.47$) and all product attribute factors ($M_{novelty} = 1.85$, $M_{price} = 2.75$, $M_{best\ choice} = 3.24$, $M_{environment} = 2.45$ and $M_{brand\ focus} = 2.84$). In contrast, this cluster scores high on the (*negative*) *attitude towards advertising* factor ($M = 3.43$) and *online purchase preference* ($M = 2.14$). Besides, socio-demographic tests show that the cluster consists of mostly relative young men. These results indicate that the respondents in this small cluster (mostly relative young men) see no sense in an extensive search based on product attributes to get to a 'best choice', but rather settle with the first product they think will fulfill their needs to 'just get it over with'. The chosen motivations to shop online and offline from cluster 1 also confirm these results. The online motives *disliking of shopping in normal stores* and *time savings* were namely chosen most frequent in this cluster, see table 6. Besides, the offline motive *I enjoy the shopping experience* was chosen relatively infrequent (table 7). With these results in mind, cluster 1 was labelled Low Standard Shopping Avoiders.

4.2.2. Cluster 2, Impulsive Hedonics (IH, 15.1 per cent)

Cluster 2 is characterized by a relative *low score* on the *best choice* factor ($M = 3.49$). In contrast, respondents in it score *high* on *impulsiveness* ($M = 2.81$), *hedonic orientation* ($M = 4.42$), *price focus* ($M = 3.38$) and *novelty focus* ($M = 2.48$). Besides, socio-demographic tests show that the cluster consists of mostly relative young females. These results indicate that the respondents in this cluster (mostly relative young females) are recreational shoppers, who like to (impulsively) purchase trendy and new products (if possible with a nice discount or low price). The online motive *dislike shopping in a normal store* was given least frequent in this cluster, whereas the offline motive *I enjoy shopping the shopping experience* was given most frequent. This again supported results of the cluster analysis. With these results in mind the cluster was labelled Impulsive Hedonics.

4.2.3. Cluster 3, Balanced Comparison Shoppers (BCS, 13.9 per cent)

The third cluster is characterized by *low scores* on *insecurity* ($M = 1.85$), *impulsiveness* ($M = 1.76$) and *online purchase preference* ($M = 1.88$). In contrast, respondents in this cluster score *high* on the *best choice* ($M = 4.08$), *consumer empowerment* ($M = 3.08$), *price focus* ($M = 3.27$) and *hedonic* ($M = 4.10$) factors. Furthermore, socio-demographic tests show that the cluster consists of mostly relative older respondents. These results indicate that the respondents in this cluster (mostly relative old respondents) are confident consumers who know what they want and

enjoy to make a detailed comparison to end up with the best possible product (e.g. price-quality) in the end. The fact that the online motive *time savings* was given least frequent in this cluster indicates that they are indeed willing to invest time in the 'quest' for the best product. Besides, the *easier price comparison* motive was chosen more frequent in this cluster. This again underlines the comparative nature of the respondents in this cluster. With these results in mind, the cluster was called Balanced Comparison Shoppers.

4.2.4. Cluster 4, Insecure Brand Loyals (INS, 14.6 per cent)

Cluster 4 is characterized by *low scores* on the (negative) *attitude towards advertising* factor (M = 3.09). In contrast, respondents score high on the *novelty focus* (M = 2.72), *insecurity* (M = 3.06) and *brand focus* (M = 3.40) factors. Besides, they have a relative high preference for an online purchase environment (M = 2.03). Results of the socio-demographic tests show that the cluster consists of mostly relative young respondents who have a slightly lower educational level compared to most of the other clusters. These findings indicate that the respondents in this cluster (mostly relative young consumers with a slightly below average educational level) are interested in the newest products and trends, but often are insecure while purchasing them, which leads them to often purchase the brands they already know or to ask advice from others. With these results in mind, the cluster was labelled Insecure Brand Loyals.

4.2.5. Cluster 5, Task Oriented Shoppers (TOS, 30.0 per cent)

Cluster 5 is by far the biggest cluster. Respondents in it are characterized by *low scores* on *novelty focus*, *hedonic orientation* and *impulsiveness*. In contrast, they score high on *environmental focus* and (negative) *attitude towards advertising*. Besides, they score around average on the remaining product attribute factors (*price*, *best choice* and *brand focus* factors). Furthermore, socio-demographic test show that the cluster consists of mostly relative old males with a relative high education. These results indicate that respondents in this big cluster (mostly relative old males with a relative high education) do not enjoy the shopping activity itself. However, they are willing to evaluate the different product attributes to make a better purchase decision in contrast to the low standards of cluster 1. The offline motive *I like the shopping experience*, was chosen relatively infrequent in this cluster, which confirms the utilitarian nature of the respondents in this cluster. With these results in mind the cluster was labelled Task Oriented Shoppers.

4.5.6. Cluster 6, Recreational Brand Shoppers (RBS, 16.3 per cent)

Respondents in cluster 6 are characterized by *low scores on price focus, insecurity, consumer empowerment and online purchase preference*. In contrast they score *high on brand focus and hedonic orientation*. Furthermore, socio-demographic tests show that the cluster consists of mostly relative old females with few WO-graduates. These results indicate that respondents in this cluster (mostly relative old females) are confident and hedonic shoppers, who value well known (quality/more expensive) brands and pay less attention to prices of the products they buy. The *loyalty towards shop keepers* and the *liking the shopping experience* (offline) motives were given relatively frequent by this cluster. Since the *brand focus* factor also contained the loyalty item, these results again confirmed the results of the cluster analysis. With these results in mind cluster 6 was labelled Recreational Brand Shoppers.

4.3 Conclusion Study 1

To summarize, six consumer segments have been identified. Table 8 contains the description of all clusters in one sentence. Two of them scored relatively low on the hedonic factor, which indicates that these clusters are more utilitarian oriented (see shopping as a task similar to working and rather do not spent too much time shopping). These are the *Low Standard Shopping Avoiders* and the *Task Oriented Shoppers*. Most evident difference between these segments is that the LSSA-cluster has very little demands while shopping and probably rather settles with the first somewhat acceptable option, whereas respondents in the TOS-cluster have somewhat higher demands and are willing to spent at least some time to find a better product option. In contrast there are three clusters which score relatively high on the hedonic orientation factor. These are the *Impulsive Hedonics* (who like new fashion and also shop because they consider it to be an enjoyable activity), the *Balanced Comparison Shoppers* (who actively search for the best product option by making a detailed comparison of the pros and cons of products, and most likely enjoy this search for the best products) and the *Recreational Brand Seekers* (who pay less attention to the price of products and often purchase expensive quality brands). Finally, the *Insecure Brand Loyals* are curious for new trends, but insecure while shopping, which probably leads them to often purchase the brands and products they already know. Appendix E contains seven radar graphs in which an attempt is made to visualize the differences between the clusters on the factors regarding shopping behavior. In Chapter 5 the practical utility of the conducted

segmentation analysis will be tested in a financial context. The differences between clusters regarding the emotional response to future financial situation will be investigated in this chapter.

Table 8. Description of the identified clusters in one sentence

Cluster	Description
1. Low standard shopping avoiders	Respondents in this small cluster (mostly relative young man) see no sense in an extensive search based on product attributes to get to a 'best choice', but rather settle with the first product they think will fulfill their needs to 'just get over with it'.
2. Impulsive Hedonics	Respondents in this cluster (mostly relative young females) are recreational shoppers, who like to (impulsively) purchase trendy and new products (if possible with a nice discount or low price).
3. Balanced Comparison Shoppers	Respondents in this cluster (mostly relative older consumers) are confident customers who know what they want and enjoy to make a detailed comparison to end up with the best possible product (e.g. price quality) in the end.
4. Insecure Novelty Seekers	Respondents in this cluster (mostly relative young consumers with relative low education) are curious towards the newest products and trends, but often are insecure while shopping, which leads them to often purchase the brands they already know or ask advice from others.
5. Task Oriented Shoppers	Although the respondents in this big cluster (mostly relative old males with relative high education) do not enjoy the shopping activity itself, they are willing to evaluate the different product attributes to make a better purchase decision in contrast to the low standards of cluster 1.
6. Recreational Brand Seekers	Respondents in this cluster (mostly relative old females with slightly below average education) are confident and hedonic shoppers who value well known (quality/more expensive) brands and pay less attention to prices of the products they buy.

Chapter 5. Study 2, Emotional Responses towards Future Financial Situation

5.1. Introduction

In this chapter, the relevance of the identified consumer segments is investigated in a context closely related to shopping behavior. Namely, it was investigated whether clusters differed in their emotional response towards their future financial situation. Since the large scale financial crisis which started around the end of 2007, the consumer sentiment score in the Netherlands (comparable to the rest of Europe) has been below zero in seven consecutive years from 2008 till 2014 (Statistics Netherlands, 2016a). In contrast, Dutch consumers seem to regain trust in the economy within the last years (e.g. a positive score of 5 in June 2016) (Statistics Netherlands, 2016a). However, this does not mean that Dutch consumers do no longer have worries about the future economic situation. Research shows that the Dutch population, off all measured aspects in a large scale study, still is the least satisfied with their own financial situation (Statistics Netherlands, 2015a). More than half of the population (55.4%) indicated that they sometimes or even often had worries about the future financial situation in 2014 (Statistics Netherlands, 2015b). This shows that the Dutch consumer sentiment is still recovering from the crisis.

Extending on this, earlier research shows that different consumers react differently in times of financial crises (Hampson & McGoldrick, 2013). This was studied by investigating whether consumers segments could be identified based on their behavioral reaction in times of a financial crisis. The results showed that some consumers (labelled the *maximum adaptors*) for instance react very strongly in times of a recession (e.g. lower their shopping frequency, less impulse buying, more purchase planning and more price focus). In contrast, other consumers (labelled the *minimum changers*) do not (or to a much lesser extent) change their shopping behavior. A possible explanation for this indifference given by Hampson and McGoldrick, is that the *minimum changers* might be the consumers who have a general dislike of shopping (e.g. the Low Standard Shopping Avoiders and Task Oriented Shopper clusters in current study). Since changing shopping behavior generally takes more effort than sticking to old behaviors, these type of consumers may not be willing to put in the effort to make changes (Hampson & McGoldrick, 2013).

5.2. Emotional responses to future financial situation

Given the fact that different consumer groups react differently in times of economic difficulty (Hampson & McGoldrick, 2013), it is also expected that differences between the clusters regarding the perceived future financial situation exist. Therefore, the object of focus is whether the clusters identified in study 1 differ regarding the emotional response towards their future financial situation. Research indicates concerns about the financial situation can interfere with personal relationships and affect work performance (Hira & Mugenda, 2000). Moreover, results of earlier studies indicate that emotional states are important determinants of purchase behavior (Sherman, Mathur & Smith 1997; Donovan, Rossiter, Marcoolyn & Nesdale, 1994). Consumers in positive moods are for instance more willing to take risks and buy more often, whereas consumers in a negative mood tend to take less risk and buy less often (Van Raaij, 1989). Despite the fact that emotions regarding future financial situation are not the only variables that influence the mood of consumers, they most likely do have (some kind) of influence on the mood of consumers. This shows that the perceived financial situation can have important impact on the life and shopping behavior of consumers, making it a relevant variable to investigate in combination with the found clusters.

5.3. Expectations and hypotheses

With regards to the clusters identified in study 1, several expectations can be formulated. Research namely shows that consumers who are insecure about a certain aspect of their economic or financial situation, often are more insecure about other economic aspects as well (Dominitz & Manski, 1996). This was studied by asking respondents to make a subjective estimation of the probability that three negative economic events would happen in the coming year, namely absence of health insurance, victimization by burglary, and job loss. The results showed that respondents who experienced a high perceived risk of one of these events happening, also tended to perceive a higher risk of the other negative outcomes happening (Dominitz & Manski, 1996). Elaborating on this, other research shows that insecurity has direct and indirect effects on negative emotions, in a way that higher levels of insecurity lead to more negative emotions (Reisel, Probst, Chia, Maloles & König, 2010). This was also studied in a financial context, namely insecurity with regards to respondents' jobs. It was found that job insecurity leads to more strong negative emotions like anxiety and anger (Reisel et al., 2010). Besides, Yi and Baumgartner (2004), specifically studied the behavior of consumers coping with

negative emotions (anger, disappointment, regret and worry) in purchase-related situations. One coping strategy which was linked to worrying (and not to the other emotions) was seeking social support (asking other for help or advice). Therefore, it can be expected that clusters scoring high on the insecurity factor (from current research) will also be more worried than clusters who score low on the insecure factor.

Given these results, it is expected that consumers who are insecure while shopping (which can be considered as something related to ones' economic situation), will also have a higher probability to be insecure about their future financial position. This is based on the finding that consumers who are insecure about one economic aspect, have a higher chance to be insecure about other economic aspects as well (Dominitz & Manski, 1996). This higher insecurity will, according to the results found by Reisel et al. (2010), in turn be reflected in a more negative emotional responds towards the future financial situation.

While the *Insecure Novelty Seekers* cluster is the most insecure shopper cluster found in current study, they are expected to be more insecure about their future financial situation as well. This is thus expected to be reflected in a more strong response on negative emotions regarding their future financial situation compared to the other segments. Besides, the same trend is expected to be present (possibly to a lesser degree) regarding the other two more insecure clusters (*Impulsive Hedonics* and *Task Oriented Shoppers*). In contrast, the *Low Standard Shopping Avoiders*, *Balanced Comparison Shoppers* and *Recreational Brand Shoppers* clusters score the lowest on insecurity. Therefore, they are expected to have a less strong response on negative emotions compared to the more insecure clusters. These expectation lead to the following hypotheses:

H1: The more insecure clusters (especially the *Insecure Brand Loyals* and to a lesser degree the *Impulsive Hedonics* and *Task Oriented Shoppers*) have a stronger response on negative emotions towards their future financial situation compared to the other clusters.

H2: The less insecure clusters (*Recreational Brand Shoppers*, *Balanced Comparison Shoppers* and *Low Standard Shopping Avoiders*) have a weaker response on negative emotions towards their future financial situation compared to the other clusters.

Given the fact that it is hypothesized that specific clusters will have a stronger (IBL, IH and TOS-clusters) or weaker (RBS, BCS and LSSA-clusters) response on negative emotions, it is

also expected that these responses will be reflected in the overall feeling towards the future financial situation. Namely, stronger responses on negative emotions are expected to be reflected in a more negative overall feeling, whereas weaker responses on negative emotions are expected to be reflected in a more positive overall feeling. These expectations lead to the following hypotheses:

H3: The clusters with a strong responses on negative emotions will have a more negative overall feeling towards future financial situation

H4: The clusters with a weak responses on negative emotions will have a more positive overall feeling towards future financial situation.

5.4. Research Method

5.4.1. Sample

Data used for study 2 was obtained by investigating research waves of the Tilburg Consumer Outlook Monitor (TILCOM⁵) set out in the LISS panel. Therefore, the sample again consisted of members from the LISS panel. Two TILCOM datasets were used in current research, namely a TILCOM dataset corresponding to December 2014 and a TILCOM dataset corresponding to December 2015. Table 8 contains relevant information regarding characteristics of both samples.

Table 8. Characteristics of used TILCOM samples

	Sample	
	TILCOM December 2014	TILCOM December 2015
Sample size (N*)	2896	2653
Response rate (%)	85.7	83.3
Males (%)	47.3	47.8
Females (%)	52.7	52.2
Mean age males in years (sd)	53.89 (17.64)	56.03 (16.42)
Mean age females in years (sd)	50.74 (17.83)	52.97 (16.71)
Mean age total sample in years (sd)	52.23 (17.80)	54.43 (16.64)

N* = Number of respondents who were successfully ascribed to one of the 6 identified consumer clusters

⁵ The Tilburg Consumer Outlook Monitor (TILCOM) is a quarterly, longitudinal monitor of consumer emotions and behavior, implemented in the LISS panel. It systematically tracks economic expectations, emotional responses to economic developments, and consumption coping in response to economic developments. Furthermore, specific topical themes related to TILCOM are sometimes included.

5.4.2. Measures

Emotional responses to the future financial situation of respondents are measured quarterly among members of the LISS panel in the TILCOM survey. These items were designed to systematically monitor (longitudinal) consumer emotions, see example 5. Respondents are asked to picture themselves how the financial situation of their household looks like over the coming 12 months. Consequently, words expressing possible emotions (negative as well as positive)⁶ are presented. The respondents are asked to indicate to what extent the presented emotions represent their feelings when they picture their future financial situation (over the coming twelve months) on a seven point scale ranging from ‘not at all’ to ‘exceptionally’. Moreover, a question regarding the overall feeling with regards to the future financial situation of the household is included, see example 6. All constructs, together with corresponding items and reliability measures used for study 2 are included in Appendix E. Since the research of Statistics Netherlands showed that there is a negative correlation between worries about future financial situation and income (Statistics Netherlands, 2015a), the average net household income of all clusters was imputed in SPSS. This way it could be investigated whether the clusters significantly differed regarding the monthly net household income. The information about respondents’ incomes could be determined using the extensive knowledge base from LISS panel members.

Example 5. Item regarding the emotional response to respondents’ future financial situation (negative emotion)

When I picture to myself how the financial situation of my household will be over the coming 12 months, right away I feel: insecure

0	0	0	0	0	0	0
not at all	a little bit	a bit	fairly	rather	very	exceptionally

Example 6. Item regarding the overall feeling of respondents towards their future financial situation

When I picture myself how the financial situation of my household will be over the coming 12 months, all in all I feel...

0	0	0	0	0	0	0
very bad	bad	fairly bad	neither bad nor good	fairly good	good	very good

⁶ Presented positive emotions (6): optimistic, happy, secure, proud, interested and relaxed

Presented negative emotions (10): insecure, sad, pessimistic, ashamed, worried, anxious, guilty, angry, envious and gloomy.

5.4.3. Procedure

Each panel member receives a unique respondent identity when they join the LISS panel. Every questionnaire that is completed by a panel member can therefore be linked back to that specific panel member via this unique respondent identity. This enabled the merge of the TILCOM datasets and the dataset from study 1. Consequently, the merged dataset revealed to which cluster the respondents from the TILCOM datasets were assigned in study 1. Since the TILCOM is a questionnaire which measures longitudinal variables, it was decided to choose two moments in time to see whether potential differences between clusters were consistent over time. Therefore, TILCOM data of December 2014 and December 2015 were used for current analysis. After merging the datasets, ANOVA's were performed to investigate possible differences between the clusters.

5.5. Results

Tables 8 and 9 (p. 35) provide an overview of the results of the conducted ANOVA tests for the different datasets (December 2014 and December 2015). The F-statistics for the negative emotions and the overall feeling towards future financial situations were significant at the $p < .001$ or $p = .001$ level in both datasets. In contrast, the F-statistic regarding the positive emotions was only significant in the December 2014 dataset ($p < .05$). Besides, the F-statistic regarding to the net household income was not significant in both datasets. Moreover, table 10 contains the results of the multilevel analysis which was conducted to see whether there were significant differences between scores from the clusters regarding the different time points. The interaction effect between clusters and time points was not significant (for all dependent variables). This indicates that the scores of the clusters regarding the different time points were not significantly different from each other.

The clusters did in no cases differ significantly regarding their average net house income at the $p < .05$ level. The clusters did also not show consistent differences with regards to the response to the presented positive emotions in neither of the two datasets. The only significant (post-hoc) difference found was that the *Recreational Brand Shopper* cluster scored higher on the positive emotions ($M = 3.38$) compared to the *Task Oriented Shopper* cluster ($M = 3.13$) in the December 2014 dataset.

Table 8. Results regarding the TILCOM dataset from December 2014
TILCOM December 2014

	Cluster						ANOVA		
	Low standard shopping avoiders	Impulsive Hedonics	Balanced Comparison Shoppers	Insecure Brand Loyals	Task Oriented Shoppers	Recreational Brand Shoppers		Total	
	N = 304	N = 439	N = 399	N = 415	N = 881	N = 458	N = 2896	F(5,2805)	p
Positive emotions	3.37 ^{ab}	3.26 ^{ab}	3.18 ^{ab}	3.33 ^{ab}	3.13^a	3.38^b	3.25	3.48	.004
Negative emotions	1.76 ^a	1.88 ^a	1.80 ^a	2.14^b	1.80 ^a	1.56^c	1.82	15.06	<.001
Overall feeling	4.63 ^{ab}	4.56^a	4.46 ^a	4.46^a	4.55 ^a	4.82^b	4.58	6.02	<.001
Household income (€)*	2954.42	3022.56	2895.07	2895.07	2923.51	2913.23	2911.26	1.584	.16
Cluster size (%)	10.5	15.2	13.8	14.3	30.4	15.8	100		

*: Household income = Average net household income per month

Notes: a-f. In each row, different superscripts indicate significantly different cluster means (p < .05)

Table 9. Results regarding the TILCOM dataset from December 2015
TILCOM December 2015

	Cluster						ANOVA		
	Low standard shopping avoiders	Impulsive Hedonics	Balanced Comparison Shoppers	Insecure Brand Loyals	Task Oriented Shoppers	Recreational Brand Shoppers		Total	
	N = 262	N = 363	N = 396	N = 316	N = 851	N = 465	N = 2653	F(5,2606)	p
Positive emotions	3.27 ^a	3.39 ^a	3.22 ^a	3.45 ^a	3.28 ^a	3.39 ^a	3.32	1.85	.10
Negative emotions	1.79 ^{a,b,c}	1.89 ^{ab}	1.77 ^{b,c}	2.02^a	1.73 ^{b,c}	1.62^c	1.78	7.67	<.001
Overall feeling	4.58 ^{ab}	4.59^a	4.61 ^{ab}	4.51^a	4.70 ^{ab}	4.83^b	4.66	4.01	.001
Household income (€)*	3062.27	2921.89	2723.39	2897.19	2962.53	2950.84	2920.94	2.02	.07
Cluster size (%)	9.8	13.7	14.9	12.0	32.1	17.5	100		

*: Household income = Average net household income per month

Notes: a-f. In each row, different superscripts indicate significantly different cluster means (p < .05)

Table 10. Results from the multilevel analysis regarding the interaction between the cluster and time points for the dependent variables

Fixed effects	Positive emotions		Negative emotions		Overall feeling	
	F(df)	p	F(df)	p	F(df)	p
Intercept	F(1,4236) = 26123.71	< .001	F(1,4183) = 13042.78	< .001	F(1,4195) = 62634,21	< .001
Clusters	F(5,4239) = 3.585	.003	F(5,4185) = 17.64	< .001	F(5,4196) = 7.25	< .001
Timepoint	F(1,2421) = 6.89	.009	F(1,2150) = 30.07	.17	F(1,2173) = 10.84	.001
Clusters * Timepoint	F(5,2429) = .715	.612	F(5,2157) = .302	.39	F(5,2180) = 1.06	.381

The scores on the negative emotions do show consistent and significant differences. The *Insecure Brand Loyals* scored higher on the response to negative emotions ($M = 2.14$) than all other clusters in the dataset from December 2014. The same trend is present in the December 2015 dataset ($M = 2.02$). However, the difference in the December 2015 dataset is significant with three clusters, instead of all. Besides, the *Impulsive Hedonics* score higher on the response to negative emotions ($M_{2014} = 1.88$; $M_{2015} = 1.89$) compared to the *Recreational Brand Shoppers* in both datasets. The *Task Oriented Shopper* cluster only scores higher on negative emotions ($M = 1.80$) compared to the *Recreational Brand Shoppers* in the 2014 dataset. Despite the fact that not all differences are significant regarding all clusters, all results point into the expected direction, which confirms that especially the *Insecure Brand Loyals* have a stronger response on negative emotions regarding their future financial situation (H1). Besides the *Impulsive Hedonics* and *Task Oriented Shoppers* only seem to be more negative when compared to the *Recreational Brand Shoppers*.

In contrast, the *Recreational Brand Shoppers* cluster scored lower on the response to negative emotions ($M = 1.56$) than all other clusters (dataset December 2014). The same trend (although not in all cases significant) is present in the December 2015 dataset ($M = 1.62$). However, the difference with the *Low Standard Shopping Avoiders*, *Balanced Comparison Shoppers* (which were the other two less insecure clusters) and the *Task Oriented Shoppers* is not significant in the 2015 dataset. The other less insecure clusters (*Low Standard Shopping Avoiders* and *Balanced Comparison Shoppers*) did not score significantly lower than the more insecure clusters regarding response on negative emotions towards future financial situation. While only the *Recreational Brand Seekers* seem to score significantly lower on the response towards negative emotions compared to most other cluster, H2 (which assumed that all three less insecure clusters would have a weaker response on negative emotions) is only partially confirmed.

Furthermore, the RBS-cluster scores significantly higher than all other clusters (except for the *Low Standard Shopping avoiders*) on overall feeling towards future financial situation ($M = 4.82$) in the December 2014 dataset. Significant ($p < .05$) and marginally significant ($p < .10$) results in the December 2015 dataset again show the same trend ($M = 4.83$). Moreover, the *Insecure Brand Loyals* scored significantly lower ($M_{2014} = 4.46$; $M_{2015} = 4.51$) than the *Recreational Brand Shoppers* ($M_{2014} = 4.82$; $M_{2015} = 4.83$) on overall feeling towards future financial situation in both datasets. Besides, the *Impulsive Hedonics* also scored lower on overall feeling ($M_{2014} = 4.56$; $M_{2015} = 4.59$) compared to the *Recreational Brand Shoppers*. These results show that the clusters which scored the highest on negative emotional response towards the future financial situation (IBL and IH-clusters), score lower on overall feeling towards that financial situation, compared to the cluster which scored the lowest on negative emotional response (RBS-cluster). Therefore, these findings are in line with the expectations from H3 and H4, in which negative emotions were expected to be reflected in overall feeling towards future financial situation.

5.6. Conclusion Study 2

Study 2 was conducted to investigate the relevance of the segmentation based on shopping behavior in a financial context. The results regarding emotional responses regarding future financial situation suggest that several differences do exist. First, the *Insecure Brand Loyals* have the most negative emotional response, which indicates that respondents in this cluster worry often about their future financial situation. Besides, the *Impulsive Hedonics* seem to follow the same trend but to a lesser degree. The *Task Oriented Shoppers* seem to be less negative compared to the other two insecure clusters. In contrast, the *Recreational Brand Shoppers* score relatively low on negative emotional responses, indicating that they worry less often about their future financial situation. The other less insecure clusters (*Low Standard Shopping Avoiders* and *Balanced Comparison Shoppers*) do not score consistently lower on negative emotions nor overall feeling. Moreover, the results suggest that negative responses towards future financial situation are also reflected in the overall feeling towards the future financial situation of the household. This is based on the fact that the *Insecure Brand Loyals* and *Impulsive Hedonics* clusters had a more negative overall feeling compared to the *Recreational Brand Shoppers* cluster. These results are largely in line with findings of earlier research which indicated that

consumers who are insecure regarding one aspect of their economic situation, also have a higher tendency to be insecure about other economic aspects (Dominitz & Manski, 1996).

Chapter 6. Conclusion, Discussion, Recommendation, Limitations and Future Research

6.1. Conclusion

Despite the fact that typologies of consumer shopping behavior have been center of attention in many studies and countries, few studies have examined whether a segmentation of the Dutch population based on shopping behavior is possible and whether such a segmentation has practical utility. Moreover, the studies that did focus on shopping behavior typically investigated one separate construct or variable (e.g. decision making style or hedonic versus utilitarian shoppers), whereas current research has included constructs from multiple typologies simultaneously. It was namely examined which relevant consumer clusters could be distinguished within a large sample of (Dutch) respondents, based on decision making style, hedonic versus utilitarian shopping orientation, demographic variables (e.g. age, gender and education), personality traits (e.g. attitude towards advertising, consumer empowerment and susceptibility for normative influence) and purchase environment preference (online versus offline). After conducting a factor and cluster analysis, six consumer clusters were successfully identified and profiled based on the variables surrounding shopping behavior and demographic variables, namely the *Low Standard Shopping Avoiders*, *Impulsive Hedonic*, *Balanced Comparison Shoppers*, *Insecure Brand Loyals*, *Task Oriented Shoppers* and *Recreational Brand Seekers*. Consequently, study 2 was conducted to investigate the practical utility of the conducted segmentation in a financial context. Emotional responses to future financial situations were the primary object of focus. The results suggest that, in line with the hypotheses, the *Insecure Brand Loyals* cluster has a stronger negative emotional response towards their future financial situation than most of the other clusters. The *Impulsive Hedonics* seem to follow the same trend but to a lesser degree. In contrast, the *Recreational Brand Shopper* segment had a less strong negative emotional response towards their future financial situation compared to most other clusters. Moreover, these responses on negative emotions also caused consistent differences in overall feeling towards future financial situation. Namely, the *Insecure Brand Loyals* and *Impulsive Hedonics* scored lower on overall feeling towards future financial situation compared to the *Recreational Brand Shoppers*. The relevance of negative associations with the financial situation is found in earlier research, which indicates that these negative associations can lead to changes in economic behavior, interfere with

personal relationships and affect work performance negatively (Hira & Mugenda, 2000). Future research could focus on investigating whether these results found in earlier research are also found with regards to the identified clusters.

6.2. Discussion

The clusters found in current segmentation analysis are to a certain extent comparable with the clusters found in earlier research by Mitchell and Bates (1998). Table 9 provides an overview of the clusters found in Mitchell and Bates (1998) together with the clusters from current research to which they are comparable to.

Table 10. Clusters found in earlier research compared to current study

	Mitchell and Bates (1998)	Current study (2016)
<i>Identified clusters (% of total sample)</i>	Trend Setters (14%)	Impulsive Hedonics (15.1%)
	Shopping Avoiders (36%)	Low Standard Shopping Avoiders (10.1%) Task Oriented Shoppers (30.0%)
	Recreational Quality Seekers (29%)	Balanced Comparison Shoppers (13.9%) Recreational Brand Shoppers (16.3%)
	Cautious Brand Loyals (21%)	Insecure Brand Loyals (14.6%)

These similarities show that there is some degree of consistency between the results of the two studies. Besides, the study of Mitchell and Bates (1998) was based on the respondents from the United Kingdom. The fact that similar clusters are found in current research (Dutch population) suggests that the consumer population of these two countries (UK and the Netherlands) is to some extent comparable. Despite these similarities, current research has also found new insights. Since more variables were included and a representative panel was used, clusters had more dimensions on which they could differ in current research. This resulted in a more detailed image of the clusters and more distinctiveness between the clusters. Consequently, not four but six clusters were distinguished. Results of current analyses show that the two biggest clusters in the study of Mitchell and Bates (1998) can both be divided into two smaller separate clusters⁷.

⁷ The 'Shopping Avoiders' (Mitchell & Bates, 1998) were for instance divided in a group which has very low standards and settle with the first product they think will fulfil their needs (LSSA) and a group who is willing to spent (at least some) time to find a better product (TOS). Similarly, the 'Recreational Quality Seekers' segment (Mitchell & Bates, 1998) was divided in a cluster which focused on making the 'best choice' after a thorough comparison (BCS), and a clusters which focused primarily on quality brands and cared less about the price of products (RBS).

Moreover, current research also included analyses regarding the differences on demographic variables and purchase environment preference of the identified clusters, which resulted in a more complete image of the (respondents in the) clusters. Current research has therefore contributed to earlier studies by adding important constructs and variables in the segmentation analysis, which resulted in the distinction of two new consumer clusters and a more detailed description of all other clusters.

However, the *Insecure Brand Loyals* cluster might be the hardest cluster to interpret, while some (seemingly) contradictory results were found regarding this cluster. Results show that it is the most insecure cluster. Insecure (or cautious) shoppers would, according to the literature, most likely be late adopters of new products or technologies (Mitchell & Bates, 1998). Therefore, it could be expected that the IBL-cluster would score low on novelty focus (focus for new trends/fashion and innovativeness). However, the IBL clusters scores high on the novelty focus factor. A possible explanation for this result could be that the IBL cluster focuses on new trends and products from an extrinsic motivation. Namely, people who are more susceptible for normative influence place more emphasize on the opinions and beliefs of other people. Therefore, they are expected to be more willing to impress (or be impressed by) others. For these people the acquisition and possession of products enables them to project a desired image to their environment (Richins & Dawson, 1992). The fact that the susceptibility for normative influence items are extracted in the Novelty and Insecurity factors, together with the fact that the IBL cluster scores the highest on both factors, indicates that the consumers in the IBL cluster might buy new and trendy products to create a desired image towards their environment rather than because of an intrinsic focus for new or trendy products.

The next question, which is also raised in earlier research, is whether these segments can be effectively used by marketers (Mitchell & Bates, 1998). Six criteria (*identifiability, substantiality, accessibility, stability, responsiveness and actionability*) to determine the effectiveness and profitability of marketing strategies, and segmentation in particular, have been elaborated in earlier research (Wedel & Kamakura. 2012).

Most of these criteria seem to be satisfied by the performed analyses. The clusters are for instance clearly identified and the smallest clusters still consists of over 10% of the sample. Given the fact that the sample is representative for the total Dutch population, this still is a relatively large group of consumers. Moreover, the characterization of the clusters provides

insights for managers on how to approach and reach the identified clusters (*actionability*). When a marketer for instance wants to target the *Balanced Comparison Shoppers*, he should take into account that respondents in that cluster make a careful comparison of (all) offered product options, and that they enjoy this ‘quest for the best’. A wide range of choices with a detailed product description stressing the strengths (and possibly also the weaknesses) of the offered products may therefore be suited for this cluster. Two of the criteria however, need more elaboration, namely the accessibility and the stability of the clusters.

Some clusters will be harder to reach than others (*accessibility*). The *Task Oriented Shoppers* for instance, have the most negative attitude towards advertising. They consider advertising to be manipulative and something that should be forbidden. In contrast, the *Insecure Brand Loyals* have the least negative attitude towards advertising. Therefore, the INS-cluster is probably easier to access than the TOS-cluster. However, the fact that advertising does not seem to be the effective way to reach the TOS-cluster can be considered as a valuable finding in itself, because it can save money for marketers who target the TOS-cluster. Future research can provide more insights regarding this finding, by for instance investigating whether the more negative (or positive) attitudes towards advertising from the clusters also lead to slower or faster persuasion of consumers from different clusters. Moreover, research could be conducted to investigate what would be an effective way to reach the clusters which have a more negative attitude towards advertising, since advertising does not seem the appropriate strategy.

Besides, two TILCOM datasets have been assessed within the timespan of one year (December 2014 – December 2015) in study 2. The results from the multilevel analysis (interaction between the cluster scores and time points) show that there are no significant differences between the scores from the clusters regarding the two time points. Therefore, the *Stability* criterion seems to be satisfied. However, the segmentation analysis (study 1) was based on data of a single point in time (March 2015). Therefore, it cannot be proven that the same results would be found in longitudinal data, neither does it mean that consumers will never change their shopping behavior. Some of the factors have already been proven to be correlated with age. Results of earlier studies for instance show that younger consumers buy more products impulsively compared to older consumers (Verplanken & Herabadi, 2001). This negative correlation between age and impulsiveness is also found in current study. Besides, online purchase preference and novelty focus also had a negative correlation with age. In contrast, older

consumers had a higher environmental focus and were more prone to look for the best product choice. Moreover, research has showed that ‘life status changes’ (such as getting married or divorced, losing or changing a job, having someone enter or leave the household, having a first child, and so forth) are an important predictor for changes in consumer (shopping) behavior (Andreasen, 1984). Since these life status changes can happen to every consumer, changes in shopping behavior can be unpredictable. These findings show that although the clusters show relatively consistent behavior over the time span of one year, it would be advisable for a manager to monitor changes in shopping behavior of the customer base once every few years. By doing this, the manager can anticipate to possible changes in the preferences and behaviors of the target segment(s). Having said this, one can also argue that although individual consumers may change cluster, the clusters itself would continue to exist while there is also a constant flow of new consumers entering the clusters. However, even if this argumentation is true, managers could still have benefits when they monitor the shopping behavior of their customer base once every few years. Since consumer preferences have become more divers over time (Allenby & Rossi, 1998), there is reason to assume that this development will continue, which can in time cause the formation of new consumer clusters. When managers can identify new consumer clusters in their early stages and anticipate to the preferences of these clusters, this can provide economic benefits while competitors most likely not target those specific (new) segments yet.

Next, the results of study 2 indicate that the identified clusters also differ with regards to their emotional response towards future financial situation. As expected, results showed that most clusters which were more insecure while shopping also had a more negative emotional response and a more negative overall feeling towards their future financial situation. However, this trend was less evidently present with regards to the *Task Oriented Shoppers* clusters. A possible explanation for this finding is that the *Task Oriented Shopper* cluster is a utilitarian oriented cluster. Research indicates that utilitarian oriented consumers have a more cognitive (information-processing) perspective, whereas hedonic consumers are considered to have a more experiential and emotional perspective (Teller et al., 2008). This might be the explanation for the fact that the findings regarding negative emotions are less prominently present with regards to the *Task Oriented Shopper* cluster.

Similarly, it was expected that the less insecure clusters would have a less negative

emotional response and a more positive overall feeling towards the future financial situation. The *Recreational Brand Shoppers* cluster was the only cluster which consistently confirmed these expectations. The trend was less prominently present with regards to the *Low Standard Shopping Avoiders* and *Balanced Comparison Shoppers*. However, the *Low Standard Shopping Avoiders* is also a utilitarian cluster. Therefore, the above given explanation that findings regarding emotions might be less evidently present regarding utilitarian clusters is also suited here. While the *Balanced Comparison Shopper* cluster is a more hedonic oriented cluster, additional research is necessary to find an unambiguous explanation for the fact that the trend was less prominently present with regards to this cluster.

6.3. Limitations and Future Research

Since both a factor and a cluster analysis were performed in current study, it must be noted that these type of analyses are susceptible for (at least some degree) of subjectivity. Given the fact that there are very few strict rules for the determination of the number of to be extracted clusters (and factors), it is possible that different researchers would have given a slightly different interpretation to the found results. This could have lead them to include (or exclude) a different number of factors or clusters in the analyses. One could for instance have distinguished more than six clusters. However, in the seven and eight cluster solutions, another cluster which scored low on Hedonic orientation factor emerged. Given the fact that there already were two relatively similar clusters which both scored low on this factor (*Low Standard Shopping Avoiders* and *Task Oriented Shoppers*), the distinctiveness between these (already quite similar) clusters diminished further with the presence of another similar cluster. This could have caused confusion while interpreting the clusters and further results. Therefore, the six consumer cluster solution seemed the most obvious to choose.

Besides, in study 2, differences regarding a financial context were investigated. For future research it would be useful to examine whether the identified clusters also differ in their behavior towards (experimental) marketing stimuli. If this is the case, it could become even more relevant for marketers to make such a segmentation while it can help them design and implement an appropriate marketing strategy for the target group. A possible example would be to set out a 2 x 2 x 2 experimental study, in which the number of presented products, the amount of information presented alongside the products and the ‘quality’ of products (e.g. bad price-quality

products versus good price-quality products) would be varied. The benefit of conducting an experiment is that actual choices can be measured, whereas the respondents in current survey study provided self-repertory answers to the items measuring their shopping behavior. Therefore, the answers can always be biased by for instance social desirability. By conducting an experiment, it can be examined whether the *Balanced Comparison Shoppers* cluster indeed make a 'better' choice (e.g. price-quality wise) compared to the *Low Standard Shopping Avoiders* cluster, whether respondents in the BCS-clusters take a longer time to do so and whether they enjoy to make this comparison more than other clusters.. Similarly, it could be examined whether the *Insecure Brand Loyals* get more overwhelmed or confused when multiple products options are presented and whether this leads to a lower shopping enjoyment or satisfaction.

Future research can also examine the moderating effects of the clusters regarding the relationship between negative associations (emotions) towards future financial situation and changes in economic behavior, interference with personal relationships and negative effects on work performance. The *Impulsive Hedonics* for instance have a relative strong response on negative emotions regarding future financial situation. According to the literature this could lead them to take less risks and purchase less (Van Raaij, 1989). However, the IH-cluster also scores high on impulsiveness and hedonic shopping orientation, which indicates that they also shop to relieve stress or other negative emotions (Arnold & Reynolds, 2003). Therefore, it can be expected that the effect of negative emotions on purchase intention will be less present regarding the IH-cluster. When future research focuses on these kind of issues, the moderating role of the identified clusters on several relations found in earlier research could be investigated and an even richer image of the clusters could be provided.

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Appendix

Appendix A. Questionnaire items with corresponding dimensions, constructs, reference of literature used for scale development and other studies using the developed scale

Dimension(s)	Construct which item was generated for	Item(s)	Reference of original literature (on which items are based)	Studies using (adapted) original scale
Purchase environment (“where?”)	Overall online vs. offline purchase preference	1. Als het gaat om winkelen in gewone winkels of online winkels heb ik over het algemeen een... (*)	See Appendix B	
	Online vs. offline shopping motives	2. Wat zijn voor u de 3 belangrijkste redenen om aankopen te doen in een gewone winkel? (*)	See appendix B	
		3. Wat zijn voor u de 3 belangrijkste redenen om online aankopen te doen? (*)		
Purchase orientation and motivation (“Why?”)	1. Hedonic vs. utilitarian shopping (DMS Shopping Enjoyment)	4. Ik vind winkelen een prettige activiteit 5. Ik vind het leuk om gewoon voor de lol te winkelen 6. Winkelen vind ik tijdverspilling (r)	Sprotles and Kendall (1986)	(Patel & Sharma, 2009)
	2. Decision making style (DMS, Impulsiveness)	7. Ik denk meestal goed na voordat ik iets koop (r) 8. Ik koop meestal alleen dingen die ik van plan was te kopen (r) 9. Soms kan ik het gevoel om iets te willen kopen niet onderdrukken 10. Ik vind het moeilijk om een koopje te laten schieten 11. Ik doe vaak aankopen zonder er over na te denken, waar ik dan later spijt van heb.	Sprotles and Kendall (1986); Verplanken and Herabadi (2001)	
	3. Decision making style (DMS, confused/overwhelmed by over choice)	12. Er zijn zoveel merken om uit te kiezen, dat ik me vaak overweldigd voel 13. Hoe meer ik over producten te weten kom, hoe moeilijker het wordt om het beste te kiezen	Sprotles and Kendall (1986)	(Mokhlis, 2009)
	4. Decision making style (DMS, Brand focus)	14. Ik koop het liefst bekende A-merken 15. De merken waarvoor de meeste reclame gemaakt wordt zijn meestal een goede keuze 16. Ik kies meestal voor de duurere merken	Sprotles and Kendall (1986)	(Mokhlis, 2009; Mitchell & Bates, 1998)

5. Decision making style (DMS, quality focus)	17. Goede kwaliteit is erg belangrijk voor mij 18. Wanneer ik een product koop doe ik moeite om de best mogelijke keuze te maken 19. Ik zoek zorgvuldig om de beste prijs-kwaliteitverhouding te vinden 20. Ik winkel snel en koop het eerste product dat me goed genoeg lijkt (r)	Sprotles and Kendall (1986)	(Mokhlis, 2009; Mitchell & Bates, 1998)
6. Decision making style (DMS, price focus)	21. Ik koop zoveel mogelijk in de uitverkoop 22. Ik kies meestal de goedkoopste producten	Sprotles and Kendall (1986)	(Mokhlis, 2009; Mitchell & Bates, 1998)
7. Decision making style (DMS, novelty/fashion focus)	23. Ik probeer altijd op de hoogte te zijn van de nieuwste trends 24. Ik vind het belangrijk om met de mode mee te gaan	Sprotles and Kendall (1986)	(Mokhlis, 2009; Mitchell & Bates, 1998)
8. Decision making style (DMS, Habitual or loyalty)	25. Als ik eenmaal een product of merk heb gevonden dat me aanspreekt, dan blijf ik daar bij	Sprotles and Kendall (1986)	(Mitchell & Bates, 1998)
9. Decision making style (DMS, Environmental focus)	26. Als ik de mogelijkheid heb om voor een biologisch product te kiezen, heeft dat mijn voorkeur 27. Ik vind het belangrijk dat de producten die ik koop energiezuinig zijn	Added in current survey	
10. Adoption behavior/ diffusion of innovativeness	28. Over het algemeen ben ik één van de eersten die nieuwe producten koopt wanneer ze op de markt komen 29. Wanneer ik een nieuw product in de schappen zie staan, aarzel ik om het te proberen 30. Ik vind het leuk om nieuwe producten of merken te introduceren bij mijn vrienden 31. Mensen vragen me zelden naar mijn mening als het gaat om nieuwe producten	Baumgartner and Steenkamp (1996); Feick and Price (1987)	(Steenkamp, Hofstede & Wedel, 1999; Steenkamp & Gielens, 2003)
11. Susceptibility to normative influence	32. Door dezelfde producten en merken te kopen als anderen in mijn omgeving, probeer ik er bij te horen 33. Ik roep vaak de hulp in van anderen om me te helpen het beste alternatief te kiezen uit een productgroep	Bearden, Netemeyer and Teel, (1989)	(Steenkamp & Gielens, 2003)

12. Consumer empowerment (assertiveness)	34. Als een goedkoop product kapot gaat houd ik het meestal in plaats van er een punt van te maken of te gaan klagen (r) 35. Ik ben waarschijnlijk meer geneigd om een tegenvallend product te retourneren dan de meeste mensen die ik ken	Richins (1983)	(Richins & Verhage, 1987; Polyrat, Jung & Hwang 2013)
13. Consumer empowerment (aggressiveness)	36. Ik maak een scene in een winkel als dat nodig is om ervoor te zorgen dat er naar tevredenheid op mijn klacht gereageerd wordt	Richins, (1983)	(Richins & Verhage, 1987; Polyrat, Jung & Hwang 2013)
14. Attitudes towards advertising	37. De meeste reclame geeft consumenten belangrijke informatie (r) 38. In de meeste reclames worden dingen beweerd die niet waar zijn 39. Consumenten zouden beter af zijn als reclame zou worden verboden 40. Ik vind veel reclames leuk (r) 41. Er zou strengere regelgeving voor reclame moeten komen	Pollay and Mittal (1993); Muehling (1987)	

(*) = Items with a (*) sign were *not* measured with the five point Likert scale ranging from totally disagree to totally agree. Measurement methods of these items are included in Appendix B

(r) = Items with (r) were recoded for further analysis

Note: Original items were in Dutch (as presented in this appendix). The manuscript contains the items translated in English, see page 19 – 20.

Appendix B. Statements and answer options of question regarding purchase environment and product category

Item	Sub items	Scale
1. Als het gaat om winkelen in gewone winkels of online winkels heb ik over het algemeen een...	-	sterke voorkeur voor gewone winkels 1 – lichte voorkeur voor gewone winkel 2 – geen voorkeur 3 – lichte voorkeur voor online winkels 4 – sterke voorkeur voor online winkels 5
2. Wat zijn voor u de belangrijkste redenen om aankopen te doen in een gewone winkel?	<ul style="list-style-type: none"> a) Ik vind het fijn om producten in het echt te zien en te vergelijken b) In een gewone winkel vind ik het makkelijker om prijzen te vergelijken c) Ik vind winkelen een leuke bezigheid d) Uit loyaliteit naar winkeliers toe e) Uit gewoonte f) Om persoonlijk geholpen te worden g) Ik kan het product direct mee naar huis nemen h) In een gewone winkel kan ik betere aanbiedingen vinden i) Anders, namelijk... 	Maximaal 3 antwoorden aankruisen uit subitem kollom. Respondent kiest de drie die hij/zij het belangrijkste vindt.
3. Wat zijn voor u de belangrijkste redenen om online aankopen te doen?	<ul style="list-style-type: none"> a) Online kan ik producten vaak goedkoper vinden b) Ik bespaar tijd door online te winkelen c) Online vind ik het makkelijker om prijzen te vergelijken d) Online kan ik op elk moment van de dag en week een bestelling plaatsen e) Sommige producten kan ik alleen online vinden f) Mijn aankopen worden op een handige plek afgeleverd g) Ik houd er niet van om in een gewone winkel te winkelen h) Anders, namelijk... 	Maximaal 3 antwoorden aankruisen uit subitem kollom. Respondent kiest de drie die hij/zij het belangrijkste vindt.

Appendix C. Correlation matrix of the eleven-factor solution principle component factor analysis

	1	2	3	4	5	6	7	8	9	10
1. Novelty	-									
2. Impulsiveness	.387**	-								
3. Hedonic	.261**	.218**	-							
4. Att_Ad	-.225**	-.091**	-.157**	-						
5. Brand focus	.242**	.210**	.006	-.020	-					
6. Insecurity	.085**	-.044**	.004	.045**	.015	-				
7. BestChoice	.001	-.135**	-.039**	.106**	.110**	.048**	-			
8. Price focus	.279**	-.031*	.040**	-.049**	.117**	-.026*	.160**	-		
9. Empowerment	.084**	-.155**	-.011	.045**	.116**	.130**	.284**	.217**	-	
10. Environment	-.001	.106**	.072**	-.011	.105**	.109**	.011	-.282**	.067**	-

(**) = Correlation significant at the 0.01 level

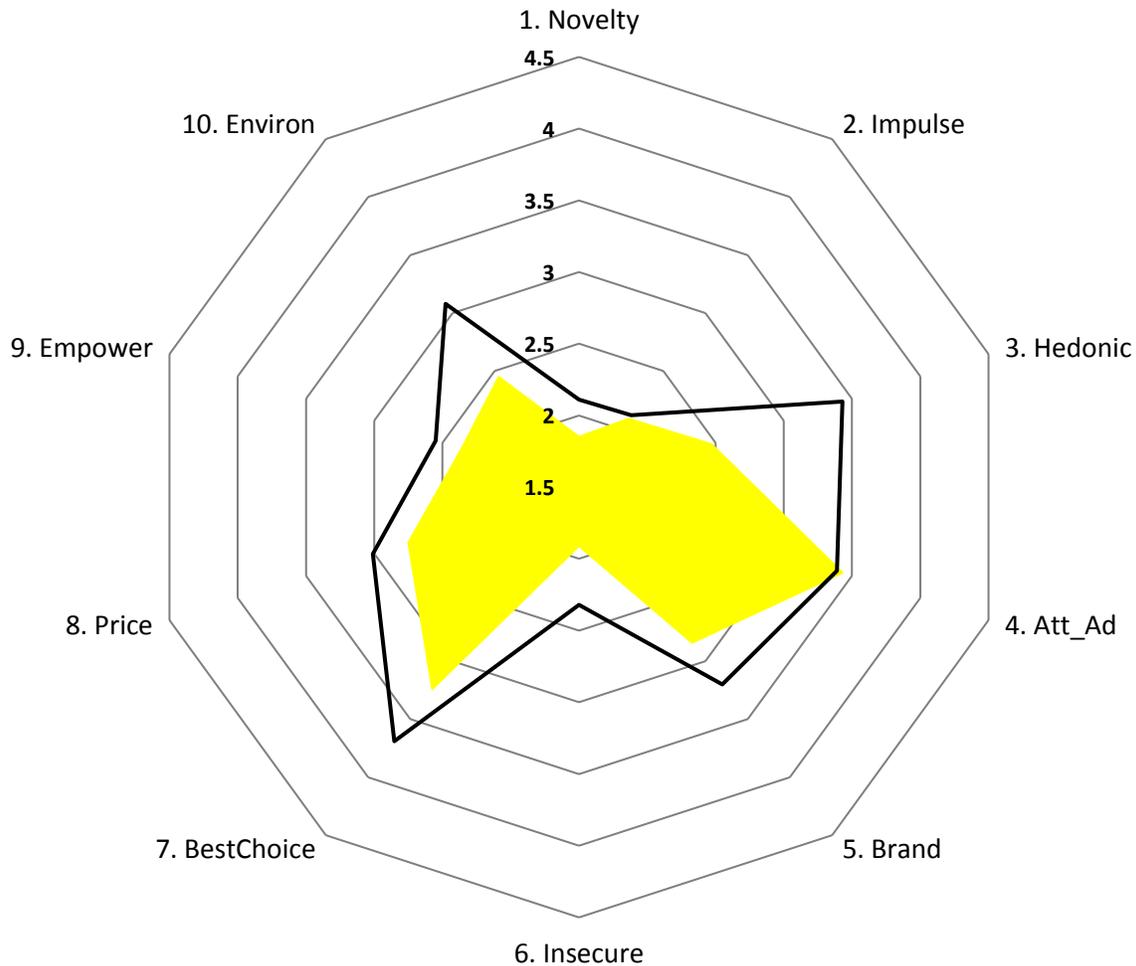
(*) = Correlation significant at the 0.05 level

Appendix D. Typologies of the six consumer clusters (segments) based on radar charts including the mean score of individual segments and total sample regarding the eleven factors

In Appendix D seven radar graphs are presented. All six respondent clusters identified in the cluster analysis of study 1 have an individual graph. Besides, a graph in which all clusters are presented together is included. In this combined graph the differences between the clusters might be most evident. With regards to the interpretation of the graphs some explanation might be necessary. The graphs are based on the scores on the 10 factors surrounding shopping behavior which were used as cluster variables in the cluster analysis conducted in study 1. Consequently, each graph consist of a colored shape which represents the scores of the cluster. Besides, the shape of the mean score of all clusters taken together is presented as a black outline with no filling. Consequently, the differences between an individual cluster and the average scores of all clusters can be obtained from the graph. All colored shapes have 10 vertices which belong to the 10 factors (presented on the outside of the graph). All colored vertices which stay within the black outline indicate that the corresponding cluster scores below average on the corresponding factor. Most evident example of this is the *Low Standard Shopping Avoiders* cluster, which scores below average on nearly all factors. In contrast, all vertices which overlap or protrude the black outline indicate that the corresponding cluster scores higher on the corresponding factor. A evident example of this is the score on the Hedonic factor of the *Impulsive Hedonics* cluster, which protrudes the average score rather clearly. In the last graph all clusters are included. This provides an indication of the differences between individual clusters, instead of a comparison to the average scores.

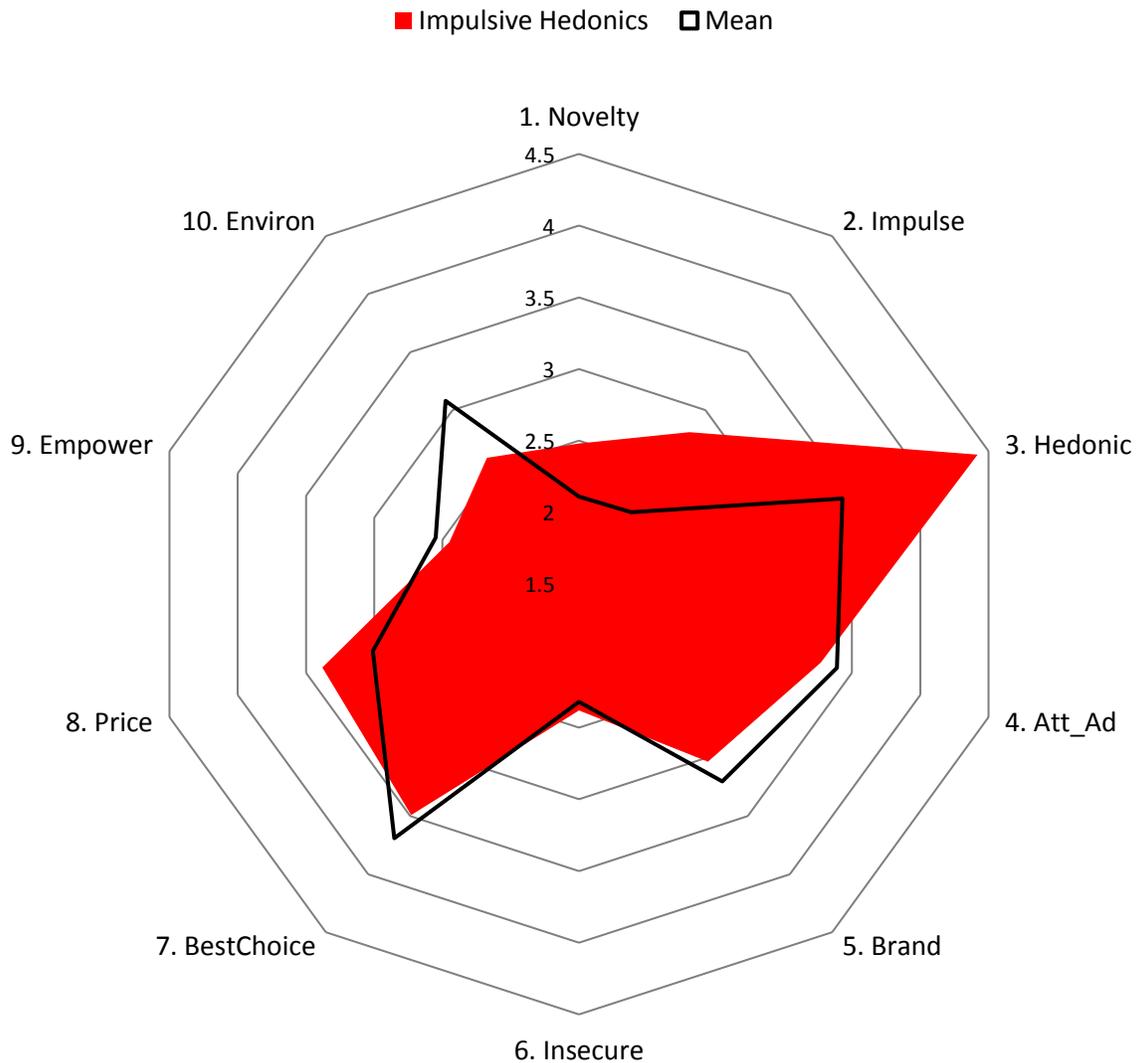
Low Standard Shopping Avoiders

■ Low Standard Shopping Avoiders □ Mean



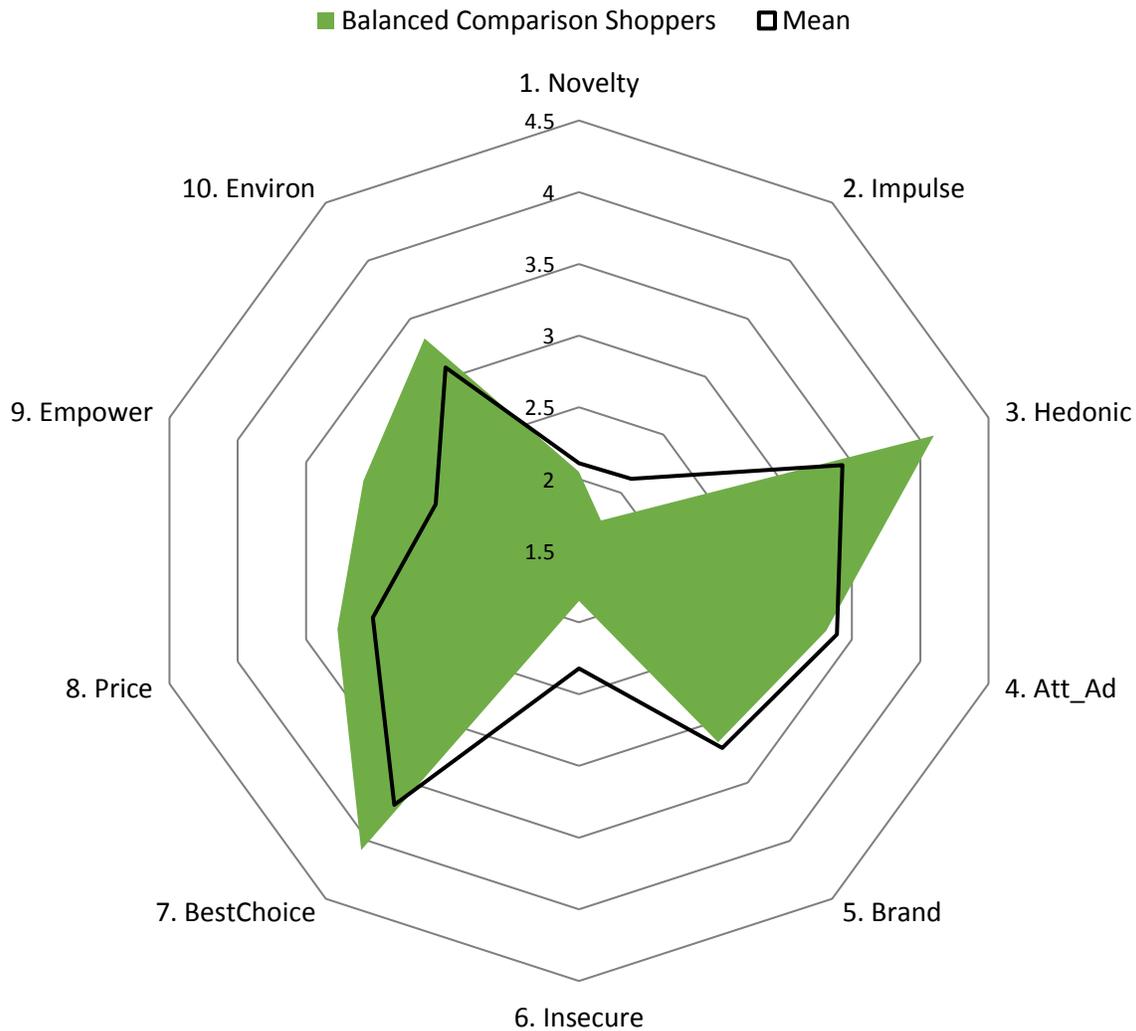
The prototypical LSSA consumer is a 45 years old man, who considers shopping as a task similar to working. It just needs to be done and ideally as quickly as possible. Therefore, he does not have high demands regarding attributes like price, brand, quality, novelty and environmental benefits of products. He typically settles with the first products which will fulfill his needs, in order to be done with shopping as quickly as possible. Furthermore, he often purchases product online for various reasons, most important ones being the ability to find cheaper products online, the ability to save time and the ability to shop at every moment of any day. The ability to see and compare products in real life immediate possession and personal help are his most important reasons to shop in a normal store. Besides, he is more prone to develop habits for shopping in online stores than consumers from other segments.

Impulsive Hedonics



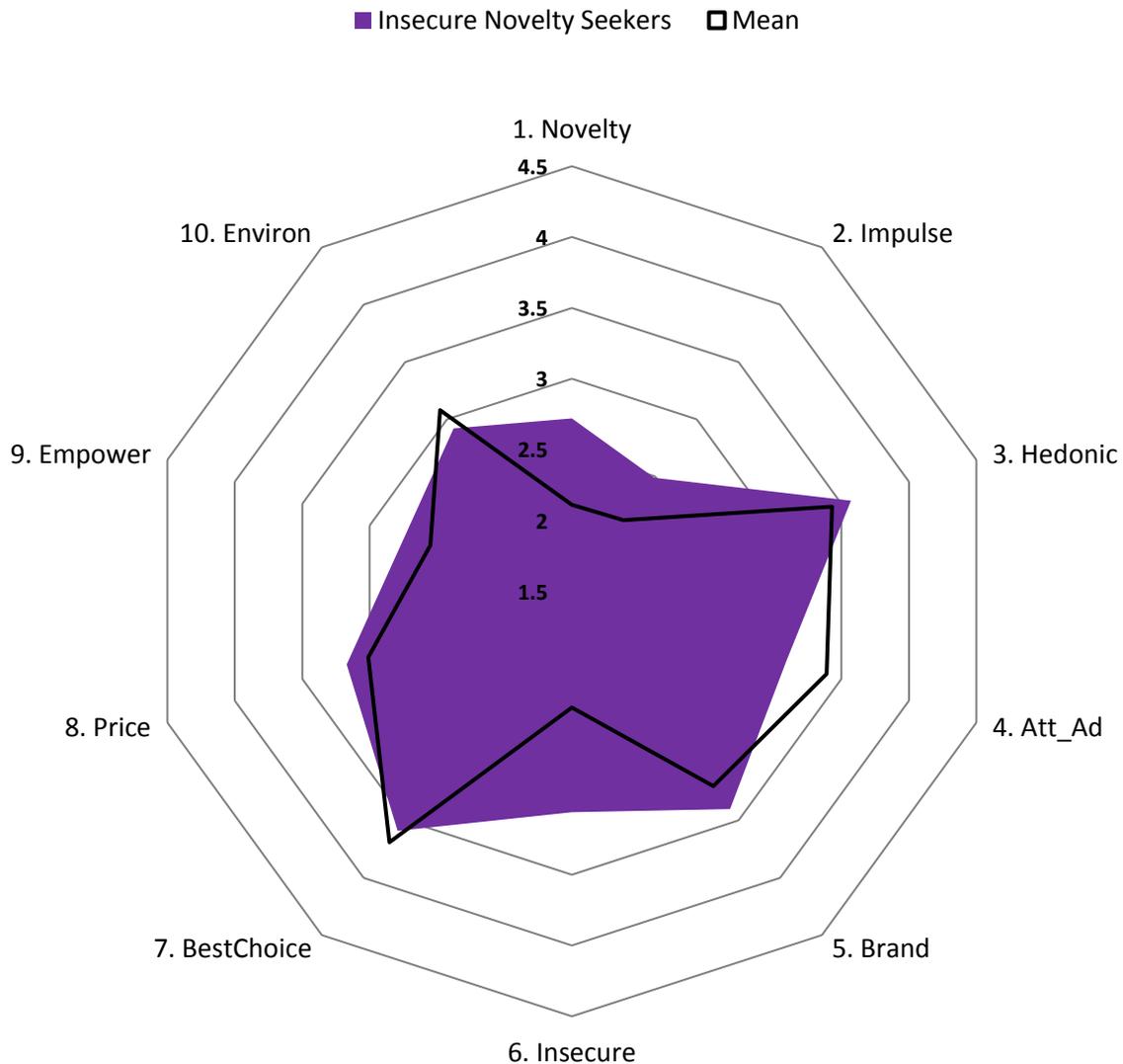
The prototypical consumer in the IH-cluster is a 22 years old female, who has finished her MBO degree or is still busy studying. She is interested in new trends and fashion and often impulsively purchases products while shopping. Therefore she does not often make a detailed comparison, nor does she necessarily search for the ‘best’ choice. Besides, she focuses on the price of products and ideally purchases products with some kind of discount. Furthermore, she purchases products online occasionally, most given motivations being the ability to shop at any moment of any day, the ability to find cheaper products online and time savings. Her most important motives to shop in a normal store are the ability to see and compare products in real life, the liking of the shopping experience and immediate possession. Furthermore she is less prone to be a loyal customer, less prone to form habits while shopping in offline stores, and she is less in need of personal assistance while shopping.

Balanced Comparison Shoppers



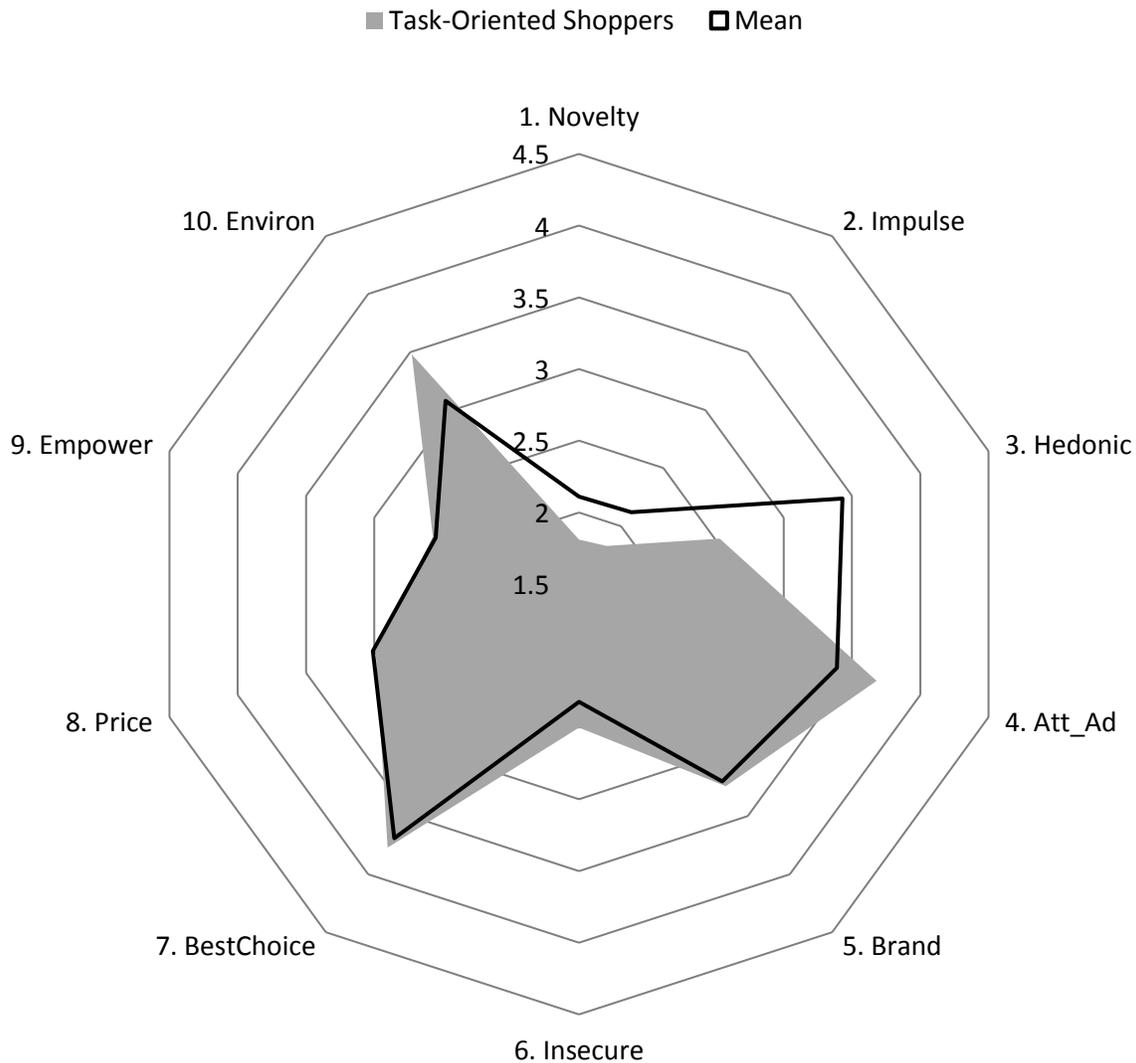
Prototypical consumers in the Balanced Comparison Shoppers segment are somewhat older (55 or older) and have a MBO or HBO degree. They actively search for the best product (quality, price and environmentally wise) and are willing to make a detailed comparison of options to find this best product (e.g. price quality). Moreover, they are relatively hedonic oriented, which indicates that they enjoy their ‘quest’ to find the best product. Furthermore, they are confident shoppers and willing to stand up for their rights if they feel like that is justified (e.g. return or make complaints about disappointing products). Since they gather relatively much information before purchasing products, the confidence and higher values of consumer empowerment (assertiveness and aggressiveness) are most likely the result of this extensive search. They have a relative low preference for the online purchase environment, but most given motives to shop online are the ability to find cheaper products, the ability to shop at any moment of any day and the ability to compare prices easier online. Their most given motives to shop in a normal store are the ability to see and compare products in real life immediate possession and the liking of the shopping experience. Finally, they are less prone to shop by habit in an offline environment.

Insecure Novelty Seekers



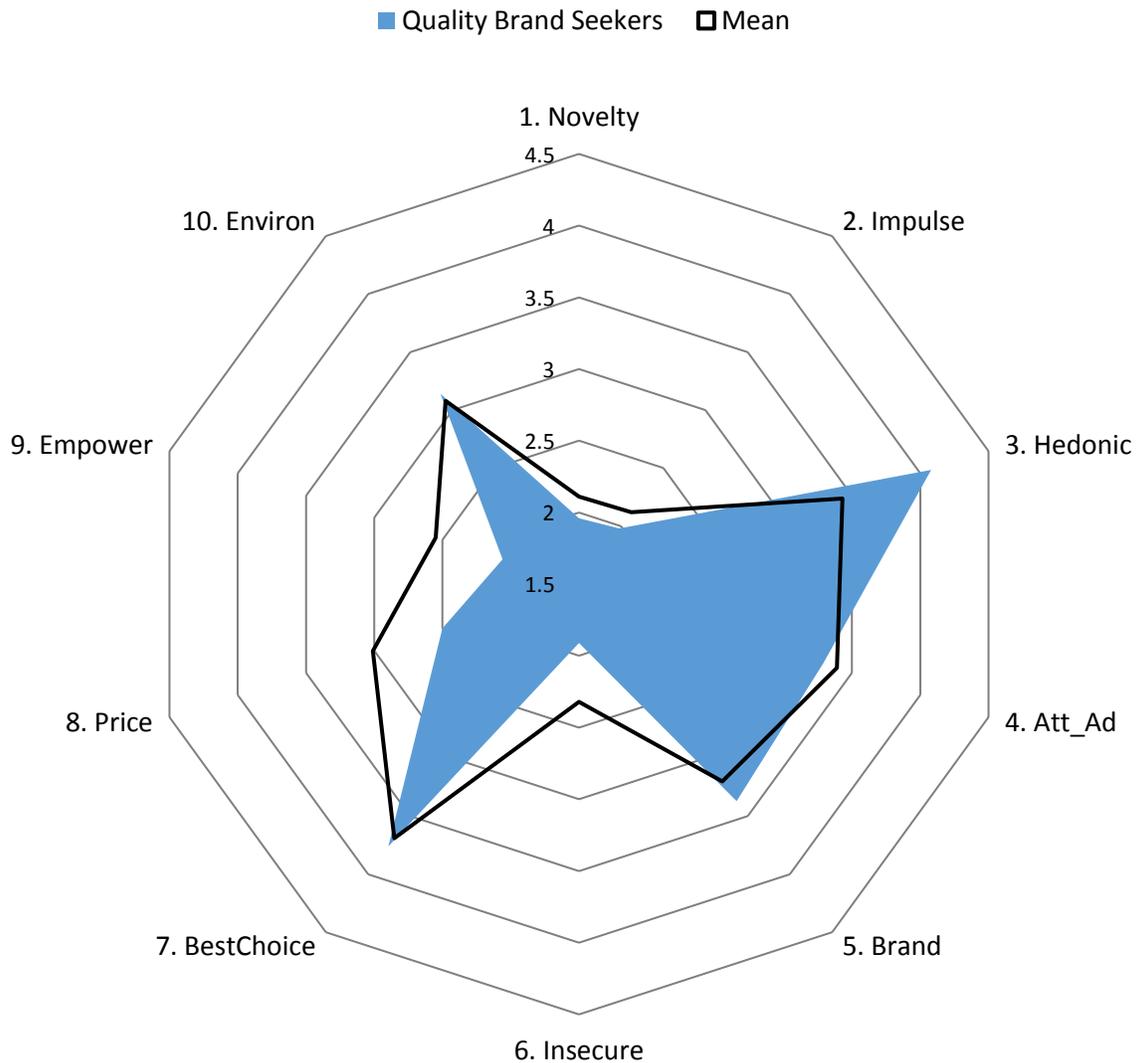
Prototypical consumers in the Insecure Brand Loyals segment are 34 years old have an around average educational level. They enjoy shopping for new trends and products and purchase on impulse relatively often. However, they are also the most insecure buyers and therefore sometimes have difficulty making choices while shopping. Therefore they are probably often faced with dilemmas regarding the acquisition of new products. This probably leads them to choose the products or brands they already know instead of the more unknown options. Furthermore, they have an above average preference for the online purchase environment. Most important motives for shopping online are the ability to find cheaper products, the ability to shop at any moment of any day and time savings. Most given motives to shop in a normal store are the ability to see and compare products in real life, immediate possession and personal help.

Task Oriented Shoppers



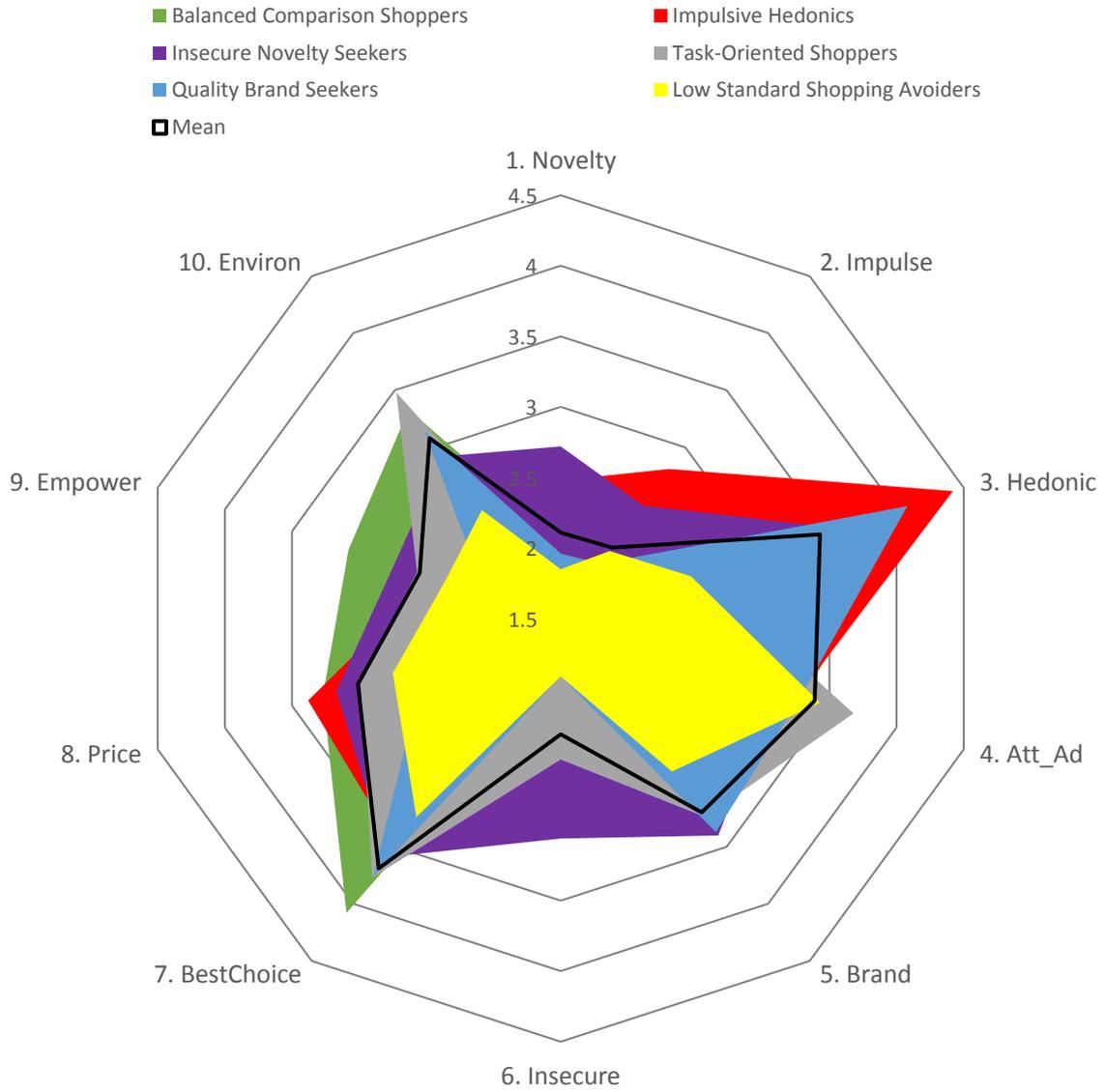
A prototypical consumer in the Task Oriented Shopper segment is a relatively old (55 or older) man with a relative high educational level (HBO or WO). He considers shopping as a task similar to working. He is not novelty focused and does not purchase products on impulse often. Despite the fact that he does not really enjoys the shopping experience, he is willing to invest at least some time in the search for products to make a better product choice in the end. However, this does not necessarily has to be 'the best' choice. Furthermore, he has a very negative attitude towards advertising and believes that advertising is often misleading. He has an around average preference for the online purchase environment and his most important motives to shop online are the ability to find cheaper products, the ability to shop at any moment of any day and the ability to compare prices better online. His most important motives to shop in a normal store are the ability to see and compare products in real life, immediate possession and personal help. Finally, is more prone to be loyal to shopkeepers from offline stores.

Recreational Brand Seekers



A prototypical consumer in Recreational Brand Shoppers segment is relatively old (55 or older). She is relatively hedonic oriented and has a relative high brand focus. Moreover, she does not focus much of her attention on the price of the products she purchases. Therefore she is expected to often purchase the more expensive brands. Besides, she is a relative confident buyer, but does not often return or make complains about disappointing products. This can either the result of her buying the more expensive (and therefore probably higher quality) products or the fact that she is less focused on the lost money than consumers in other segments. Furthermore, she has a relative low preference for an online purchase environment. However, her most important motives to shop online are the ability to shop at any moment of any day, the ability to find cheaper products online and the ability to compare prices easier online. Her most important reasons for shopping in a normal store are the ability to see and compare products in real life, immediate possession and personal help. Finally, Rita is more prone to be loyal to the shopkeepers from offline stores.

Combined Graph



Finally, a graph in which all consumer segments are plotted. This graph shows the differences between clusters visually.

Appendix E. Constructs study 2 with corresponding items and reliability measures

Construct	Sub-construct/item(s)	Answer scale	Cronbach's Alpha (α)
			TILCOM 12-2014 TILCOM 12-2015
Emotional responses to future financial situation	Positive Emotions		.91 .90
	Als ik mij voorstel hoe de financiële situatie van mijn huishouden de komende 12 maanden zal zijn, dan voel ik mij nu:	helemaal niet – een klein beetje – een beetje – redelijk – erg – heel erg – uiterst	
	1. <i>Optimistisch</i>		
	2. <i>Blij</i>		
	3. <i>Zeker</i>		
	4. <i>Trots</i>		
	5. <i>Nieuwsgierig</i>		
	6. <i>Ontspannen</i>		
Emotional responses to future financial situation	Negative Emotions		.94 .95
	Als ik mij voorstel hoe de financiële situatie van mijn huishouden de komende 12 maanden zal zijn, dan voel ik mij nu:	helemaal niet – een klein beetje – een beetje – redelijk – erg – heel erg – uiterst	
	7. <i>Onzeker</i>		
	8. <i>Bedroefd</i>		
	9. <i>Pessimistisch</i>		
	10. <i>Beschaamd</i>		
	11. <i>Bezorgd</i>		
	12. <i>Angstig</i>		
	13. <i>Schuldig</i>		
	14. <i>Boos</i>		
	15. <i>Afgunstig</i>		
	16. <i>Somber</i>		
Emotional responses to future financial situation	Overall feeling		N.A. N.A.
	Als ik mij voorstel hoe de financiële situatie van mijn huishouden de komende 12 maanden zal zijn, dan voel ik mij alles bij elkaar genomen...	heel slecht – slecht – vrij slecht – niet goed en niet slecht – vrij goed – goed – heel goed	