SHOPPING BEHAVIOUR

AN EMPIRICAL STUDY INTO THE APPRECIATION OF ATMOSPHERIC CHARACTERISTICS OF INNER-CITY SHOPPING AREAS GIVEN THE SHOPPER'S MOTIVATIONAL ORIENTATION

H.J.H.M. Willems

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PREFACE AND ACKNOWLEDGEMENTS

With pride I present the graduation study I conducted as part of my master studies in Real Estate Management & Development of the faculty of Architecture, Building & Planning at Eindhoven University of Technology.

Changes in the Dutch retail landscape are imminent. They are caused by the rapidly changing social trends and developments and changing spending patterns. Physical reorientation of the retail market is necessary to sensure a healthy shopping environment in the nearby future. This study attemps to clarify the relationship between the motivational orientation of consumers visiting an inner city shopping area and their appreciation of the atmospheric characteristics.

During this graduation period, I participated in an graduation atelier focussing on 'Consumer behaviour'. This form of cooperation resulted in three researches based on the same dataset. The other two reports describe consumer experience with an emphasis on (1) age classifications of the consumer, and (2) consumer experience distinguishing historical and non-historical locations. Therefore, my special thanks to my two study companions Tim Op Heij (1) and Wouter Dijkman (2), with whom I have spent a lot of pleasant time working together and who made it possible to conduct a research on such a large scale.

I would like to express my gratitude to the following individuals, companies and institutions; without their help and support this research study would not have been possible. First of all I would like to thank my mentors: Ingrid Janssen (TU/e), Aloys Borgers (TU/e) and Herman Kok (Multi Corporation B.V.) for their support, recommendations, brainstorming and feedback on the content and structure of my study. Furthermore, I would like to thank Arno Ruigrok (Multi Corporation B.V.) for his support.

Most of all, however, I must appreciate the sacrifices made by my girlfriend Sylvie Niessen, who has provided me with incredible support and encouragement to complete this thesis.

Last but not least, a great amount of thanks goes out to my family and friends for their support and inspiration.

Please, enjoy reading!

Rick Willems
Gouda, October 2012

SUMMARY

Retail has long been an attractive asset class within the real estate sector and is perceived by some as 'a safe haven' due to the overall stable and relatively high rates of return. However, the ongoing financial crisis, changing market conditions and the decline of consumer confidence are some of the current problems that stakeholders face. The demographic factors of a shrinking and ageing population in various Dutch municipalities will further have an increasing impact on the existing retail structure. Last but not least, the advent of the Internet as an additional sales channel for the retail trade seems to be unstoppable. Physical reorientation of the retail market is necessary to ensure a healthy shopping environment in the nearby future. Creating superior customer experience when shopping appears to be one of the primary objectives in today's retailing environment. This research focuses on possibilities of improving the atmospherics in the inner-city shopping areas. More specifically, the main objective of this study was to empirically determine which atmospheric characteristics contribute to the shopper's appreciation of inner-city shopping areas.

A literature study revealed a list 35 environmental characteristics, or 'atmospherics', which may affect the experiential value of shopping areas as perceived by shoppers. This list was pruned to 25 items by means of interviews with industry experts. These atmospherics include aspects such as the accessibility, the shop offer, the shape and material of the facades, the presence or absence of greenery and furniture, the dimensions of streets and buildings and the crowdedness.

The literature review also revealed that shoppers differ in terms of shopping behaviour and appreciation of shopping environments. Shoppers may be segmented by their personal characteristics, their motivation or other characteristics. Regarding shopping motivation, shoppers can be classified as hedonic or utilitarian motivated although a combination of motivations seems to occur as well. Hedonic motivated shoppers are more subjective and personalizing shoppers, resulting in a playful and fun shopping activity and utilitarian motivated shoppers shop more task-related, efficient and rational. The relationship between the motivational orientation of consumers and the appreciation of atmospheric characteristics is very important and forms the main focus of this study. A secondary objective of this study was to obtain an insight into the differences between the various motivational orientations with regard to the appreciation of inner-city shopping areas.

The research was conducted in the historic inner-cities of two Dutch medium sized cities: Maastricht and 's-Hertogenbosch. Within each of these inner-city areas, four mutually different locations were selected. In the selection of these shopping locations, the appearance (historical vs non-historical) of the location functioned as an important criterion. In each city, two historical and two non-historical locations were selected. At each location, the 25 characteristics were assessed as objectively as possible.

By means of a survey, shoppers' opinions were collected. Each respondent was asked to rate each item on a 7-point Likert scale. In addition, each respondent had to rate the overall appreciation and the sphere of the location under consideration. Furthermore, each respondent was asked to rank the four locations within the inner-city regarding overall appreciation and sphere. A total of 918 respondents participated during five midweek survey days in July 2012.

The collected data was analyzed by various methods. Factor analysis was performed to reduce the set of variables. This resulted in three factors, namely 'dimensions', 'architecture' and 'environment'. The individual scores on the 25 items and the derived factors were subject of decision tree analyses. This technique links the dependent variable (the score on an item or factor) to one

or more relevant independent variables: the observed characteristics. The results show if and which variables cause the largest impact on the shoppers' appreciations. In second instance, the categorical variable motivational orientation was added to examine the influence of this personal characteristic on the relation between appreciation of items and observed characteristics.

Interesting findings were that all motivational orientations prefer an outdoor location with a historical appearance in both the shape and material of the facade. Contrary to expectations utilitarian motivated consumers rated the historical facades and historical material of facades more positive than hedonic motivated respondents. The presence of greenery, furniture and music in shopping locations appeared to be appreciated by all motivational orientations. This is especially the case for hedonic motivated consumers which also preferred narrow streets, discrete shop windows and rate discrete advertisement signs more positive than utilitarian shoppers.

Multinomial Logit (MNL) models were estimated using the most appreciated location from the rank orderings provided by each respondent. A selection of the observed characteristics, based on the results of the decision tree analyses, was used as potential explanatory variables in the MNL model. This analysis showed which combination of observed characteristics contributed most to the respondent's first choice of favourite location and the respondent's first choice of favourite location concerning sphere. Although the explanatory power of the models is limited, some observed characteristics appeared to significantly influence the shoppers' preferences. For the selection of the favourite location, the distance to the nearest public transport stop, amount of fashion and luxury shops, daily shops and restaurants/leisure outlets, and the shape of the facades seemed to contribute significantly to this choice.

Concerning the most preferred location regarding sphere, the contributing aspects are the shape and colour of the facades, amount of light, background noise and width of the street. Taking the motivational orientation of the consumers into consideration in interaction with the observed characteristics, in choosing the favourite location the significant variable, according to the MNL analysis, appeared to be the shape of the facade. This value increases in the case of hedonic motivated consumers and decreases for consumers that are motivated both hedonic and utilitarian. The value shape of the facades for utilitarian consumers remains constant, thus of no influence in choosing their favourite location. The coefficients of the favourite location concerning sphere show that the characteristics have no significant interaction, therefore these characteristics do not depend on the motivational orientation of the consumer.

Finally, to improve the appreciation of inner-city shopping areas, shopping centre managers and developers should consider the aspects mentioned above in attempts to improve the experiential value of shopping locations. In short, use historic icons and buildings if present, strive to narrow shopping streets, provide a high number of fashion and luxury shops, implement greenery, furniture, music and make sure that the accessibility is good. The different motivational orientations show clear differences in the interpretation and appreciation of the examined atmospherics. Shopping centre managers and developers should take these differences into account.

CONTENTS

1. INTRODUCTION

1.1 BACKGROUND

Retail has long been an attractive asset class within the real estate sector and is perceived by some as 'a safe haven' due to the overall stable and relatively high rates of return (Wijnen, 2010). Vosters (2008) noted that shopping areas are important for the satisfaction of human needs and for this reason the quality of the space is determined by the presence and spatial location of shops. In this previous study Vosters (2008) also stated the structure of the Dutch retail market is relatively exceptional, almost nowhere one can find such an elaborated structure as in the Netherlands. This structure is the result of the continuing interference by the government and restrictive urban planning. However, the ongoing financial crisis, changing market conditions and the decline of consumer confidence are some of the current problems that stakeholders face. The demographic factors of a shrinking and ageing population in various Dutch municipalities will further have an increasing impact on the existing retail structure. Last but not least, the advent of the Internet as an additional sales channel for the retail trade seems to be unstoppable. The annual Multi-channel Monitor of the Hoofdbedrijfschap Detailhandel is one of the current studies which emphasizes this by showing a significant increase of the internet as a primary tool for orientation and purchasing products and services by consumers (HBD, 2011). However, the influence of the internet on actual online sales in the fashion branch is limited as stated in the Multi-channel Monitor.

FGH bank (2010) suggest that physical reorientation of the retail market is necessary to ensure a healthy shopping environment in the nearby future. The shopping facilities in the larger cities within the Netherlands have remained largely stable or have even increased in size for example in Amsterdam and Utrecht (FGH bank, 2012). This is because lots of people want to live in and around cities due the presence of universities as well as cultural and high quality services. Companies affiliated to the knowledge economy are therefore happy to settle there (de Zeeuw, 2012). Municipalities, developers, investors and retailers will have to develop a clearer vision for assuring the attractiveness of shopping areas. It is important that all the stakeholders involved should strive to optimize that goal. Shopping areas specifically should be more dynamic: they need to change from supply oriented to demand-oriented and thus consumer oriented. In addition to giving space to the retailers, the trick is to create an environment which feels like 'a place to be' with a good balance between tension and relaxation (NRW, 2011).

"If we can develop and design streets so that they are wonderful, fulfilling places to be – community-building places, attractive for all people – then we will have successfully designed about one-third of the city directly and will have had an immense impact on the rest" (Jacobs, 1995).

Currently there is a notion of a 'new' consumer, who is acting in an unexpected way as he is not consuming according to a rigid and traditional pattern, and wants to 'experience' and 'live to the max' as much as possible (Keizer, 2009). Laning and Vosjan (2011) stated that the consumer displays himself as a new type of customer, inspired by increased prosperity, mobility and knowledge, against the backdrop of increasing globalization. Common spending patterns are changing because consumers are acting more conscious with their money due to the ongoing financial crisis. The Dutch retail landscape is changing rapidly in both the supply and demand aspect because of these circumstances. Creating superior customer experience when shopping appears to be one of the primary objectives in today's retailing environment (Verhoef et al., 2009). Understanding the behavior of the highly dynamic consumer is therefore one of the key features in building a sustainable future for the retail market.

Early studies during the mid 20th century developed classifications of retail shoppers, in an attempt to extract shopping motivations from distinct "types"

of shoppers, such as the "economic," "personalizing," "ethical," and "apathetic" shopper (Stone, 1954). Since Tauber's article (1972) various researchers have investigated consumer shopping motivations and have identified a broad range of consumer shopping motivations. The results of Babin, Darden and Griffon (1994) demonstrate that the distinct hedonic and utilitarian shopping value dimensions exist and are related to a number of important variables. These two fundamental motivational orientations identified in the shopping-behavior literature are consistent with the fundamental motivational orientations identified in psychology (Kaltcheva and Weitz, 2006). The hedonic orientated consumers derive inherent satisfaction from the shopping activity itself while on the other hand the task orientated consumer engages in shopping out of necessity. But each consumer has his own perception and will admit that each shopping area has its own characteristics and qualities. This is probably because of the personal experience, mood and intention of the consumer. The atmosphere of a retail area is a powerful marketing tool for both attracting the consumer and influencing his behavior during shopping. Turley and Milliman (2000) note that there is a statistically significant relationship between atmospherics and shopping behavior. Based on their review article they conclude that the effect of the retail environment on consumer behavior is both strong and robust, and that it can be shaped to increase the likelihood of eliciting particular behaviors from shoppers. To date, relatively little is known about the influence of atmospherics and store environment on consumer behavior (Lunardo and Mbengue, in press). The motivational orientation or intention of the consumer visiting the shopping area probably plays a significant part in that valuation of atmospheric characteristics. In the case of branding or (re)development of a shopping area with a specific purpose these findings could provide a number of important variables that must be taken into consideration. Gaining an insight in which atmospheric characteristics of a shopping area play a role in its appreciation by motivational orientated shoppers is essential for various stakeholders.

1.2 PROBLEM DEFINITION AND OBJECTIVE

It is difficult to make consumer behavior tangible by doing research. Over the years various studies have led to a better understanding of consumers and their shopping patterns. Some of these studies showed that the motivational orientations are one of the most important variables in the decision making process. Changes in the Dutch retail landscape are necessary to keep up with social trends and developments. The relationship between the motivational orientation of consumers and the appreciation of atmospheric characteristics of a shopping area is probably very important.

The experiential value, or entertainment aspect of retailing, or 'entertailing', is increasingly being recognized as a key competitive tool that responds to threats like internet shopping (Arnold and Reynolds, 2003). Since experience is something personal, it is hard to define. In this study, it is used as a measure for the attractiveness of a shopping area based on interpretations and feelings provoked by the environment in relation with the consumers motivational orientation. A high experiential value leads to a positive shopping experience and the appreciation of the environment contributes to this experiential value. This study assumes that a positive appreciated aspect leads to a positive effect on the experiential value.

PROBLEM DEFINITION
In order to propose a research study which contributes to the knowledge of retail real estate with respect to atmospheric characteristics and consumer behaviour, the following problem definition has been formulated:

Which – and how do – atmospherics of an inner-city shopping area contribute to the experiential value of the consumer, differentiated by shoppers motivational orientation?

The problem definition is divided in the following research questions in order to provide a complete answer:

1. How can experiential value be explained?
2. Which motivational orientations underlie consumer behavior?
3. How can 'atmospherics' be defined to provide useful characteristics of the shopping area?
4. Which – and how do – atmospherics contribute to the experiential value?
5. What are the differences in experiential value between the motivational orientations?

OBJECTIVE

The objective of this study is: *The empirical determination of which atmospheric characteristics contribute to the appreciation of the inner city given the shoppers motivational orientation.*

1.3 SCHEMATIC RESEARCH REPRESENTATION

The research design (Figure 1.1) gives an overview of the contents of this study, divided into seven chapters. The study starts in Chapter 1 with the problem definition which is a result of the research motivation and formulates the objective and research questions. In Chapter 2 a literature review provides the theoretical background that functions as a foundation for the further study. This literature phase is a critical and in depth evaluation of previous studies which expands the knowledge about the particular research questions. Chapter 3 describes the methods and approach of the research. The study areas and the actual survey locations of this study are described in detail in Chapter 4. The role of the motivational orientation of consumers as moderator of the relationship between atmospheric characteristics and the experiential value (attractiveness) is assessed by means of a survey conducted in two inner-city shopping areas (Figure 1.2). The general survey data of the

Problem definition	Chapter 1
Theoretical background	Chapter 2
Research methodology	Chapter 3
Study areas and survey locations	Chapter 4
Description of the collected data	Chapter 5
Data analysis	Chapter 6
Conclusions and recommendations	Chapter 7

FIGURE 1.1 – RESEARCH DESIGN

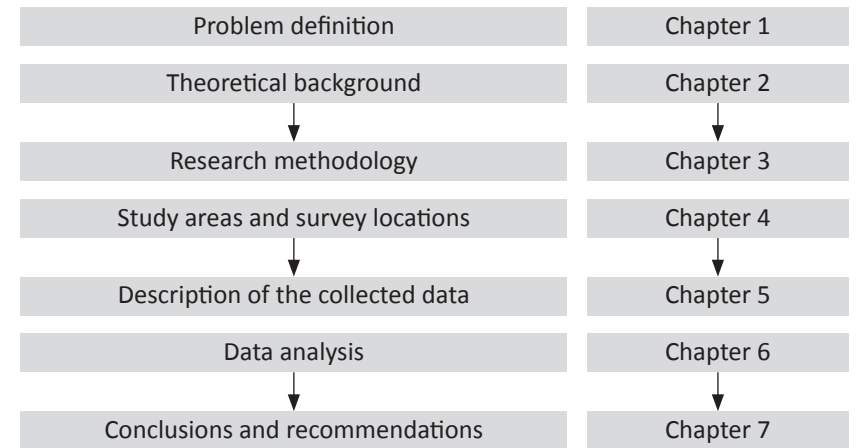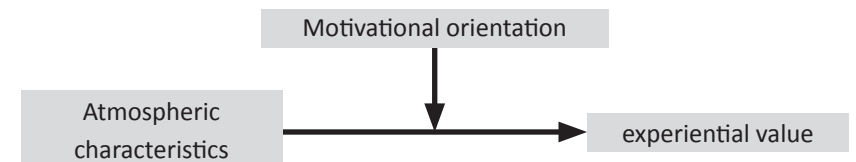

FIGURE 1.2 – CONCEPTUAL MODEL

respondents is described in Chapter 5. After the data is collected and recoded to create a useful dataset, the data analysis is performed and explained in chapter 6. After completing the data analyses, the results are translated into conclusions and briefly described in chapter 7. The final part of this study consists of the recommendations for further research.

2. LITERATURE REVIEW

This chapter will focus on the relation between the consumers motivational orientation and the atmospherics of a shopping area. By reviewing the literature of the particular topics in this chapter existing knowledge and findings contribute to situate the current study within the body of literature and provide answers to the research questions. Using academic literature will provide insight into; who the consumer is, consumer preferences and consumer motivational orientation. The next section describes where consumers shop and the relationship between consumers and the inner city shopping area. The last part is about the atmospherically characteristics of inner city shopping areas. Besides the literature review on atmospheric characteristics several interviews with experts have been conducted to enrich current literature findings and to possibly substantiate statements. This chapter results in a final list of atmospherically characteristics for further analysis.

2.1 CONSUMERS MOTIVATIONAL ORIENTATION

Shopping motivation has emerged as one of the key aspects in research on consumer behaviour and is therefore, till today frequently discussed (Wagner and Rudolph, 2010).

The field of consumer behaviour consists of three distinct activities: shopping, buying and consuming (Tauber, 1972). To improve the retail strategy decision-making of retailers shopper typologies are from the utmost importance. One of the first studies performed by Stone (1954) yielded four consumer types based on Chicago housewives. By conducting depth interviews with 124 female department store shoppers Stone was able to differentiate several distinct shopper types. In order to summarize the characteristics of each of the expressed answers brief sketches were made to cluster and filter the responses. This was a first attempt to extract shopping motivations from distinct "types" of shoppers, such as the "economic," "personalizing,"

"apathetic" and "ethical," shopper. Stone (1952) also argued that some shoppers are more involved in socializing rather than the actual buying of products. This study by Stone (1952) was an attempt to better understand the varying orientations toward the activity of shopping. Due to these early studies determinants of consumers shopping behaviour are revealed thus providing new insights in the consumer which could be useful in many new strategies of different stakeholders (Westbrook and Black, 1985).

Tauber (1972) conducted an exploratory study by in-depth interviews to determine the reasons why people shop. This widely cited study hypothesized that people's motives are a function of numerous variables, several of which are unrelated to the actual buying of a product or the need for services. This unrelated need is fulfilled by a variety of psychosocial needs that go beyond the acquisition of products or services. These general motives have been classified by Tauber (1972) into two main dimensions – personal and social motives. The personal motives according to Tauber (1972) are role playing, diversion, self gratification, learning about new trends, physical activity and sensory stimulation. On the other hand the social motives are social experiences outside home, communication with others having a similar interest, peer group attraction, status and authority and the pleasure of bargaining. Ever since Tauber's article (1972) numerous researches have been done on consumer shopping motivations by various researchers (Westbrook and Black, 1985; Arnold and Reynolds, 2003; Wagner and Rudolph, 2010; Arnold and Reynolds, in press).

The first systematic effort to derive various motivation dimensions which underlie the consumers' shopping activity was made by Westbrook and Black (1985). Based on an interview with 203 adult female department store shoppers seven dimensions of shopping motivation were identified: (1) Anticipated utility, (2) Role enactment, (3) Negotiation, (4) Choice

optimization, (5) Affiliation, (6) Power/ authority and (7) stimulation. The existing literature shows that two fundamental motivational orientations underlie the different shopping motives:

1. Utilitarian; task-related, efficient and rational;
2. Hedonic; subjective and personal, resulting in playfulness and fun.

These two fundamental motivational orientations identified in the shopping-behavior literature are consistent with the fundamental motivational orientations identified in psychology (Kaltcheva and Weitz, 2006). In order to measure and assess the consumers perception of both hedonic and utilitarian consumers scales were needed. The results of Babin et al. (1994) proved, based on the consumption experience of consumers when shopping, that the distinct hedonic and utilitarian shopping value dimensions exist and that they are related to a number of important variables. As noted by Kaltcheva and Weitz (2006) the hedonic orientated consumers derive inherent satisfaction from the shopping activity itself while on the other hand the task orientated consumer engages in shopping out of necessity. This lack of pleasure during the shopping experience for highly utilitarian orientated shoppers is frequently found in retailing research (Lunardo and Mbengue, 2009). Contrary to the utilitarian consumers the hedonic consumers seek hedonic experiences for stimulative and experimental qualities as approach motivation (Arnold and Reynolds, in press).

Because of the increasing importance of experience as a retailing strategy Arnold and Reynolds (2003) investigated the hedonic shopping motivations. In this study, based on exploratory qualitative and quantitative studies, they identified a six-factor scale of shopping motivations. These hedonic shopping motivations are: (1) adventure shopping, (2) gratification shopping, (3) value shopping, (4) social shopping, (5) role shopping and (6) idea shopping. Cox

et al. (2005) reassessed the pleasures of shopping and revealed that bargain hunting is one of the predominant activities when visiting brick and mortar stores. Bargain orientated shoppers are frequently described as cool and calculating economic shoppers in contrast to pleasure-driven recreational shoppers (Cox et al., 2005). An important contradiction between previous research done by Tauber (1972) and Westbrook and Black (1985) is that the findings of Cox et al. (2005) suggest that few shoppers enjoy the interaction with other shoppers. This interaction or social value is further researched by Rintamäki et al. (2006). The empirical evidence of this study supports a trichotomy of consumer value: hedonic, utilitarian and in particular, social value. This social value varies by day of week with a significant increase on Saturday (versus weekdays) when the store is more crowded (Rintamäki et al., 2006).

Consumers can be classified in various ways based on several characteristics. Existing research mainly distinguishes demographic and personal characteristics, behaviour and the above motivation as variables. The next section provides a literature review on different consumers groups .

2.2 CONSUMER GROUPS
Consumers are the starting point of the cash flow of the shopkeeper, the shop owner and the investor or bank. This emphasises the importance of knowing who the consumer actually is. Despite the fact that it is usually effective to design the shopping area according to the preferences of each kind of consumer, it is necessary to know who is visiting the shopping area and what the individual consumer's preferences are. Especially when considering aspects such as environmental atmospherics it is relevant to know which needs and expectations come with which type of consumer. The first section of this chapter is about consumers' characteristics and their motivational orientation.

In the early years, Stone (1954) made the first clustering of female department store shoppers using a questionnaire. This resulted in the following four shopper types. The economic shopper placed the greatest importance on price, quality, and variety when selecting a retailer. Personalizing consumers preferred patronizing local merchants because of the relationships they formed with their staff. The ethical consumers also preferred local merchants, but for a different reason. Instead of enjoying the personal attention elicited from smaller stores, these consumers felt a moral obligation to keep the local merchants in business. Apathetic consumers noted little interest in shopping, and seemed to be driven by convenience motives. Later research also focused on females, mostly in department stores, until Bellenger and Korgaonkar (1980) conducted a study among mixed-sex adult shoppers. This was the first study that mentioned recreational shoppers. More recent research often distinguishes hedonic and utilitarian motivated shoppers determined by Babin et al. (1994), mainly based on gender (Raajpoot et al., 2008; Chebat et al., 2005; Chebat et al., 2007; Jackson et al., 2010; Pentecost and Andrews, 2010), age (Angell et al., 2012; Jackson et al., 2010; Massicotte et al., 2011) and income (Allard et al., 2009; Mägi and Julander, 2005). People with a higher income tend to shop more utilitarian. Considering gender, females tend to be more hedonic, more loyal, more sensitive to the environment, more motivated by uniqueness seeking, assortment seeking, social interaction and browsing, and possess a higher level of impulsive buying. Summarizing the studies based on age, results in three generation groups, starting with builders and baby boomers, consisting of people born between 1922 and 1964. They designate security and accessibility of major importance for their shopping trip. People born between 1965 and 1979, known as generation X, appraise functional congruity above self-congruity (self congruence occurs where there is an increased degree of consistency between the ideal self and the actual self) and are more driven by impulsive buying than the older generation. The youngest generation, generation Y, is born between 1980

and 1995 and places self-congruity above functional congruity, scores higher on fashion fanship, attitude towards fashion and impulsive buying and does the most frequent purchases. However, this group does not spend more than the other generations. Generation Y people distinguish themselves by adding more value to self-esteem and interpersonal communication. Additionally, there are studies that mention the effect of shopping alone, with family or with friends and the effect on the hedonic value. Borges et al. (2010) claim that shopping with friends results in the highest hedonic value compared to shopping with family or alone.

2.3 SHOPPING CENTRE IMAGE

It is extremely interesting to include the consumer's mind-set toward shopping areas. Farrel (2003) argued in his study: "Shopping centers are designed to make money. But shopping centers only make money if they make sense to consumers, so the development of shopping centers begins with market research, the art of finding money that is not yet being spent". Insight in consumers' preferences can be the key to a successful retail project (Verma, 2007). Bitner (1992) analysed how consumers respond to a retail environment and noted that consumers can react to a retail store in a cognitive, emotional and biological way. Much research has been conducted into shopping centre preference. Concluding from these studies it can be said that various aspects within a shopping centre influence the consumer's preference for a shopping centre. Sit, Merrilees and Birch (2003) reviewed studies examining shopping centre variables affecting the shopping centre image (Dennis et al, 2001; Frasquet et al., 2001; Wong et al, 2001; Bell, 1999; Wakefield and Baker, 1988; Fin and Louviere, 1996; Ahn and Hosh,. 1989; Wee, 1986; Weisbrod et al, 1984; Gautschi, 1981; Nevin and Houson, 1980; Howell and Rogers, 1980, Bellenger et al, 1977). The pioneering retail store image study was conducted by Martineau (1958, p47), who defined the concept as: "... the way in which (..) retail (..) is interpreted in the shopper's

mind partly by its functional qualities and partly by an aura of psychological attributes."

The fact that numerous researches used the study of Sit et al (2003) as foundation for their own research, made it outstandingly interesting to use conclusions of the research. On behalf of their research Sit et al (2003) used fourteen studies to conduct an overview of image variables in shopping centre studies. They clustered all retail image variables into the following seven groups:

Merchandising: Assortment, quality, pricing and styling or fashion.
Accessibility: Ease of getting in and out and ease of navigating within the shopping area.
Services: Personal services, ambulance, escalators and amenities (restrooms etc.).
Atmospherics: Ambience, colour, décor, music and layout.
Entertainment: Special events (Santa Claus etc.) and specialty (movie theatres etc.).
Food: Food courts, cafes and restaurants.
Security: "Safe place to be".

Generally, the literature reveals four dominant groups in shopping centre image studies: merchandising; accessibility, services and atmospherics. Also called the 'big four' groups of shopping centre image. Sit et al. (2003) added three group's to these big four: entertainment, food and security. Not all groups are fully understood yet.

Much research has been done into shopping centre image attributes. Wong et al (2012) established in their research into shopping motives, store attributes and shopping enjoyment among Malaysian youth that there is still a lack of

defined variables which contribute to the physical aspects of shopping areas. Especially, there is a lack of studies into atmospherics. Atmospherics have been analysed on a micro level for their influence on buying behaviour and sales numbers, but the experience atmospherics can create has hardly been analysed (Quartier, Christiaans, Van Cleempoel, 2008). It has been shown that atmospherics actually contribute to consumer experience. Dorovan & Rossiter's (1982) results indicate that store atmosphere influences emotional states such as pleasure, arousal, dominance, and submissiveness and consequently blocks or elevates the consumers' mood and shopping motive. In a similar research on retail atmospherics, Gardner and Siomkos (1990) found that store atmospherics such as lighting, layout, displays, fixtures, colours, textures, sounds, and fragrance affect consumer product perception. Further, atmospherics have been reported to stimulate consumer excitement at a shopping mall (Wakefield and Baker, 1998). Evaluating the consumers' perception of atmospherics variables can craft retail store image, enhance customer value and increase consumer experience.

2.4 ATMOSPHERICS

As described in the above section atmospherics is an attribute which significantly influences the consumers' perception about a specific shopping area. This section will specify the atmospherics in more detail. The first part is about how atmospherics is defined. The second part zooms in on the topic and indicates the different variables of atmospherics leading to a list of inner city shopping area aspects.

Atmospherics is defined as an important environmental cue that provides consumers with an indication of the quality of a shopping mall and includes items such as ambience, colour, décor, music and layout (Howell & Rogers, 1980; Sit, Merrilees & Birch, 2003; Howel, 2005). A distinction should be made between research in retail environments on a micro level and research

on a molar level, based on the theory of Hull and Harvey (1989). They define micro characteristics as the physical characteristics of the environment that create a particular atmosphere, such as colour, music, light and sound. Molar characteristics are defined as "emergent properties" that result from the sum of the micro characteristics, as atmosphere is. So far not much research has focused on the influence of molar characteristics on consumer behaviour because of the difficulty of analysing a sum of characteristics, which are synergetic and holistic.

Various researches have used different atmospherics to determine shopping center attraction (Alqahtani, 2011), preference (Borgers and Vosters,2010), experience (Farrag, El Sayed and Belk, 2010; Ibrahim & Ng, 2002; Tsjai, 2009), ambience, (Ragagopal, 2009), image (Chebat, Sirgy & Grzeskowiak, 2010; Sit et al, 2005), enjoyment (Lee, Ibrahim and Hsueh-Shan, 2005), or excitement (Wakefield & Baker, 1998). Both in academic literature and in graduation theses many variables have been found. Turley and Milliman (2000) note that there is a statistically significant relationship between atmospherics and shopping behaviour. Based on their review article they conclude that the effect of the retail environment on consumer behaviour is both strong and robust. The difficulty is to compare the different studies regarding variables of atmospherics. Besides, different variables are named, dimensioned and understood differently as well. Therefore the different variables that have been found during the literature review are subdivided under homonymous variables. A selection of the most frequently named and/or apparent influential variables are listed, this resulted in a list of 35 variables. This list of atmospheric characteristics has been summarised in Table 2.1.

2.5 EXPERT INTERVIEWS

Besides the literature review on atmospheric characteristics several interviews with experts have been conducted to enrich current literature findings and to possibly substantiate statements which results from the later data analysis. These open-end in-depth interviews were structured according to a number of sub-questions. The open-end method allows the interviewer to deeply explore the expert's point of view by specific supplementary questions resulting in a semi-structured interview. Because of this semi-structured format, only key questions are asked in line with the current study. Additional questions are brought up based on specific answers of the experts during the interview, which results in a flexible interview. The answers provide more information about the current state of the Dutch retail sector and the possible influence of physical characteristics of shopping areas on consumer

TABLE 2.1 - ATMOSPHERIC CHARACTERISTICS

CHARACTERISTICS

• Indoor/ Outdoor	• Flooring	• Amount of light
• Accessibility	• Furniture	• Smell
• Advertisement	• Greenery	• Shape facades
• Air conditioned	• Height buildings	• Shop windows
• Architecture	• Location	• Size of the centre
• Background noise	• Material pavement	• Social Interactions
• Bars and Restaurants	• Material facades	• Spaciousness
• Colour pavement	• Music	• Temperature
• Colour facades	• Tidiness	• Traffic Flow
• Crowdedness	• Other visitors	• Width street
• Decoration	• Parking	• Width – Height ratio
• Entrances	• Shops	

experience from the experts' point of view. The general interview consists of the following parts:

- brief description of the motive and purpose of the study;
- brief description of the motive and purpose of the interview;
- several open questions about the current state of the Dutch retail sector;
- and several questions about the influence of physical characteristics of shopping areas on consumer experience.

The interviews with experts were mainly conducted at Multi Corporation, one of the largest retail developers in Europe, as part of this graduation project. Multi Corporation consists of many disciplines within the field of retail development. In cooperation with Herman Kok, Associate Director Research & Concept International Markets and mentor during this graduation project, a selection was made of experts both within Multi Corporation and other companies or organisations Interviews were conducted with several retail experts from Multi Corporation, WPM Groep and BRO. In addition, some of these experts are also committee members of certain interest groups. An overview of the interviewees and interview can be found in appendix A.

THE INTERVIEWEES OPINIONS

The interviewees stated among other things that the quality of the environment is essential in constructing lasting consumer experience within shopping areas. Many of the historical shopping areas possess these positive characteristics contrary to more recent developments in and around the main shopping areas. Physical reorientation of the retail market is necessary to ensure a healthy shopping environment in the nearby future with consumer needs functioning as a starting point. The consumer experience of a shopping area will depend, besides the quality of the environment, on the atmosphere, cosiness, tenant mix, accessibility and parking. This experience is different for each of the consumers visiting a shopping area.

Based on their experience in retail development, Multi Corporation applies atmosphere influencing characteristics intuitively as emphasised by the interviewees. There are three categories to be distinguished; hardware stores (purposeful purchase behaviour), supermarkets (combination of targeted shopping and a certain degree of 'experience shopping') and inner cities. The third category is focused on shopping and more entertainment-orientated. People can shop in an inner city without purchasing goods, and still be satisfied about their shopping trip. Small streets are preferred in case of an indoor shopping area and wider streets in an outdoor situation. Traditionally, the height is two or three storeys with a width of eight to ten metres. The application of a middle section and two sidewalks may give the impression that (car) traffic may be expected. The following atmospherics (or physical characteristics) are relevant within a retail environment:

- Store supply and variation;
- Interrupting the shops with leisure or restaurants;
- Appearance, indoor or outdoor;
- Traffic, only residents, cars, bicycles;
- Walking distance to parking;
- Dimensions;
- Facade variation and pavement (materials and structure) ;
- Other visitors.

Whatever the consumers' orientation, everyone is aware of the fact that an area is historic or not. For a developer or designer, it is important to start with the historic icons in the area. Dimensions play a great role in the experiential value. It is necessary to create an 'exciting' area with 'sense of place'.

TABLE 2.2 - FINAL ATMOSPHERIC CHARACTERISTICS

CHARACTERISTICS

• Accessibility	• Colour pavement	• Greenery	• Height buildings
• Shops	• Amount of light	• Furniture	• Width – Height ratio
• Restaurants/ leisure	• Background noise	• Shop Windows	• Crowdedness
• Shape of facades	• Music	• Advertisement Signs	• Other Visitors
• Material facades	• Smell	• Tidiness	• Colour of light
• Material pavement	• Indoor/ outdoor	• Width street	• Elevation
• Colour facades			

During the interview (Appendix A) the experts were asked among other to rank the atmospheric characteristics of table 2.1 based on their experience within the Dutch or European retail sector. By doing so, the most important atmospheric characteristics of the list of 35 most frequently named variables in academic literature, yielded 25 atmospheric characteristics for further analysis (Table 2.2)

2.6 CONCLUSIONS
Shoppers are the starting point of the cash flow of the retailer, the shop owner and the investor or bank. By reviewing the literature of the particular topics in this chapter existing knowledge and findings contribute to situate the current study within the body of existing literature. Consumers can be classified in various ways according to the existing literature on consumers and consumer behaviour. Classifications of consumers are mainly based on motivation and personal characteristics. Much research is conducted to determine the reasons why people shop. Two fundamental motivational orientations underlie different shopping motives:

1. Utilitarian; task-related, efficient and rational;
2. Hedonic; subjective and personal, resulting in playfulness and fun.

The specific hedonic shopping motivations are important because of the increasing focus on experience as a retailing strategy. Literature suggest that predominant hedonic shopping motivations consist of: (1) adventure shopping, (2) gratification shopping, (3) value shopping, (4) social shopping, (5) role shopping and (6) idea shopping.

Much research has been done into shopping centre attributes that influence shopping centre image. These studies revealed that there are four dominant groups: merchandising; accessibility, services and atmospherics, also called the 'big four'. Atmospherics are an important group that significantly influences the consumer perception about a specific shopping area. Understanding the contribution of atmospherics of a shopping area is important because of their relation with consumer experience of the given area. Therefore a list of 35 most frequently named variables have been summarised out of academic literature and graduation theses.

Besides the literature review on atmospheric characteristics several interviews with industry experts have been conducted to enrich current literature findings. The interviewees pruned the list with 35 most important atmospheric characteristics to a list of 25 for further research.

3. RESEARCH METHODOLOGY

The literature study in the previous chapter revealed that consumers can be classified according to personal characteristics and their motivational orientation. Furthermore, a list of characteristics affecting the sphere in shopping areas was compiled.

In this chapter, the methodology for the remainder of this research project will be described. Subsequently, the necessary data, the way of data collection, the locations of data collection, the process of data collection and the analysis methods will be explained. The purpose of these steps is to eventually draw conclusions regarding the most important physical characteristics affecting the shoppers' evaluation of the shopping environment, possibly in interaction with the shoppers' motivational orientation.

3.1 QUANTITATIVE RESEARCH

Because of the exploratory character of this study, it was decided to measure shoppers' preferences regarding the atmospherics at different shopping locations. Two types of measurement were implemented: Likert scales and choices 7-point Likert scales ranging from very low to very high will be used to measure a shopper's appreciation for each of the 25 items on the list of atmospherics. For each item scoring very low or very high, the respondent will be asked to verbally explain this score. By means of a choice, shoppers have to select the most preferred shopping location from a set of shopping locations. For each respondent, this set of locations must contain at least two familiar shopping locations. A survey is used to collect this data from a large number of respondents. A survey is the most common form of quantitative research. The survey (Appendix B) is divided into several parts as shown in Figure 3.1.

1. Shopping motivation as a direct question, and the determination of the shopping motivation using the list of Babin et al. (1994). This first part
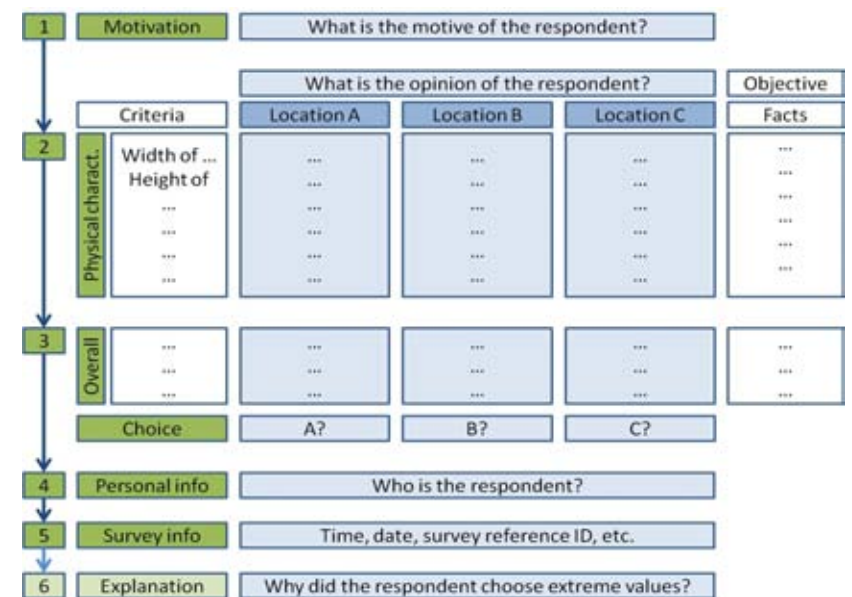
FIGURE 3.1 - OVERVIEW SURVEY.

determines whether the shopper's motivation is utilitarian, hedonic or a combination of these two main motivational orientations.

2. This part describes the aspects concerning the 25 atmospherics characteristics as derived from the literature review and the expert interviews.

3. The third part of the survey is intended to give an overall appreciation and to compare the survey locations with each other. Also the choice of the most preferred location is elicited in this part. There is a distinction between the general appreciation and the appreciation concerning the sphere.

4. This part is indented to provide information about the respondent, for instance; age, gender, household composition and means of transportation.

5. General survey information.
6. The last part is added report reasons for extreme values in the appreciation of the individual characteristics of the locations. For each item scoring very low or very high, the respondent is asked to explain this score. This part was separated from part 2 to prevent that respondents do not select extreme values to reduce the completion time.

Because respondents have to compare and choose from multiple shopping locations, it was decided to select a number of locations in an inner city shopping area. Shoppers visiting the inner city are probably familiar with multiple locations within the inner city shopping area. To increase variation among the locations, two inner city shopping areas were selected. Physical characteristics of these locations were determined as well (see chapter 4).

The data will be analysed in multiple ways and is further described in Chapter 6. First, the data will be described by means of descriptives. Next, factor analyses, decision tree analysis and choice models will be used. Especially the method of decision tree analysis is an explorative method. The finding of this method may guide the process of estimation the choice models.

3.2 STUDY AREAS AND PHYSICAL CHARACTERISTICS

STUDY AREAS
Before conducting the actual study, it is important to define the study area. The main requirement regarding the selection of inner city shopping areas, is to include different shopping environments in order to investigate the relationship between physical or physical characteristics and the perceived experience by consumers shopping in those environments. Both historical and modern environments are taken into consideration to enable measuring differences between the intrinsic attraction of historical vs. modern

environments (CRS Group, 2012). The inner city shopping areas or study areas were chosen according to the following criteria:

-   located in the Netherlands;
-   more than 100.000 inhabitants living in the city;
-   similar social-cultural characteristics;
-   contain both historical and non-historical shopping locations.

FIGURE 3.2 - OVERVIEW STUDY AREAS.

Based on these criteria, the historic city centers of Maastricht and 's-Hertogenbosch were selected after careful consideration of different Dutch cities (Figure 3.2). Within the historic inner city shopping area of each of the two cities, four mutually different survey locations were selected based on criteria as a historical vs. modern environment and appearance. The study areas and survey locations will be further described in detail in Chapter 4.

PHYSICAL CHARACTERISTICS
25 Physical characteristics for further research were selected as described in Chapter 2. These physical characteristics are assumed to affect the atmosphere in the shopping street and will serve as independent variables. These physical characteristics have been inventoried by the team of master

students involved in this project. The scores of the 25 physical characteristics have been determined as objectively as possible. The scores of the non-objective measurable variables are further described in appendix D. Because the crowdedness and the weather vary during the day, values were given during the actual surveys. The eventual value options per survey location of both Maastricht and 's-Hertogenbosch are reported in Chapter 4.

3.3 THE SURVEYING PROCES

DATES AND TIMES
The dates and times are chosen considerately because the aim was to conduct the survey on regular days Wednesday till Friday. Public holidays, late-night shopping days and other day events are avoided. Because of the social security aspects, late-night shopping days are not relevant and therefore avoided. Saturdays are left out because of the supposed high number of recreational shoppers (Rintamäki et al., 2006).

To gain a representative result, the surveying takes place in each of the two cities from Wednesday to Friday. In Table 3.1 an overview is given of

TABLE 3.1 - OVERVIEW OF SURVEYING DAYS

LOCATION	DATE	TIME-FRAME
Maastricht	4 juli	10:30 - 17:00
Maastricht	5 juli	10:00 - 16:00
Maastricht	6 juli	10:30 - 16:00
's-Hertogenbosch	11 juli	11:00 - 16:00
's-Hertogenbosch	12 juli	11:30 - 16:00
's-Hertogenbosch	13 juli*	-

*   As result of bad weather conditions no surveying was done.

the surveying days in this study. The time frame comprises the almost entire duration of the opening hours. The original plan for the surveying period was to comprise six days. However, due to the bad weather conditions in 's-Hertogenbosch on Friday 13 juli, it was decided to skip this survey day. In determining the survey days local markets are not taken into account in both Maastricht and 's-Hertogenbosch. Because the main goal of the study is to establish which atmospheric characteristics determine the attractiveness of the inner city shopping area, this will not affect the results.

THE SURVEYORS
During the five surveying days, several surveyors conducted the survey. These surveyors rotated according to a prearranged schedule over the survey locations so that they are constantly occupied. This schedule had also been drawn up for stating at what time the surveyor surveyed the location. Several days before the actual survey, the surveyors were instructed by means of a manual to ensure a trustworthy surveying process on the survey locations and an appropriate approach of the shoppers (Appendix C). There was a minimum of two surveyors on each location, mostly classmates and friends.

The surveyors were instructed to select the respondents randomly. The reason was to create a representative sample of all ages, genders and other personal characteristics. Each surveyor was instructed to introduce himself/herself as a student of Eindhoven University of Technology who is conducting a survey on behalf of a graduation research project. When the respondent was willing to participate, the surveyor completed the survey list together with the respondent. The surveyor clarified the questions when needed but left the respondent responsible for the exact choice of the check boxes.

When the respondent refused to participate, the non-response questions were estimated by the surveyor and noted on the therefore prepared form.

This information was meant for validation. The following information was required: (estimated) age, gender and group composition.

3.4 CONCLUSIONS

Because of the exploratory character of this study, it was decided to measure shoppers' preferences regarding the atmospherics at different shopping locations. Quantitative research by means of a survey is the most appropriate method to obtain the required data. A survey is used to collect this data from a large number of respondents. A survey is the most common form of quantitative research.

Based on these criteria, the historic city centres of Maastricht and 's-Hertogenbosch were selected after careful consideration of different Dutch cities. Within the historic inner city shopping area of each of the two cities, four mutually different survey locations were selected based on criteria as a historical versus modern environment and appearence.

The data will be analysed in multiple ways. First, the data will be described by means of descriptives. Next, factor analyses, decision tree analysis and choice models will be used. Especially the method of decision tree analysis is an explorative method.

The dates and times are chosen considerately because the aim was to conduct the survey on regular days Wednesday till Friday. Public holidays, late-night shopping days and other day events are avoided. The original plan for the surveying period was to comprise six days. However, due to the bad weather conditions in 's-Hertogenbosch on Friday it was decided to skip this survey day.

4. STUDY AREA AND SURVEY LOCATIONS

Before conducting the actual study it is important to define the study area. This chapter will describe the study area and survey locations in detail for both the historic inner city shopping areas of Maastricht and 's-Hertogenbosch. First both cities will be compared by social-demographic, historic and general shopping characteristics. Within each of the two historic inner city shopping areas four mutually different survey locations were selected of which two historical and two modern. As previously discussed the physical characteristics or independent variable of each of the survey locations are inventoried. The next chapter 'description of the collected data' will summarise the personal characteristics of the respondents that participated in the survey.

4.1 STUDY AREAS

Generally the shopping areas within a city can be divided into two groups, namely historical and systematically developed locations in a shopping area. The inner city area is normally the oldest part of a city because of the expansion over the years from the city centre. These two groups of streets, along with the rest of the city are shaped as a result of because of events or influences during the long history of the actual city. During the French occupation of Holland (1795 to 1813), for example, the architecture was influenced by the so-called Lodewijk styles. Given the problem definition of this study several survey locations, both historical and recently developed, will be consideral in order to answer the question whether atmospheric characteristics influence the experiential value on the locations. To limit the influence of several variables such as demographics and urban context the inner city shopping areas of the Dutch cities of Maastricht and 's-Hertogenbosch have been chosen by a number of premises which have been previously described in Chapter 3. These two cities have a comparable, highly developed, regional retail function and are, moreover, the provincial capitals of Limburg and Noord-Brabant respectively. The most important demographic characteristics of both cities are shown in Table 4.1. These demographic characteristics show

that the cities are fairly comparable. When looking the educational level of the students, however, they differ significantly. The educational level of the students is much higher in Maastricht which can be seen in both the number of university students and the household size compared to 's-Hertogenbosch. These household size levels show, in combination with the number and educational level of the students, that Maastricht is comparable with the typical Dutch University city of Groningen (1,68).

Based on information that is provided by Locatus as well as information collected from a expert interviews, several survey locations within the study areas of Maastricht and 's-Hertogenbosch were chosen. Locatus is a company

TABLE 4.1 - DEMOGRAFIC CHARACTERISTICS OF THE STUDY AREAS (CBS, 2010a; CBS, 2010b).

CHARACTERISTICS	MAASTRICHT	'S-HERTOGENBOSCH
Inhabitants	118.533	139.607
Natives (%)	76,3	80,7
Immigrants (%)	23,7	19,3
Pressure per 100 persons aged 20-64	58,2	57,2
Green pressure (≤ age 19)*	29,6	35,2
Gray pressure (≥ age 65)*	28,6	22,0
Household size	1,87	2,12
Rented homes (%)	48	41
MBO students**	3154	3793
HBO students**	4184	4012
University students**	7336	1191

* The ratio between the number of persons within the green or gray pressure compared to the people in the 'productive' age 20-65 years.

* * Dutch educational level

that collects up-to-date information about shopping and consumer-oriented- and service related companies throughout the Benelux. Information like current facts and figures, sub-centers, foot fall, location segments, number of shops and branches related to shopping have provided a clear picture of facilities and diversity of shops for both cities and the survey locations in particular. The reason for the differentiation between historical and non-historical is that historical inner cities already possess attraction due to the experience that the historical environment evokes (CRS Group, 2012).

4.1.1 GENERAL DESCRIPTION MAASTRICHT

The history of Maastricht began when the Romans built a settlement near a ford in the river. The name is derived from Mosae Trajectum, the place where one could cross the river Meuse. The settlement grew into a walled castellum monitoring the crossing by means of a reinforcement (Kunsttrip, 2012). Maastricht has endured many sieges because of the strategically significant crossing of the river Meuse. Dutch, Spanish and French armies have often stood at the gates of Maastricht. In 1795 the occupiers took fairly radical measures: Maastricht is to be the capital of a French province, called 'Département de la Meuse Inferior' (Department of Lower Maas). After the fall of Napoleon Belgium and the Netherlands form a kingdom under King William I. After a nine-year struggle (1830-1839), a separation took place. Because of the interference caused by General Dibbets, the city of Maastricht remained part of Holland (Kunsttrip, 2012). Nowadays Maastricht is a relatively small city with approximately 122,000 inhabitants and a surface area of less than sixty square kilometres. It is a city with a metropolitan international atmosphere. Dutch, French and German in addition to the 'Maastricht's' dialect are the vehicular languages. The city is rich in culture, history, monuments, folklore and traditions. Annually more than 2.6 million tourists visit the city. Opposite the static, cultural and historical context of Maastricht are the dynamics of the current time, against the monumentality, vibrant city (Deckers, 2005).

FIGURE 4.1 - OVERVIEW SURVEY LOCATIONS AND MAIN PARKING FACILITIES MAASTRICHT

FIGURE 4.2 - OVERVIEW SURVEY LOCATIONS AND MAIN PARKING FACILITIES 'S-HERTOGENBOSCH.

4.1.2 GENERAL DESCRIPTION 'S-HERTOGENBOSCH

The history of 's-Hertogenbosch began in 1185 when Duke Henry I of Brabant, first Duke of Brabant, who possessed a large estate in nearby Orthen, founded the city of 's-Hertogenbosch. In order to protect the interest of the Duke of Brabant against the Counties of Guelders and Holland, the city was conceived as a fortress town (Holland History, 2012). In the beginning the fortress city was from no bigger than the central triangular market square. The earliest walls used to surround this square. The original medieval structure is largely retained till the present-day. Throughout the centuries, 's-Hertogenbosch successfully fought off attacks from Holland and Gelderland, as well as from the far north and the south, which was under the control of the Spanish population (Den Bosch, 2011). The city grew to become the second largest after Utrecht, with around 20,000 to 25,000 inhabitants at the beginning of the 16th century. In this flourishing period, one of the most famous sons of 's-Hertogenbosch was born, Hieronymus Bosch (1450-1516). Bosch was one of the greatest Renaissance painters in Northern Europe. (Holland History, 2012). In 1815 's-Hertogenbosch became the political and cultural capital of Brabant (Den Bosch, 2011). Nowadays the late Gothic St. John's Cathedral, the classical city hall, the many winding streets with warehouses and merchants houses and the oldest brick house in the Netherlands 'The Moor' recall past time.

4.2 SURVEY LOCATIONS MAASTRICHT

This paragraph describes the survey locations that are chosen for the historic inner city shopping area of Maastricht. All of the survey locations are mutually different. The historical locations in Maastricht are the Maastrichter Brugstraat and Stokstraat. Entre Deux and Mosea Forum are the two contemporary locations in Maastricht. The survey locations are confided for analysis to the actual length of the street.

1. MAASTRICHTER BRUGSTRAAT

The Maastrichter Brugstraat is probably one of the oldest streets of Maastricht and is adjacent to the famous 13th century stone arch Sint Servaas bridge which crosses the river Meuse. Throughout the centuries, the Maastrichter Burgstraat as functioned as the main shopping street of Maastricht.Due to the many historic buildings, this street has nowadays a boulevard-like atmosphere with lots of greenery. This particular survey location is therefore, designated as a historic shopping location. The Maastrichter Brugstraat is part of the inner shopping area, one of the subcenters of the inner city shopping area of Maastricht, which can be seen in appendix E1. Information provided by the Locatus Explorer shows that the Maastrichter Brugstraat is a high traffic location, which means that many shoppers pass through this location (Appendix E2). Based on this traffic Locatus rated the Maastrichter Brugstraat as an A2 location (Appendix E3).

Retail offer

The main shopping segment in the Maastrichter Burgstraat is 'Fashion and Luxury' see Table 4.2. The Maastrichter Brugstraat is characterized by high street retail brand stores. Some examples of these stores are: Tommy Hilfiger, Van Lier, Hugo Boss, Villeroy & Boch, Lacoste, Cavallaro and McGregor Shop. An overview of the available facilities for Maastricht is given in appendix E4.

Accessibility and parking

Because the Maastrichter Brugstraat is situated in the inner shopping area of Maastricht there is a restriction on car use in and around this particular area. The overall accessibility of the location is quite good because of the many underground parking spaces and the main train station of Maastricht that is located in the vicinity. This train station is located on the other bank of the river Meuse which can be crossed the Sint Servaas bridge.
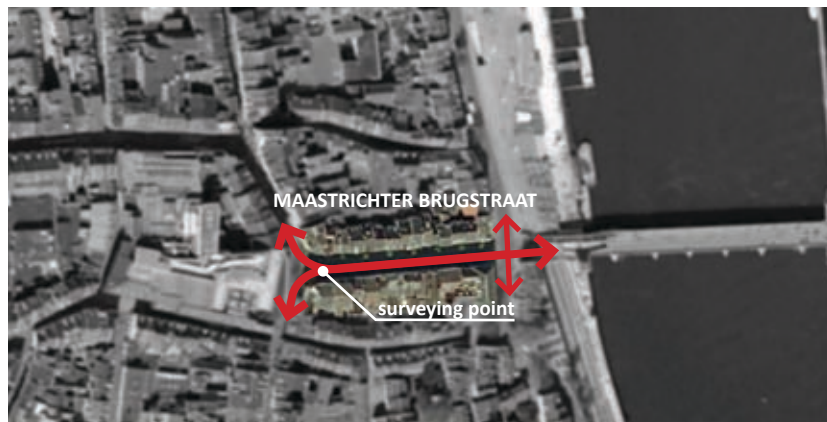
TABLE 4.2 - MAASTRICHTER BRUGSTRAAT (LOCATUS EXPLORER, 2012).

CHARACTERISTICS	MAASTRICHTER BRUGSTRAAT	
FACILITY OFFER	(No.)	(%)
Retail	26	90%
Leisure	2	7%
Other	1	3%
Vacancy	0	0%
Total	29	100%
RETAIL OFFER	(No.)	(m²)
Daily	1	53
Fashion and luxury	22	2711
Leisure time	0	0
In and arround the house	2	150
Other	1	30
Total	26	2944
LEISURE OFFER	(No.)	(%)
Café - restaurant	1	50%
Fastfood	1	50%
Total	2	100%

FIGURE 4.3 - MAASTRICHTER BRUGSTRAAT.

2. STOKSTRAAT

The Stokstraat is the main street of the Stokstraatkwartier, a neighbourhood in the inner city of Maastricht, and has a long history back to the days of the Romans. The Stokstraatkwartier was built in the 17th and 18th century and was a true marketplace. In the second half of the 20th century an extensive restoration transformed the Stokstraat from a working class neighbourhood to a new character: a shopping area with prestige and allure. The cobblestone pedestrian lane frequently used in the pavement of early streets emphasises the historic appearance. Nowadays, the location is the prime shopping location of Maastricht with many historical buildings and atmospheric aspects. The Stokstraat is part of the inner shopping area, one of the subcenters of the inner city shopping area of Maastricht, which can be seen in appendix E1. Information provided by the Locatus Explorer shows that the Stokstraat is a low traffic location (Appendix E2). Based on the this traffic Locatus rated the Stokstraat as a B2 location (Appendix E3).

Retail offer

The main shopping segment in the Stokstraat is 'Fashion and Luxury' see Table 4.3. In appendix E4, an overview of the facility offer is given for Maastricht. The Stokstraat is characterized by high-end retailers, a chic atmosphere and historic buildings in a particularly narrow street. Here you will find true quality shops, including the top of the class fashion boutiques. Some examples of these stores are: Kiki Niesten, Stalman & Brunswijk, Cristel Marcellis and Olivier Strelli. These specific retailers attract a specific upper class audience.

Accessibility and parking

The accessibility and parking aspect for the Stokstraat is quite similar to that of the Maastrichter Brugstraat. This is because the Stokstraat is in fact a side street of the Maastrichter Brugstraat, but with a different physical environment.

TABLE 4.3 - STOKSTRAAT (LOCATUS EXPLORER, 2012).

CHARACTERISTICS	STOKSTRAAT	
FACILITY OFFER	(No.)	(%)
Retail	28	74%
Leisure	2	5%
Other	7	18%
Vacancy	1	3%
Total	38	100%
RETAIL OFFER	(No.)	(m²)
Daily	0	0
Fashion and luxury	25	2022
Leisure time	0	0
In and arround the house	2	115
Other	1	45
Total	28	2182
LEISURE OFFER	(No.)	(%)
Café - restaurant	1	50%
Café	1	50%
Total	2	100%

FIGURE 4.4 - STOKSTRAAT.

3. ENTRE DEUX

Shopping Centre Entre Deux is located between the squares the Vrijthof and the Markt in the inner city shopping area of Maastricht. The Entre Deux derives its name from its location between the two squares, the French translation means 'between two'. Multi Vastgoed, in corporation with 3W, transformed the old neglected shopping centre enclosed by several historic buildings, into an elegant shopping district (2006). Entre Deux was designed by architect Arno Meijs as a post non-historical contemporary shopping location. In 2008, the Entre Deux received the highly coveted ICSC European Shopping Centre Award 2008 from the International Council of Shopping Centers (ICSC). Information provided by the Locatus Explorer shows that the Entre Deux is a fairly high traffic location (Appendix E2). Based on the this traffic Locatus rated the Entre Deux as a B1 location (Appendix E3).

Retail offer

The retail offer of the Entre Deux is mainly based on shopping in the branch 'Fashion and Luxury' see Table 4.4. Some examples of the stores in the diverse middle class segment are: Jack and Jones, H&M, Men at Work, Zara, New Yorker, Geox and Bjorn Borg. Besides this there are some shops in the branch leisure (vrije tijd) such as: Cadeaux and Intertoys. An overview of the available facilities for Maastricht is given in appendix E4.

Accessibility and parking

Because of its central location between the two main squares of Maastricht with the limited walking distance from the underground parking facilities the overall accessibility of this particular location is very good. Because this location is situated in the inner city there is also restricted car use. The main entrances of the complex are Domicanerkerkplein and Spilstraat.

surveying point

ENTRE DEUX

reference: AMA-group
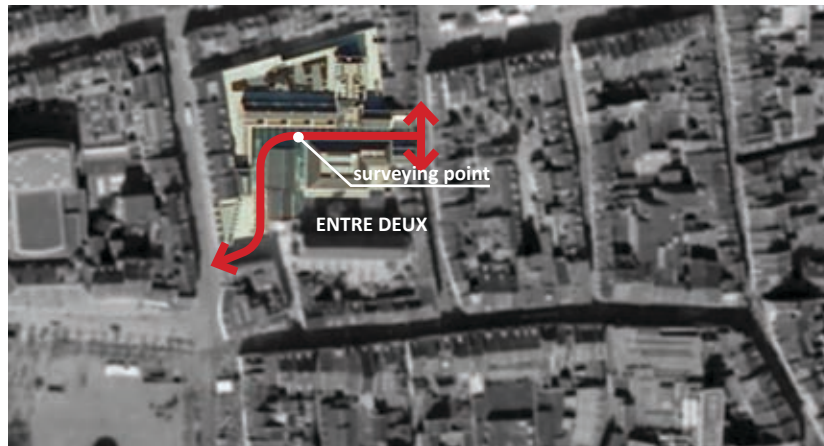
TABLE 4.4 - ENTRE DEUX (LOCATUS EXPLORER, 2012).

CHARACTERISTICS	ENTRE DEUX	
FACILITY OFFER	(No.)	(%)
Retail	22	71%
Leisure	1	3%
Other	1	3%
Vacancy	7	23%
Total	31	100%
RETAIL OFFER	(No.)	(m²)
Daily	1	36
Fashion and luxury	18	6454
Leisure time	3	674
In and arround the house	0	0
Other	0	0
Total	22	7164
LEISURE OFFER	(No.)	(%)
Restaurant	1	100%
Total	1	100%

FIGURE 4.5 - ENTRE DEUX.

4. MOSAE FORUM

The Mosae Forum shopping area (2007) is a recent development of project developer 3W and forms a passage way to the centre of Maastricht by the creation of a new shopping and residential area. The development was based on three important principles. (1) Expansion of the core shopping area with both large, crowd-drawing shops and small specialists, (2) restyling of the banks of the river Meuse and (3) a new workplace for the Maastricht municipal officials (Arcadis, 2012). The shopping center consists of two parts. The southern part, designed by architect Bruno Albert of Liege, is partly integrated with the existing buildings. The northern building part, designed by Architect Jo Coenen & Co. Mosae Forum is described as a contemporary shopping location. Information provided by the Locatus Explorer shows that the Mosae Forum is a fairly low traffic location (Appendix E2). Based on this traffic Locatus rated the Mosae Forum as a B2 location (Appendix E3). This is explainable because the Mosae Forum is located at the edge of the inner shopping centre of Maastricht.

Retail offer

The Mosae Forum retail offer consists of more diverse middle class segment shops with the emphasis on 'Daily' and clothing stores which can be seen in seen in Table 4.5. Some examples of these stores are: H&M, the Sting, Esprit, Van Haren, S.Oliver, Jumbo, Kruitvat and the Mediq Apotheek. An overview of the available facilities for Maastricht is given in appendix E4.

Accessibility and parking

Mosae Forum is part of the inner shopping area, one of the subcenters of the inner city shopping area of Maastricht, which can be seen in appendix E1. Accessibility and parking were key aspects in the design of the Mosae Forum. An underground parking garage resulted also in a car-free Markt. The parking garage which is easily accessible has a capacity of 1082 parking places.
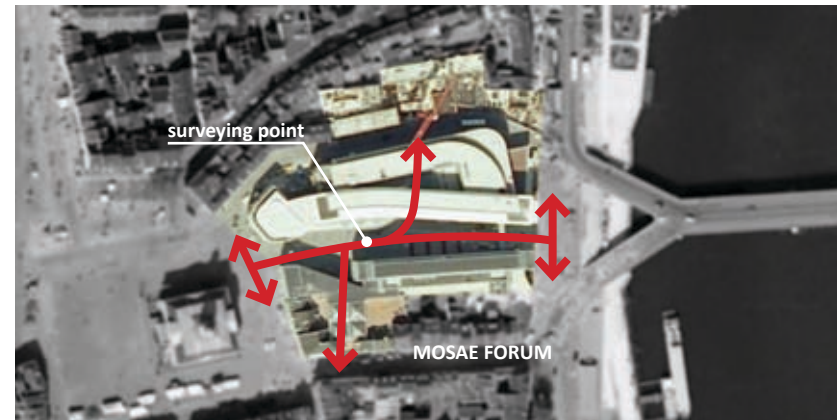
TABLE 4.5 - MOSAE FORUM (LOCATUS EXPLORER, 2012).

CHARACTERISTICS	MOSAE FORUM	
FACILITY OFFER	(No.)	(%)
Retail	21	66%
Leisure	3	9%
Other	3	9%
Vacancy	5	16%
Total	32	100%
RETAIL OFFER	(No.)	(m²)
Daily	9	2836
Fashion and luxury	9	5994
Leisure time	2	1174
In and arround the house	1	515
Other	0	0
Total	21	10519
LEISURE OFFER	(No.)	(%)
Café - restaurant	1	33%
Lunchroom	2	66%
Total	3	100%

FIGURE 4.6 - MOSAE FORUM.

4.3 SURVEY LOCATIONS 'S-HERTOGENBOSCH

In this paragraph a description is given of the survey locations concerning the historic inner city shopping area of 's-Hertogenbosch. The historic locations in 's-Hertogenbosch are Hinthamerstraat and Kerkstraat. Burgemeester Loeffplein and Arena are the two contemporary survey locations. The survey locations are confided for analysis to the actual length of the street.

1. HINTHAMERSTRAAT

The Hinthamerstraat is the main shopping street and one of the older streets within the inner city shopping area of 's-Hertogenbosch. The majority of the shops is situated in one of the many historic buildings. This particular survey location is therefore, designated as a historic shopping location. The Hinthamerstraat is part of the inner shopping area, one of the shopping streets of the inner city shopping area of 's-Hertogenbosch, which can be seen in appendix F1. Information provided by the Locatus Explorer shows that the Hinthamerstraat is a high traffic location (Appendix F2). Based on this traffic Locatus rated the Hinthamerstraat as an A2 location (Appendix F3).

Retail offer

The retail offer of the Hinthamerstraat consists of a number of diverse middle class segment shops with the emphasis on 'Daily' and clothing stores see Table 4.6. Some examples of these stores are: America Today, Superstar, Xenos, Score, DiDi and Chasin` Denim. An overview of the available facilities for 's-Hertogenbosch is given in appendix F4.

Accessibility and parking

Because the Hinthamerstraat is situated in the inner city shopping area there is a restriction on car use around this particular area. However, several parking facilities are on walking distance of the Hinthamerstraat.

TABLE 4.6 - HINTHAMERSTRAAT (LOCATUS EXPLORER, 2012).

CHARACTERISTICS	HINTHAMERSTRAAT	
FACILITY OFFER	(No.)	(%)
Retail	69	68%
Leisure	24	24%
Other	3	3%
Vacancy	5	5%
Total	101	100%
RETAIL OFFER	(No.)	(m²)
Daily	11	774
Fashion and luxury	37	4772
Leisure time	7	731
In and arround the house	11	1374
Other	3	330
Total	69	7981
LEISURE OFFER	(No.)	(%)
Café - restaurant	17	71%
Cultural	4	17%
Other	3	12%
Total	24	100%

FIGURE 4.7 - HINTHAMERSTRAAT

2. KERKSTRAAT

The Kerkstraat is the main shopping street and one of the older streets within the inner city shopping area of 's-Hertogenbosch. The majority of the shops is situated in one of the many historic buildings and many of the prime retailers are situated here. This particular survey location is therefore, designated as a historic shopping location. The Kerkstraat has many historical buildings and atmospheric aspects and forms a prime shopping location in 's-Hertogenbosch. The Kerkstraat is part of the inner shopping area, one of the shopping streets of the inner city shopping area of 's-Hertogenbosch, see in appendix F1. Information provided by the Locatus Explorer shows that the Kerkstraat is a fairly high traffic location which means that quite a number of shoppers are passing through this location (Appendix F2). Based on this traffic Locatus rated the Kerkstraat as a B1 location (Appendix F3).

Retail offer

The main shopping segment of the Kerkstraat is Fashion and Luxury see Table 4.7. Besides the many fashion and luxury stores a variety of restaurants is situated in the Kerkstraat. The fashion and luxury stores are characterized by high-end retailers and fashion/art boutiques. Some examples of these stores are: Schaap & Citroen, Pall Mall, Claudia Sträter, McGregor, Purdey, Scapa Ladies, Fred de la Bretoniere, Geddes & Gillmore Cavallaro Napoli. An overview of the available facilities for 's-Hertogenbosch is given in appendix F4.

Accessibility and parking

Because the Kerkstraat is situated in the inner shopping area of 's-Hertogenbosch, there is a restriction on car use in and around this particular area. The overall accessibility of the specific location is quite good because of the parking spaces in the vicinity.

TABLE 4.7 - KERKSTRAAT (LOCATUS EXPLORER, 2012).

CHARACTERISTICS	KERKSTRAAT	
FACILITY OFFER	(No.)	(%)
Retail	36	71%
Leisure	9	18%
Other	5	10%
Vacancy	1	2%
Total	51	100%
RETAIL OFFER	(No.)	(m²)
Daily	1	75
Fashion and luxury	32	6570
Leisure time	3	711
In and arround the house	0	0
Other	0	0
Total	36	7356
LEISURE OFFER	(No.)	(%)
Café - restaurant	7	78%
Ijssalon	1	11%
Hotel-restaurant	1	11%
Total	9	100%

FIGURE 4.8 - KERKSTRAAT

3. ARENA

As previously mentioned, the decrease in the number of visitors in the second half of the 90s resulted in the physical reorientation of parts of the existing shopping area. With the development of shopping centre Arena a expansion of the current retail structure was realised. The shopping centre is annular and comprises two shop layers of which one is located beneath the surface that is surrounded by shops. Besides the quality shops, fountains, fixed sitting areas and leisure facilities help to created a vivid shopping area.

The Arena is part of the inner shopping area, one of the shopping streets of the inner city shopping area of 's-Hertogenbosch, see appendix F1. Information provided by the Locatus Explorer shows that the Arena is a 'fairly high traffic location' which means that quite a number of shoppers are passing through this location (Appendix F2). Based on this traffic Locatus rated the Arena as a B1 location (Appendix F3).
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<u>Retail offer</u>
The retail offer of the Arena is mainly focussed on shopping in the branch 'Fashion and Luxury' see Table 4.8. Some examples of these stores in this diverse middle class segment are: Blokker, New Yorker, Pieces, H&M, Vero Moda and Björn Borg. Besides this there are some shops in the branch leisure and daily such as: Albert Heijn and the Kruitvat. An overview of the available facilities for 's-Hertogenbosch is given in appendix F4.

<u>Accessibility and parking</u>
The underground parking that is situated under the Arena complex ensures an excellent accessibility and parking. This particular parking facility forms a starting point for many of shoppers visiting the Arena and 's-Hertogenbosch. Nearby bus stops increase this accessibility by means of public transport.

TABLE 4.8 - ARENA (LOCATUS EXPLORER, 2012).

CHARACTERISTICS	BURGEMEESTER LOEFFPLEIN	
FACILITY OFFER	(No.)	(%)
Retail	17	74%
Leisure	1	4%
Other	5	22%
Vacancy	0	0.0%
Total	23	100%
RETAIL OFFER	(No.)	(m²)
Daily	2	1377
Fashion and luxury	11	4146
Leisure time	2	300
In and arround the house	2	22
Other	0	0
Total	17	5845
LEISURE OFFER	(No.)	(%)
Restaurant	1	100%
Total	1	100%

FIGURE 4.10 - ARENA

4. BURGEMEESTER LOEFFPLEIN

In the second half of the 90s, there was a decrease in the number of visitors in 's-Hertogenbosch. The Burgemeester Loeffplein was unattractive, with large buildings and a dominant traffic situation that did not fit into the historic character of the city (van der Heijde & Peddemors, 2006). After the revitalisation of this shopping area and the development of the shopping location Arena, a new lively area was created in the centre of 's-Hertogenbosch. This particular survey location is therefore, designated as a contemporary shopping location. The Burgemeester Loeffplein is part of the inner shopping area, one of the shopping streets of the inner city shopping area of 's-Hertogenbosch, see appendix F1. Particular location situated along a large square with large amount of greenery. Information provided by the Locatus Explorer shows that the Burgemeester Loeffplein is a 'high traffic location' (Appendix F2). Based on this traffic Locatus rated the Burgemeester Loeffplein as an A2 location (Appendix F3).

Retail offer
The main shopping segment of the Burgemeester Loeffplein is Fashion and Luxury in a more diverse middle class segment shops, as can be seen in Table 4.9. Some examples of these stores are: Hilfiger Denim, Van Dalen, Jack & Jones, Björn Borg and DEPT. An overview of the available facilities for 's-Hertogenbosch is given in appendix D4.

Accessibility and parking
Because the Burgemeester Loeffplein is situated in the inner shopping area of 's-Hertogenbosch there is an restriction on car use in and around this particular location. However, the accessibility by car of the shopping location Burgemeester Loeffplein is very good because of the large underground parking area in the neighbouring Arena. The accessibility in term of public transport is due the proximity of bus stops also very good.

BURGEMEESTER LOEFFPLEIN

surveying point

TABLE 4.9 - BURGEMEESTER LOEFFPLEIN (LOCATUS EXPLORER, 2012).

CHARACTERISTICS	BURGEMEESTER LOEFFPLEIN	
FACILITY OFFER	(No.)	(%)
Retail	15	65%
Leisure	2	9%
Other	6	26%
Vacancy	0	0%
Total	23	100%
RETAIL OFFER	(No.)	(m²)
Daily	0	0
Fashion and luxury	12	2267
Leisure time	2	1766
In and around the house	1	81
Other	0	0
Total	15	4114
LEISURE OFFER	(No.)	(%)
Café - restaurant	1	50%
Hotel-restaurant	1	50%
Total	2	100%

FIGURE 4.9 - BURGEMEESTER LOEFFPLEIN

4.4 PHYSICAL CHARACTERISTICS SURVEY LOCATIONS

As previously described in chapter 3 values were given to the 25 atmospheric characteristics that will serve as independent variables for the survey locations in both Maastricht and 's-Hertogenbosch. The specific values for the physical characteristics of survey locations are summarised in Tables 4.10 and 4.11.

4.5 CONCLUSIONS

This chapter has described the study areas and survey locations in detail. Based on several social demographic criteria the historic city centres of Maastricht and 's-Hertogenbosch were selected after careful consideration of different Dutch cities.

Within each of the two cities, four mutually different survey locations were selected based on the criteria historical versus modern environment and appearance. The physical characteristics have been inventoried by the team of master students involved in this project. The scores of the 25 physical characteristics have been determined as objectively as possible. The characteristics of the survey locations will serve as independent variables.

TABLE 4.10 - INDEPENDENT VARIABLES SURVEY LOCATIONS MAASTRICHT

INDEPENDENT VARIABLES		1. Maastrichter Brugstraat	2. Stokstraat	3. Entre Deux	4. Mosea Forum
1.	Accessibility				
	Distance to parking facility	300m	250m	200m	0m
	Distance to public transport	400m	300m	200m	100m
2.	Shops				
	Fashion and luxury	22	25	18	9
	Daily	1	0	1	9
3.	Leisure and restaurants	2	2	1	3
4.	Shape of facades	Historical	Historical	Clean and uniform	
5.	Material of the facades	Historical	Historical	Contemporary	
6.	Material of the pavements	Rough	Rough	Smooth	Smooth
7.	Colour of the facades	Mixed	Mixed	Bright	Bright
8.	Colour of the pavements	Bright	Bright	Bright	Bright
9.	Amount of light	High	High	Average	High
10.	Background noise	Average	Low	Average	High
11.	Music	Yes	No	No	No
12.	Smell	None	None	None	None
13.	Indoor	No	No	Yes	No
14.	Greenary	18	1	0	0
15.	Street furniture	No	No	No	No
16.	Shop Windows	Neutral	Discrete	Neutral	Striking
17.	Advertisement signs	Neutral	Discrete	Neutral	Discrete
18.	Tidiness	Good	Good	Good	Good
19.	Width of the street	12m	5m	8m	20m
20.	Height of the building (storeys)	4	3	4	5
21.	Width to height ratio	3	2	2	4
22.	Crowdedness	Time bound	Time bound	Time bound	Time bound
23.	Other Visitors	-	-	-	-
24.	Colour of the light	Average	Average	Warm	Cool
25.	Elevation	No	No	Yes	No
26.	Weather	Time bound	Time bound	Time bound	Time bound

TABLE 4.11 - INDEPENDENT VARIABLES SURVEY LOCATIONS ´S-HERTOGENBOSCH

INDEPENDENT VARIABLES		1. Hinthamerstraat	2. Kerkstraat	3. Arena	4. Burgermeester Loeffplein
1.	Accessibility				
	Distance to parking facility	200m	350m	0m	0m
	Distance to public transport	150m	250m	0m	0m
2.	Shops				
	Fashion and luxury	37	32	11	12
	Daily	11	1	2	0
3.	Leisure and restaurants	24	9	1	2
4.	Shape of facades	Historical	Historical	Clean and uniform	
5.	Material of the facades	Historical	Historical	Contemporary	
6.	Material of the pavements	Smooth	Smooth	Smooth	Smooth
7.	Colour of the facades	Mixed	Mixed	Dark	Dark
8.	Colour of the pavements	Mixed	Mixed	Mixed	Mixed
9.	Amount of light	High	High	Average	High
10.	Background noise	Average	Average	High	Average
11.	Music	Yes	Yes	No	No
12.	Smell	None	None	None	None
13.	Indoor	No	No	Yes	No
14.	Greenary	0	0	0	15
15.	Street furniture	No	No	Yes	No
16.	Shop Windows	Neutral	Neutral	Striking	Striking
17.	Advertisement signs	Striking	Neutral	Neutral	Discrete
18.	Tidiness	Average	Good	Good	Good
19.	Width of the street	15m	10m	30	50
20.	Height of the building (storeys)	3	3	2	2
21.	Width to height ratio	5	3	15	25
22.	Crowdedness	Time bound	Time bound	Time bound	Time bound
23.	Other Visitors	-	-	-	-
24.	Colour of the light	Average	Average	Average	Average
25.	Elevation	No	No	Yes	No
26.	Weather	Time bound	Time bound	Time bound	Time bound

5. DESCRIPTION OF THE COLLECTED DATA

This chapter gives a description about the characteristics of the respondents as part of the collected data. Firstly, the response and non-response of this study will be described for both Maastricht and 's-Hertogenbosch. Furthermore a description will be given about the general characteristics of the respondents who participated in this study. These general characteristics include age, gender, profession, shopping motivation etc.

5.1 RESPONSE AND NON-RESPONSE

5.1.1 RESPONSE
During three survey days in Maastricht and two survey days in 's-Hertogenbosch 1374 shoppers have been asked to complete the survey as part of this study as can be seen in Table 5.1. A total of 918 shoppers agreed to take part in this survey, which resulted in a larger number of respondents. This is a total response of 67% which is, ccompared with other studies, a good response for an empirical study. Looking at the surveys conducted, in both Maastricht and 's-Hertogenbosch, 759 shoppers in Maastricht and 614 shoppers in 's-Hertogenbosch were ask to take part in this survey. This resulted in 473 respondents in Maastricht (62%) and 445 respondents in 's-Hertogenbosch (73%).

5.1.2 NON-RESPONSE
Of the total of 1374 shoppers who have been asked 456 shoppers (33%)

TABLE 5.1 - RESPONSE AND NON-RESPONSE

CHARACTERISTICS	MAASTRICHT		'S-HERTOGENBOSCH	
SHOPPER ASKED	(No.)	(%)	(No.)	(%)
Respons	473	62.2%	445	72.5%
Non-respons	287	37.8%	169	27.5%
Total	760	100.0%	614	100.0%

refused to take part in this survey (Table 5.2). When the respondent refused to participate, the non-response questions were estimated by the surveyor and noted on the therefore prepared form. This information was meant for validation. The non-respondents have been described in both Maastricht and 's-Hertogenbosch by a number of personal features, namely the respondents' gender, approximate age and group composition.

Comparing the non-response (table 5.2) and the response (table 5.3) indicates that the population is representative. However, the research population consists of a slightly higher share of females than observed at the survey locations. The share of both young and older people (aged younger than 25 years and over 55 years) in the research population is higher than the share that was present during the surveying period. This proves that especially the middle class was less willing to participate.

TABLE 5.2 - GENDER AND AGE OF THE NON-RESPONSE

CHARACTERISTICS	MAASTRICHT		'S-HERTOGENBOSCH	
GENDER	(No.)	(%)	(No.)	(%)
Male	118	41.3%	72	42.6%
Female	168	58.7%	97	57.4%
Total	286	100.0%	169	100.0%
AGE	(No.)	(%)	(No.)	(%)
<18	10	3.5%	13	7.7%
18-25	63	22.0%	27	16.0%
26-35	52	18.2%	29	17.2%
36-45	56	19.6%	29	17.2%
46-55	51	17.8%	41	24.3%
56-65	39	13.6%	26	15.4%
>65	15	5.2%	4	2.4%
Total	286	100.0%	169	100.0%

5.2 CHARACTERISTICS OF THE RESPONDENTS

5.2.1 GENDER, AGE DISTRIBUTION AND EDUCATION

In total 918 shoppers, 473 in Maastricht and 445 in 's-Hertogenbosch, were willing to complete the survey which was part of this study (Table 5.3). Of these respondents about 70% were female and 30% were male in both cities. One (possible) reason is that more women were in the specific shopping area during this survey. In addition, it is a possibility that women tend to lead the conversation while shopping in couples because of the affinity that women

TABLE 5.3 - GENDER, AGE DISTRIBUTION AND EDUCATION.

CHARACTERISTICS	MAASTRICHT		'S-HERTOGENBOSCH	
GENDER	(No.)	(%)	(No.)	(%)
Male	153	32.3%	129	29.0%
Female	320	67.7%	316	71.0%
Total	473	100.0%	445	100.0%
AGE	(No.)	(%)	(No.)	(%)
11-25	185	39.1%	184	41.3%
26-40	58	12.3%	63	14.2%
41-55	100	21.1%	109	24.5%
56-70	121	25.6%	73	16.4%
71-85	9	1.9%	16	3.6%
Total	473	100.0%	445	100.0%
EDUCATION	(No.)	(%)	(No.)	(%)
Primary School	10	2.1%	9	2.0%
Secondary School	91	19.3%	68	15.3%
MBO	98	20.8%	128	28.8%
HBO	190	40.3%	170	38.3%
University	83	17.6%	69	15.5%
Total	472	100.0%	444	100.0%

have with shopping. After classifying age into several categories, Table 5.3 shows that the majority of the respondents, about 40% , is in the first category 11-25 years. This percentage can be explained because both Maastricht and s-Hertogenbosch are typical Dutch university cities. A relative small number of the respondents in the category of 26 to 40 years (about 15%) is striking. This can probably be explained because this particular category is 'at work' and therefore unapproachable during the time of the survey given the timetable in both Maastricht and 's-Hertogenbosch.

The educational level of the respondents is mainly of HBO grade (40% in Maastricht and 38% in 's-Hertogenbosch). Focusing on specific survey locations within both cities, the 'education level' is significantly higher in the Stokstraat compared to the other survey locations. Around 25% of the respondents participating the survey at that specific location have a University grade educational level. Plausible explanation is that the Stokstraat is the most prime shopping location of Maastricht with many high-end retailers which on contrary attract a specific, better educated, upper class audience.

5.2.2 PROFFESION, HOUSEHOLD COMPOSITION AND NET INCOME

The majority of the respondents in both cities are people who have jobs, in Maastricht approximately 46% and 's-Hertogenbosch around 49% (Table 5.4). A substantial part of the remaining respondents are students (30%). This number can be explained because both Maastricht and 's-Hertogenbosch, as described before, are university cities bustling with students. The number of pensioners in Maastricht is slightly higher with 17% against 15% in 's-Hertogenbosch. The unemployed portion is around 5% of the total respondents during this survey in both Maastricht and 's-Hertogenbosch.

The respondents were also asked to describe their household composition. The results, regarding this topic, vary widely. For instance; in Maastricht there

is a higher portion of respondents that have the household composition of 'Living together without children' (37%) and 'Alone with children' (4%). In 's-Hertogenbosch on the other hand there are high scores in the household composition of 'Alone with children' (31.8%) comparing to the household composition 'Living together with children (15.3%).

The net disposable household income of the respondents, as shown in Table 5.4, shows that both cities are largely comparable. Approximately 30% of respondents have a net disposable household income of less than € 1,200 or a net disposable household income of € 4,000 to € 6,000. The higher income category of more than € 6.000 clearly shows that more respondents in this category are found in Maastricht (11.5%) than in 's-Hertogenbosch (4.6%). A total of 178 respondents refused answering this particular question, the majority of these argued that such information was simply to personal to share.

5.2.3 VISIT FREQUENCY, SHOPPING MOTIVATION AND GROUP COMPOSITION

The visit frequencies of Maastricht and 's-Hertogenbosch are very similar to each other. The results, as shown in Table 5.5, indicate that the majority of the respondents (50%) visit the city less than once a month for shopping. About 18% of the respondents indicate that they visit the city on a monthly basis for shopping and about 30% visits the city more frequently.

Examining the actual shopping motivation, it can be seen that approximately half of the respondents have a hedonic shopping motivation in both Maastricht (52%) and 's-Hertogenbosch (45%). In 's-Hertogenbosch there is a slightly higher percentage of utilitarian based shoppers than in Maastricht. This is probably because of the slightly higher retail offer in combination with more leisure activities that are located in the city of Maastricht in comparison with 's-Hertogenbosch. The combination of utilitarian and hedonic based shopping motivation credits for about 22% in both cities.

The vast majority of respondents were with someone when they visited Maastricht or 's-Hertogenbosch. Most respondents were part of a group composition with family (50%) or either with friends (35%). Only very few

TABLE 5.4 - PROFESSION, HOUSEHOLD COMPOSITION AND NET INCOME

CHARACTERISTICS	MAASTRICHT		'S-HERTOGENBOSCH	
PROFESSION	(No.)	(%)	(No.)	(%)
Student	160	34.0%	138	31.2%
Employment	215	45.6%	216	48.8%
Unemployed	17	3.6%	22	5.0%
Retired	79	16.8%	67	15.1%
Total	471	100.0%	443	100.0%
HOUSEHOLD COMPOSITION	(No.)	(%)	(No.)	(%)
Alone with childeren	114	24.3%	50	11.3%
Living together without childeren	175	37.2%	46	10.4%
Alone with childeren	17	3.6%	141	31.8%
Living together with childeren	110	23.4%	68	15.3%
Student	39	8.3%	28	6.3%
Other	15	3.2%	110	24.8%
Total	470	100.0%	443	100.0%
NET INCOME (€)	(No.)	(%)	(No.)	(%)
< 1200	107	27.3%	112	32.2%
1200-2000	68	17.3%	60	17.2%
2000-4000	118	30.1%	110	31.6%
4000-6000	54	13.8%	50	14.4%
> 6000	45	11.5%	16	4.6%
Total	392	100.0%	348	100.0%

respondents with small children or groups consisting of 3 or more persons.

5.2.4 POSTAL CODE AND TRANSPORTATION

The majority of the respondents in Maastricht and 's-Hertogenbosch is originated from the provinces were the survey was held, Limburg and Noord-Brabant. In Maastricht the share of respondents from Limburg is 58% and in 's-Hertogenbosch the share in respondents from Noord-Brabant is 63%. Noteworthy is the percentage of respondents visiting from outside the

Netherlands. In Maastricht this percentage is much higher (12%) than in 's-Hertogenbosch (2%). Most of the respondents used the car as basic means of transportation (Table 5.6). In both cities, comparable values were found regarding transportation to the actual research locations. Approximately 25% of respondents have been using the public transportation system by using the bus or train. However, looking at the specific research locations within both cities, the car use is significantly higher at the Mosea Forum in Maastricht 65% and Burgemeester Loeffplein in 's-Hertogenbosch 57%. This higher car use can be explained because both research locations or more recent developments at the edge of the inner city shopping area. Also underground parking facilities are situated nearby, these more recent development survey locations.

TABLE 5.5 - VISIT FREQUENTY, SHOPPING MOTIVATION AND GROUP COMPOSITION

CHARACTERISTICS	MAASTRICHT		'S-HERTOGENBOSCH	
VISIT FREQUENTY	(No.)	(%)	(No.)	(%)
2x per week or more	34	7.2%	32	7.2%
Weekly	65	13.8%	65	14.6%
2x per Month	43	9.1%	53	11.9%
Monthly	84	17.9%	72	16.2%
Less	244	51.9%	222	50.0%
Total	470	100.0%	444	100.0%
SHOPPING MOTIVATION	(No.)	(%)	(No.)	(%)
Utilitarian	92	19.5%	122	27.4%
Hedonic	246	52.0%	201	45.2%
Both	106	22.4%	94	21.1%
Other	29	6.1%	28	6.3%
Total	473	100.0%	445	100.0%
GROUP COMPOSITION	(No.)	(%)	(No.)	(%)
Alone	60	12.7%	57	12.8%
Family	238	50.3%	220	49.4%
Friends	175	37.0%	168	37.8%
Total	473	100.0%	445	100.0%

TABLE 5.6 - POSTAL CODE AND TRANSPORTATION

CHARACTERISTICS	MAASTRICHT		'S-HERTOGENBOSCH	
POSTAL CODE	(No.)	(%)	(No.)	(%)
Limburg	267	58.4%	32	7.6%
Noord-Brabant	23	5.0%	265	62.6%
Other NL	114	24.9%	120	28.4%
Other	53	11.6%	6	1.4%
Total	457	100.0%	423	100.0%
TRANSPORTATION	(No.)	(%)	(No.)	(%)
Car	243	51.5%	236	53.4%
Bicycle	47	10.0%	57	12.9%
Public transportation	125	26.5%	111	25.1%
Walking	43	9.1%	31	7.0%
Other	14	3.0%	7	1.6%
Total	472	100.0%	442	100.0%

5.3 CONCLUSIONS

This chapter has described the collected data of the individual respondents that participated in this study. As previously described, also a detailed overview of the non-response was kept.

During three survey days in Maastricht and two survey days in 's-Hertogenbosch 1374 shoppers have been asked to complete the survey as part of this study. A total of 918 shoppers, 473 respondents in Maastricht and 445 respondents in 's-Hertogenbosch, agreed to take part in this survey. Of these respondents about 70% were female and 30% were male in both Maastricht and 's-Hertogenbosch. About 40% of the total respondents is categorised in the first category 11-25 years. This percentage can be explained because both Maastricht and s-Hertogenbosch are typical Dutch university cities. The educational level of the respondents is mainly of HBO grade (40% in Maastricht and 38% in 's-Hertogenbosch). Focusing on specific survey locations within both cities, the 'education level' is significantly higher in the Stokstraat of Maastricht compared to other survey locations.

The majority of the respondents in both cities are people who have jobs, in Maastricht approximately 46% and 's-Hertogenbosch around 49%. A substantial part of the remaining respondents are students (30%). The net disposable household income of the respondents, shows that both cities are largely comparable. The results indicate that the majority of the respondents (50%) visit the city less than once a month for shopping. Of the remaining respondents, 18% indicate that they visit the city on a monthly basis for shopping. Examining the actual shopping motivation, figures show that approximately half of the respondents have a hedonic shopping motivation and were with someone when they visited. The majority of the respondents in Maastricht and 's-Hertogenbosch is originated from the provinces were the survey was held and used the car as basic means of transportation.

6. DATA ANALYSIS

The collected data will be analysed in this chapter by a number of different methods based on the particular research questions. The data analysis has been done by the following methods: (1) sequential analyzing the frequencies, (2) performing factor analyses, (3) decision tree analysis of single items or a set of items/ factors and (4) the multinomial logit model. Especially the third methode of analysis is an explorative method to increase the potential for gaining useful and, probably, unexpected results.

Since the analyses result in a large set of tables and graphs, the information given here is mostly limited to the main findings with a reference to the appended disk containing the full analysis results (Appendix Disk).

6.1 FREQUENCIES
Tables 6.1 and 6.2 show the mean rating of each aspect on each single survey location in both Maastricht and 's-Hertogenbosch. The mean values are based on the 7-point Likert scales varying from very negative (value = 1) to very positive (value = 7). They also show which location has the best respondent's rating on a city level (green figures). The frequencies tables provide a number of interesting (initial) statements about the individual survey locations.

The mean ratings of the physical characteristics of Maastricht show that the majority of the characteristics are rated more positive in Stokstraat (historical), compared to the other survey locations in Maastricht. Concerning 's-Hertogenbosch, the same result is noticeable on the location Kerkstraat, which is in appearance the most similar location compared to Stokstraat.

More detailed frequencies can be found in appendix G. The tables in this appendix show the amount and percentage of responses, from very negative to very positive, for each individual aspect.

TABLE 6.1 - MEAN RATINGS OF THE SURVEY LOCATIONS IN MAASTRICHT

INDEPENDENT VARIABLES	1. Maastrichter Brugstraat	2. Stokstraat	3. Entre Deux	4. Mosae Forum
1. Accessibility	5.69	5.41	5.37	5.93
2. Shops	5.73	5.63	5.44	5.73
3. Leisure and restaurants	5.28	5.40	4.90	5.12
4. Shape of facades	5.80	6.36	5.44	5.15
5. Material of the facades	5.54	6.15	5.23	5.05
6. Material of the pavements	4.90	4.80	4.58	4.65
7. Colour of the facades	5.29	5.63	4.70	4.53
8. Colour of the pavements	4.78	5.18	4.71	4.51
9. Amount of light	5.61	5.58	5.43	5.65
10. Background noise	5.12	5.31	4.42	4.76
11. Music	4.54	4.14	4.19	4.21
12. Smell	5.07	4.76	4.43	4.93
13. Indoor	5.14	5.62	4.82	5.21
14. Greenary	4.50	4.29	3.25	2.94
15. Street furniture	4.01	3.87	3.23	3.49
16. Shop Windows	5.23	5.71	5.12	5.43
17. Advertisement signs	4.74	5.05	4.43	4.81
18. Tidiness	5.36	5.86	5.57	5.52
19. Width of the street	5.69	5.52	5.66	5.62
20. Height of the building (storeys)	5.66	5.74	5.49	5.39
21. Width to height ratio	5.55	5.65	5.51	5.23
22. Crowdedness	5.33	5.60	5.08	5.19
23. Other Visitors	5.09	5.20	5.10	5.00
24. Colour of the light	-	-	4.96	5.13
25. Elevation	-	-	5.03	-
26. Weather	-	-	-	-

TABLE 6.2 - MEAN RATINGS OF THE SURVEY LOCATIONS IN 'S-HERTOGENBOSCH

INDEPENDENT VARIABLES	1. Hinthamerstraat	2. Kerkstraat	3. Arena	4. Burgermeester Loeffplein
1. Accessibility	5.79	5.73	5.49	5.68
2. Shops	5.55	5.75	5.10	5.32
3. Leisure and restaurants	5.42	5.56	4.89	5.10
4. Shape of facades	5.64	5.76	4.68	4.59
5. Material of the facades	5.39	5.44	4.76	4.53
6. Material of the pavements	5.05	5.08	4.97	4.65
7. Colour of the facades	4.91	5.16	4.50	4.27
8. Colour of the pavements	4.75	5.12	4.77	4.68
9. Amount of light	5.50	5.64	5.73	5.21
10. Background noise	4.90	5.12	4.89	4.17
11. Music	4.47	4.79	4.09	3.96
12. Smell	4.75	4.87	4.52	4.34
13. Indoor	5.03	4.97	5.11	4.59
14. Greenary	3.06	3.59	3.50	3.37
15. Street furniture	3.31	3.98	4.59	3.50
16. Shop Windows	4.62	5.24	4.95	4.85
17. Advertisement signs	4,34	4,78	4,52	4,33
18. Tidiness	5,21	5,46	5,43	4,95
19. Width of the street	5,57	5,77	5,63	5,55
20. Height of the building (storeys)	5,41	5,48	5,22	5,06
21. Width to height ratio	5,30	5,42	5,14	5,17
22. Crowdedness	5,03	5,27	5,17	5,00
23. Other Visitors	4,92	5,20	4,90	4,78
24. Colour of the light	-	-	5.22	-
25. Elevation			5.22	-
26. Weather	-	-	-	-

6.2 FACTOR ANALYSIS

The goal of a factor analysis is to identify a number of latent variables from a set of observed variables. This reduces the set of variables in the dataset. The set of variables concerning the respondents opinion about the environmental aspects, or 'atmospherics', form the input of the factor analysis. Since the variable 'Colour of the light' is only applicable on the three locations Entre Deux, Mosae Forum and Arena, and the two variables 'Colour of the light' and 'Elevation' only on Entre Deux and Arena, there are many missing values in the dataset concerning these two variables. Therefore, these two items are ignored in the factor analysis preventing them to form an undesired factor. Adding them to the analysis will result in a factor consisting of only 'Elevation' and 'Colour of the light', disregarding that they have little substantive connection. The variables 'Tidiness', 'Colour of pavement' and 'Smell' are also not included in the factor analysis since they have respectively little or no variation.

The factor analysis can be performed on Maastricht and 's-Hertogenbosch separated and on both cities as one. It is only allowed to perform a factor analysis when the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) has a value above 0.6. The results of the three tests, namely Maastricht, 's-Hertogenbosch and both cities at the same time, proves that the sample is adequate in each situation. In the situation of both cities together, the analysis results in a value of 0.874 (see appendix H for factor analysis result).

The amount of factors can be determined by the screen plot. The plot results of the individual cities indicated similar results and, therefore, are not displayed in this section. Since analysis of only one factor is not allowed, the analysis is continued with three variants; two factors, three factors and four factors. Variables need to exceed the minimum value of 0.5 to be assigned to a certain factor.

The factor analysis with a fixed number of three factors provides the best usable result. The analysis with two factors adds 'Colour facades', 'Material facades' and 'Shape facades' to the environmental aspects 'Furniture' and 'Greenery' to function as one factor. Performing the factor analysis with a fixed number of four factors creates a fourth factor that consists of only one item, namely 'Shops'. Since this is already an item on itself, the number of fixed factors for the further analysis is set on three. The analysis is performed on three different situations:

1. *Factor analysis in both Maastricht and 's-Hertogenbosch*
The factor analysis regarding both Maastricht and 's-Hertogenbosch can be seen in Table 6.3

2. *Factor analysis in Maastricht*
The factors derived from this analysis results in the same factors as for both cities.

3. *Factor analysis in 's-Hertogenbosch*
The factor analysis of the values regarding 's-Hertogenbosch has a comparable output. Factor 1 and 2 are the same as in both cities. Factor 3 however is more extensive. This factor consists of 'Furniture', 'Greenery' and 'Shop windows'. Despite of the plausible composition of this factor, mainly

TABEL 6.3 - FACTORS

FACTOR 1 'DIMENSIONS'	FACTOR 2 'ARCHITECTURE'	FACTOR 3 'ENVIRONMENT'
Width-height ratio	Material facades	Furniture
Height buildings	Shape facades	Greenery
Width street	Colour facades	
Crowdedness		

concerning the environment, the combination of 'Furniture' and 'Greenery' is more explicable since it represents clear and tangible aspects.

BEST USEABLE FACTOR ANALYSIS RESULT
The factor analysis of Maastricht and 's-Hertogenbosch functioning as one shows the most reasonable result (see table 6.3). The variables of factor 1, 2 and 3 show a clear intrinsic match among each other.

The variables in factor 2 represent design variables disregarding the dimensional characteristics. These dimensional characteristics appear in factor 1. A possible explanation for the absence of 'Material pavement' in factor 2 is that it is the only design variable that is tangible, unlike the other design variables that probably will be judged by sight. Factor 3 has content concerning the environment.

Variables that did not exceed the value of 0.5 in the factor analysis, and therefore cannot be assigned to a factor: Accessibility, Shops, Restaurants/leisure, Material pavement, Amount of light, Background noise, Music, Indoor/outdoor, Shop windows and Advertisement signs.

6.3 DECISION TREE ANALYSIS
This section describes the analysis of each individual aspect concerning the physical characteristics called 'atmospherics'. This part of the research links the dependent variables to the relevant independent variables. Thereafter, the factors that emerged from the factor analysis (described in section 6.2) are also linked to relevant independent variables and shown in this section.

For this research, it is important to know which variables influence the dependent variable. The tree analysis searches step by step for the variable and the classification of the variable that causes the largest difference in the

distribution of the dependent variable. These values are the percentages of respondents that selected a certain appreciation of one aspect on the 7-point Likert scale (very negative – very positive). In each step, the analysis determines the best splitting variable. The variable will be included in the tree when it meets the requirements that it is the most relevant variable and causes a significant difference in the percentages of the dependent variable. To conclude, the tree analysis obtains the most affecting independent variable for a certain dependent variable and, thereby, gives the percentage of correctly predicted answers for the dependent variable. The decision tree is not trustworthy when the overall percentage correctly predicted is equal to or less than 14,3% (= 100% / 7 Likert scale options). The higher the score of overall percentage correctly predicted answers, the more reliable the decision tree results are. Thereby, adding or removing one or more variables to a certain decision tree will lead to another calculation of the overall percentage correctly predicted answers, when this value of the 'new' decision tree is higher, the added or removed variables result in an improvement of the reliability (and vice versa). The decision tree analysis (CRT as growing method) uses one dependent variable, or one factor that is based on latent items, and one or more independent variables. The decision tree analyses is based on the 25 variables as determined in chapter three. The variables in

TABEL 6.4 - VARIABLES THAT ARE INAPPROPRIATE FOR DECISION TREE ANALYSIS

VARIABLE	REASON
Colour of pavement	No variation between the two cities
Smell	No variation
Tidiness	Only one deviating value
Other visitors	Not categorized
Colour of light	Not enough variation
Elevations	Not enough variation

Table 6.4 appeared to be inappropriate for the decision tree analysis. After each regular item decision tree analysis, the same analysis is performed implementing the consumers motivational orientation. The conclusions that concern the consumers motivational orientation only cover the conclusions that differ from the previous conclusions regarding that certain item.

Based on the literature review and the survey results the consumers motivational orientation is determined as follows:

1. Utilitarian; task-related, efficient and rational;
2. Hedonic; subjective and personal, resulting in playfulness and fun.
3. Both; a combination of both utilitarian and hedonic.

The first decision tree analysis, 1.1 'Accessibility and distance to the nearest parking', comes with an figure (Figure 6.1) that functions an example to show how a decision tree analysis output should be interpreted. The other decision trees can be found on the appendix disc. Each individual tree is given in a PDF file containing the file name that is equal to the item name (for example: 1.1 Accessibility and distance to the nearest parking).

1. ACCESSIBILITY AND DISTANCE TO NEAREST PARKING
The dependent variable 'Accessibility' is likely to be dependent on:
- Distance to the nearest parking;
- Distance to the nearest public transport stop;
- Transport mode.

The accessibility is rated on 7-point Likert scale varying from very negative to very positive. The distance to the nearest parking and nearest public transport stop is measured from 0 meters to 350 respectively 400 meters. The options concerning transport mode consist of: by car, public transport,

walking, bicycle and other. For the decision tree analysis, these options are limited to only car users concerning the distance to the nearest parking, and only public transport users when it concerns the distance to the nearest public transport stop.

1.1 GENERAL CONCLUSIONS

Distance parking and car users
- The overall accessibility is rated fairly positive (21.9%), positive (38.6%) or very positive (24.0%).
- Respondents rate the accessibility more positive when the distance to the nearest parking is equal to or less than 100 meters; the overall ratings are positive (39.8%) and very positive (29.1%), compared to positive (37.7%) and very positive (20.1%) when the distance is more than 100 meters.
- The positive effect of the closer distance disappears when it over 275 meters; the overall ratings are positive (41.1%) and very positive (20.0%), compared to positive (36.0%) and very positive (20.2%) when the distance is equal to or less than 275 meters.
- However, respondents do rate the accessibility more positive when the distance to the nearest parking is equal to or less than 225 meters; the overall ratings are positive (36.1%) and very positive (22.2%), compared to positive (35.7%) and very positive (17.1%) when the distance is more than 225 meters.
  The overall percentage correctly predicted is 38.6%.

For validation, another tree analysis is performed including the respondents arriving by other transport modes.

Distance parking and car or other transport mode
- Respondents arriving by car rate the accessibility more positive when the distance to the nearest parking is equal to or less than 150 meters; the
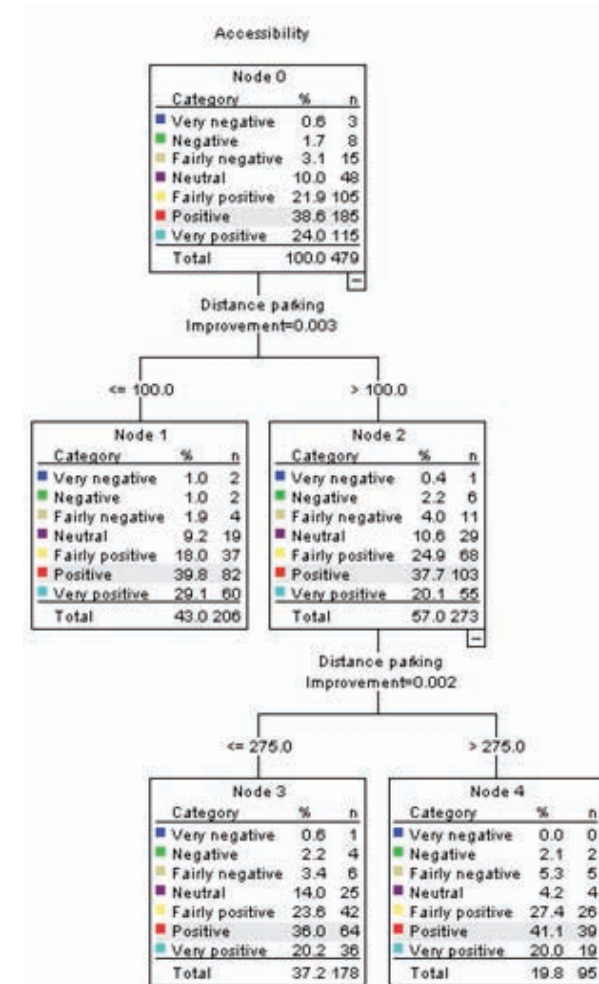
FIGURE 6.1 - ACCESSIBILITY AND DISTANCE TO THE NEAREST PARKING

overall ratings are positive (39.4%) and very positive (29.3%), compared to positive (37.7%) and very positive (20.1%) when it is more than 150 meters.

- Respondents arriving by other transport mode, do not rate the accessibility more positive when it is equal to or less than 150 meters; the overall ratings are positive (31.5%) and very positive (30.1%), compared to positive (36.8%) and very positive (26.5%) when it is less than 150 meters.

The overall percentage correctly predicted is 36.8%.

Distance public transport stop and public transport users.
- The overall accessibility is rated fairly positive (23.2%), positive (33.8%) or very positive (28.7%).
- Respondents rate the accessibility more positive when the distance to the nearest public transport stop is equal to or less than 125 meters; the overall ratings are positive (31.6%) and very positive (34.2%), compared to positive (34.8%) and very positive (25.9%) when the distance is more than 125 meters.
- The positive effect of the closer distance disappears when it is equal to or less than 225 meters (but more than 125 meters), compared to over 225 meters; the overall ratings are positive (30.0%) and very positive (22.9%), compared to positive (38.6%) and very positive (28.4%) when the distance is equal to or less than 225 meters.

The overall percentage correctly predicted is 36.3%.

For validation, another tree analysis is performed including the respondents arriving by other transport modes.

Distance public transport stop and public transport or other transport mode
- Respondents arriving by public transport rate the accessibility more positive when it is equal to or less than 150 meters; the overall ratings are

positive (32.7%) and very positive (33.6%), compared to positive (34.9%) and very positive (24.8%) when it is less than 150 meters.

- Respondents arriving by other transport mode also rate the accessibility more positive when the distance to the nearest public transport stop is equal to or less than 150 meters; the overall ratings are positive (38.5%) and very positive (27.5%), compared to positive (37.1%) and very positive (21.8%) when it is more than 150 meters.
- This confirms the conclusion formulated above (Distance public transport and transport mode).

The overall percentage correctly predicted is 36.9%.

1.2 CONCLUSIONS ACCESSIBILITY BY CAR AND MOTIVATIONAL ORIENTATION
Distance parking and car users
- The motivational orientation of the respondent functions as the second splitting variable and the first splitting variable remains 'Distance parking'. To conclude: the respondent's motivational orientation does not have the most influence on the results.
- The decision tree lacks further relevant conclusions other than emphasising that the nearest parking when equal to or less than 100 meters is rated more positive; the overall ratings are positive (40.8%) and very positive (28.9%), compared to positive (38.8%) and very positive (20.8%) when the parking distance is more than 100 meters.
- Forcing the respondent's motivational orientation as first splitting variables, does also not lead to relevant conclusions.

The overall percentage correctly predicted is 39.7%.

Distance public transport stop and public transport users
- The distance to the public transport functions as the first splitting variable. Therefore, distance public transport has more influence on the respondents ratings in comparison with other variables. This specific node

distinguishes equal to or less than 125 metres and more than 125 metres.

- Forcing the respondent's motivational orientation as first splitting variables, does also not lead to relevant conclusions.

The overall percentage correctly predicted is 37.5%.

2. SHOPS

The dependent variable 'Shops', which represents the shop offer, is likely to be dependent on:

- Fashion and luxury shops;
- Daily shopping;
- Other shops

The shop offer is rated on 7-point Likert scale varying from very negative to very positive. The independent variables indicate the amount of certain shop types.

2.1 GENERAL CONCLUSIONS

Fashion and luxury shops, daily shopping and other.

- The overall shop offer is rated fairly positive (22.4%), positive (34.9%) or very positive (23.6%).
- The amount of fashion and luxury shops has the largest impact on the results and, therefore, functions as the first and second splitting variable.
- Respondents rate the shop offer more positive when the number of fashion and luxury shops is higher; the overall ratings are positive (28.0%) and very positive (22.6%), compared to positive (39.2%) and very positive (24.3%) when the amount is exceeding 15.
- The variable 'Daily shops' has less effect and 'Other shop's has no significant effect on the shop offer rating.

The overall percentage correctly predicted is 35.9%.

2.2 CONCLUSIONS SHOPS AND MOTIVATIONAL ORIENTATION

Fashion and luxury shops, daily shopping and other.

- The number of fashion and luxury shops functions as the first splitting variable. Therefore, the number of fashion and luxury shops has more influence on the respondents ratings in comparison with other variables. This specific node distinguishes equal to or less than 15 shops and more than 15 shops.
- Respondents that are hedonic motivated rate the shop offer more positive than the utilitarian motivated consumer when the amount is equal to or less than 15 fashion and luxury shops; the overall ratings are positive (30.5%) and very positive (28%), compared to positive (26.0%) and very positive (16.9%) when utilitarian or both utilitarian and hedonic motivated.
- When the number of fashion and luxury shops is more than 15 there is no significant effect on any particular motivational orientation to make a any statement.
- 'Daily shopping' and 'Other shops' do not have a significant influence on the results.
- The decision tree with no forced first variable lacks of further relevant conclusions. Therefore, the variable 'consumers motivational orientation' is forced as first splitting variable.

The overall percentage correctly predicted is 37.4%.

Fashion and luxury shops, daily shopping and other with forced first splitting variable

- The forced splitting variable 'consumers motivational orientation' reveals the variables 'Daily shopping' and 'Other shops' as significant variables for respondents that are hedonic or that are motivated in combination of the main motivational orientations hedonic or utilitarian. These respondents rate the overall 'shops' more positive when number 'other shops' are equal to or less than to 3.5 shops, the number 'daily shopping'

is more than 0.5 and the number of 'fashion and luxury shops' is larger than 20.

- Respondents that are utilitarian motivated rate the overall variable 'shops' significantly more positive when the number of 'fashion and luxury shops' is larger than 20; the overall rating are positive (45.5%) and very positive (19.3%), comparing with positive (24.6%) and very positive (16.7%) when the number is equal to or less than 20.

The overall percentage correctly predicted is 36.9%.

3. RESTAURANTS/ LEISURE

The dependent variable 'Restaurants', which represents the offer of restaurants/leisure, is likely to be dependent on the independent variable 'Restaurants/leisure'.

The restaurant/leisure offer is rated on 7-point Likert scale varying from very negative to very positive. The independent variable indicates the amount of restaurants/leisure facilities.

3.1 GENERAL CONCLUSIONS

- The overall restaurants/leisure appreciation is neutral (16.6%), positive (28.9%) or very positive (22.9%).
- Respondents rate the restaurants/leisure offer more positive when the amount of restaurants/leisure facilities is higher; the overall ratings are positive (27.6%) and very positive (24.5%), compared to positive (35.0%) and very positive (26.2%) when the amount is exceeding 6.
- Respondents do not rate the restaurants/leisure offer more positive when the amount of restaurants/leisure facilities is higher than 17; the overall ratings positive (40.0%) and very positive (26.7%), compared to positive (30.3%) and very positive (25.7%) when the amount is exceeding 17.

The overall percentage correctly predicted is 29.1%.

3.2 CONCLUSIONS RESTAURANTS/LEISURE AND MOTIVATIONAL ORIENTATION

- The number of restaurants/leisure facilities function as the first splitting variable. Therefore, the number of restaurants/leisure facilities have more influence on the respondents ratings in comparison with other variables. This specific node distinguishes equal to or less than 1.5 shops and more than 1.5 shops. The variable 'consumers motivational orientation' functions as the second splitting variable, thus less relevant.
- Respondents that are utilitarian motivated are more positive about the variable 'restaurants/leisure' when the number of restaurants/ leisure facilities is larger than 1.5; the overall ratings are positive (34.7%) and very positive (25.7%), comparing with positive (27.8%) and very positive (25.4%) when motivated both or hedonic.
- The decision tree with no forced first variable lacks of further relevant conclusions. Therefore, the variable 'consumers motivational orientation' is forced as first splitting variable.

The overall percentage correctly predicted is 29.3%.

Restaurants/leisure with forced first splitting variable

- To emphasize the general conclusion findings suggest that respondents that have a utilitarian motivation rate the overall variable 'restaurants/leisure' more positive when the number of restaurants/leisure is larger than 1.5; the overall ratings are positive (34.7%) and very positive (25.7%), comparing with positive (21.4%) and very positive (15.7%) when the number is equal to or less than 1.5.
- Respondents that are hedonic or that are motivated in combination of the main motivational orientations hedonic or utilitarian rate the overall 'restaurants/leisure' more positive when number 'restaurants/leisure' facilities are more than 1.5 but equal or less than 16.5.

The overall percentage correctly predicted is 29.3%.

4. SHAPE OF THE FACADES

The dependent variable 'Shape facade's is likely to be dependent on:
- Shape of facades;
- Shop windows;
- Advertisement signs.

The shape of the facades is rated on 7-point Likert scale varying from very negative to very positive. The independent variables indicate the actual shape of the facades (diverse (historical)/clean and uniform), the conspicuousness of the shop windows and the conspicuousness of the advertisement signs (discrete/neutral/striking).

4.1 GENERAL CONCLUSIONS

- The overall shape of the facades appreciation is fairly positive (19.0%), positive (30.2%) or very positive (26.4%).
- The actual shape of the facades has the largest impact on the results and, therefore, functions as the first splitting variable.
- Respondents rate the shape of the facades more positive when it is diverse (historical); the overall ratings are positive (34.1%) and very positive (36.7%), compared to positive (26.4%) and very positive (16.4%) when it is clean and uniform.
- The conspicuousness of the shop windows has the second largest impact on the results and, therefore, functions as the second splitting variable.
- In the diverse (historical) situation, respondents rate the conspicuousness of the shop windows more positive when it is discrete; the overall ratings are positive (35.7%) and very positive (52.4%), compared to positive (33.4%) and very positive (30.7%) when it is neutral. 'Striking' does not appear in this splitting variable.
- In the clean and uniform situation, respondents rate the conspicuousness of the shop windows more positive when it is neutral; the overall ratings

are positive (32.2%) and very positive (20.0%), compared to positive (24.6%) and very positive (15.3%) when it is striking. 'Discrete' does not appear in this splitting variable.
- The conspicuousness of the advertisement signs has the least impact on the results. However, there is a significant impact and, therefore, it functions as the third splitting variable.
- Respondents rate the shape of the facades, in both diverse and clean and uniform appearance, more positive when the advertisement signs are discrete instead of neutral, or neutral instead of striking.

The overall percentage correctly predicted is 32.9%.

4.2 CONCLUSIONS SHAPE OF THE FACADES AND MOTIVATIONAL ORIENTATION

Shape of facades, shop windows and advertisement signs

- The shape of the facades functions as the first splitting variable and therefore, has more influence on the respondents ratings in comparison with other variables like the variable 'consumers motivational orientation. This specific node 'shape of facades' distinguishes in diverse (historical) and clean and uniform (contemporary).
- In general, the respondents rate the overall shape of the facade more positive when it is 'diverse' (historical) and has a discrete shop windows; the overall ratings are positive (34.9%) and very positive (35.6%), compared to positive (26.7%) and very positive (16.3%) when the shape of the facades are contemporary.
- Respondents that are hedonic motivated rate the overall shape of facades, with neutral shop windows and with clean and uniform (contemporary) shapes of facades more positive than the utilitarian motivated consumers; the overall ratings are positive (38.2%) and very positive (25.5%), compared to positive (27.6%) and very positive (15.5%) when the consumers motivational orientation is utilitarian or both.
- The decision tree with no forced first variable lacks of further relevant

conclusions. Therefore, the variable 'consumers motivational orientation' is forced as first splitting variable.

The overall percentage correctly predicted is 34.1%.

Shape of facades etc. with forced first splitting variable
- Respondents that are motivated utilitarian or both rate the overall shape of facades significantly more positive when historical; the overall ratings are positive (38.5%) and very positive (34.6%), compared to positive (24.3) and very positive (14.9%) when the shape of the facades is clear and uniform (modern).
- Respondents that are motivated hedonic especially appreciate discete shop windows.

The overall percentage correctly predicted is 33.0%.

5. MATERIAL OF THE FACADES
The dependent variable 'Material of facades' is likely to be dependent on the independent variable 'Material of facades'.

The material of the facades is rated on 7-point Likert scale varying from very negative to very positive. The independent variable indicates actual material of the facades (historical/contemporary materials).

5.1 GENERAL CONCLUSIONS
- The overall material of the facades appreciation is fairly positive (22.1%), positive (29.7%), or very positive (19.8%).
- Respondents rate the material of the facades more positive when it is historical; the overall ratings are positive (33.2%) and very positive (27.8%); compared to positive (26.4%) and very positive (12.2%) when it is contemporary.

The overall percentage correctly predicted is 29.7%.

5.2 CONCLUSIONS MATERIAL OF THE FACADES AND MOTIVATIONAL ORIENTATION
- Material of the facades functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with other variables. This specific node distinguishes equal to or less than historical and contemporary.
- Utilitarian motivated respondents rate the overall material facades more positive when historical; the overall ratings are positive (43.2%) and very positive (25.0%), compared to positive (31.0%) and very positive (27.0%) when the consumers orientation is hedonic or both.
- When the material of facades is contemporary, hedonic motivated respondents rate the material of the facades more positive than respondents that are utilitarian or both; the overall ratings are positive (27.9%) and very positive (13.2%), compared to positive (25.1%) and very positive (10.6%) when the consumers orientation is utilitarian or both.
- The decision tree with no forced first variable lacks of further relevant conclusions. Therefore, the variable 'consumers motivational orientation' is forced as first splitting variable.

The overall percentage correctly predicted is 30.3%.

Material facades etc. with forced first splitting variable
- The forced splitting variable 'consumers motivational orientation' reveals that respondents no matter what the orientation rate the material of facades more positive when historical. This emphases the general conclusion.

The overall percentage correctly predicted is 30.3%.

6. MATERIAL PAVEMENT
The dependent variable 'Material pavement' is likely to be dependent on the independent variable 'Material pavement'.

The material pavement is rated on 7-point Likert scale varying from very negative to very positive. The independent variable indicates actual material of the pavement (rough/smooth).

6.1 GENERAL CONCLUSIONS

- The overall material of the pavement appreciation is neutral (20.4%), fairly positive (23.7%) or positive (25.2%).
- Respondent's ratings indicate no clear preference for rough or smooth pavement materials; the overall ratings are positive (23.4%) and very positive (18.3%), compared to positive (25.8%) and very positive (10.8%) when it is smooth.

The overall percentage correctly predicted is 25.2%.

The reason for the lack of a preference may be that there is no variance in pavement materials in 's-Hertogenbosch, since each of the four locations contain smooth pavement materials. However, Maastricht has two locations with smooth pavements, and two locations with rough pavements. Therefore, another decision tree analysis is performed only for the city of Maastricht

Material pavement only in Maastricht

- Respondents rate the material of the pavement more positive when it is rough; the overall ratings are positive (23.4%) and very positive (18.3%); compared to positive (21.0%) and very positive (11.3%) when it is smooth.

The overall percentage correctly predicted is 23.5%.

Implementing gender in the analysis will probably result in a different outcome. Females are likely to rate the pavement less positive when it is rough since that decreases the ease of walking when they are wearing shoes with heals. Therefore, the same analysis is performed with 'Gender' as an additional independent variable.

Material pavement only in Maastricht and gender.

- Gender has the largest impact on the results and, therefore, functions as the first splitting variable.
- Female respondent's ratings indicate no clear preference for rough or smooth pavement materials; the overall ratings are fairly positive (19.9%), positive (20.5%) and very positive (13.0%); compared to fairly positive (20.1%), positive (19.0%) and very positive (11.5%) when it is smooth.
- Male respondents rate the material of the pavement more positive when it is rough; the overall ratings are positive (28.1%) and very positive (27.0%), compared to positive (26.6%) and very positive (10.9%) when it is smooth.

The overall percentage correctly predicted is 26.0%.

6.2 CONCLUSIONS MATERIAL PAVEMENT AND MOTIVATIONAL ORIENTATION

- Material of the pavement functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with other variables. This specific node distinguishes smooth and rough material of pavement. As previously discussed only the Maastricht will be taken in account with respect to the material of pavement.
- Respondents that are motivated hedonic rate the material of pavement more positive when smooth contrary to responders that are motivated utilitarian or both; the overall ratings are positive (23.3%) and very positive (12.5%), compared to positive (17.6%) and very positive (8.3%) when it is smooth.
- The decision tree with no forced first variable lacks of further relevant conclusions. Therefore, the variable 'consumers motivational orientation' is forced as first splitting variable. This resulted in no further relevant conclusions.

The overall percentage correctly predicted is 26.8%.

7. COLOUR OF THE FACADES

The dependent variable 'Colour facade's is likely to be dependent on the independent variable 'Colour facade's.

The colour of the facades is rated on 7-point Likert scale varying from very negative to very positive. The independent variable indicates actual colour of the facades (dark/mixed/bright).

7.1 GENERAL CONCLUSIONS
- The overall colour of the facades appreciation is neutral (20.8%), fairly positive (24.3%) or positive (23.6%).
- The actual colour of the facades has the largest impact on the results when it is split into 'Mixed' as one node, and 'Bright; Dark' as another node. This functions as the first splitting variable.
- Respondents rate the colour of the facades more positive when it is mixed; the overall ratings are positive (29.2%) and very positive (19.2%), compared to positive (18.3%) and very positive (9.0%) when it is bright or dark.
- Considering the node 'Bright; Dark', resulting in the second splitting variable, respondents rate the colour of the facades more positive when it is bright; the overall ratings are neutral (23,0%), fairly positive (25,9%), positive (19.7%) and very positive (10%), compared to neutral (25,7%), fairly positive (22,0%), positive (17.0%) and very positive (7.8%) when it is dark.

The overall percentage correctly predicted is 27.3%.

7.2 CONCLUSIONS COLOUR OF THE FACADES AND MOTIVATIONAL ORIENTATION
- The colour of the facades functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with other variables. This specific node distinguishes mixed and dark; bright colours of facades.
- Regarding the consumers motivational orientation no clear statements can be made regarding the colour of facades. In general the respondents prefer the mixed colour of facades instead of the dark and brighter ones; the overall ratings are positive (29.0%) and very positive (18.2%), compared to positive (18.3%) and very positive (8.8%) when it is dark or bright. These results emphasise the general findings.

The overall percentage correctly predicted is 27.9%.

8. AMOUNT OF LIGHT

The dependent variable 'Amount of light' is likely to be dependent on:
- Amount of light;
- Weather;
- Indoor/outdoor.

The amount of light is rated on 7-point Likert scale varying from very negative to very positive. The independent variables indicate the actual amount of light (low/average/high), the weather (cloudy/partially cloudy/sunny) and indoor (indoor/outdoor).

8.1 GENERAL CONCLUSIONS
Amount of light.
- The first splitting variable distinguishes 'Average' as one node, and 'High; Low' as another.
- The seconds splitting variable distinguishes 'High' and 'Low'. Respondents rate the amount of light more positive when it is low; the overall ratings are positive (49.6%) and very positive (20.9%), compared to positive (37.9%) and very positive (22.0%) when it is high.

The overall percentage correctly predicted is 37.0%

Amount of light, weather, indoor/outdoor.

- Including the indoor/outdoor variable in the same analysis as displayed above, results in 'Weather' functioning as the second splitting variable.
- There is no clear effect of the weather on the rating of the amount of light; the overall results are positive (38.0%) and very positive (22.5%), compared to positive (52.3%) and very positive (17.0%) when it is cloudy.

The overall percentage correctly predicted is 37.0%

8.2 CONCLUSIONS AMOUNT OF LIGHT AND MOTIVATIONAL ORIENTATION

- The amount of light functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with other variables. This specific node distinguishes high; low and average amounts of light.
- No clear positive or negative statement about the influence of the consumers motivational orientation. Also the forced first variable consumers motivational orientation lacks of further relevant conclusions.

The overall percentage correctly predicted is 37.6%.

9. BACKGROUND NOISE

The dependent variable 'Background noise' is likely to be dependent on:
- Background noise;
- Crowdedness;
- Music.

The background noise is rated on 7-point Likert scale varying from very negative to very positive. During the survey value options were given for background noise (low, average and high), crowdedness (quiet, average and crowded) and music (no or yes).

9.1 GENERAL CONCLUSIONS

- The overall appreciation of background noise is mostly neutral (29.6%), fairly positive (23.6%) or positive (21.7%).
- The background noise has the largest impact on the results and, therefore, functions as the first splitting variable.
- Respondents rate the background noise more positive when it is low; the overall ratings are fairly positive (20.6%), positive (26.2%) and very positive (23.0%), compared to fairly positive (24.1%), positive (21.0%) and very positive (10.7%) when it is average or high.
- Concerning the node 'Low background noise', the crowdedness functions as the splitting variable. Respondents rate the background noise more positive when the crowdedness is quiet or average; the overall ratings are fairly positive (22.0%), positive (28.0%) and very positive (32.0%), compared to fairly positive (19.7%), positive (25.0%) and very positive (17.1%) when it is crowded.
- Concerning the node 'Average; High background noise', the music functions as the splitting variable. Respondents rate the background noise more positive when there is music present; the overall ratings are fairly positive (25.1%), positive (26.6%) and very positive (12.7%), compared to fairly positive (23.5%), positive (17.1%) and very positive (9.4%) when it is absent.

The overall percentage correctly predicted is 31.9%.

9.2 CONCLUSIONS BACKGROUND NOISE AND MOTIVATIONAL ORIENTATION

- Since the motivational orientation of the respondent functions as one of the last splitting variable, there are no relevant conclusions in the decision tree without forced variables. Forcing the motivational orientation as the first splitting variable also results in no relevant conclusions. Therefore, a decision tree analysis is performed using only the two variables motivation orientation and background noise.

- The amount of background noise functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with other variables. This specific node distinguishes average; high and low amount of background noise.
- Respondents rate in general the background noise more positive when the amount of background noise is low; the overall ratings are positive (26.1%) and very positive (20.7%), compared to positive (21.2%) and very positive (10.4%) when it is average or high.
- Forcing the motivational orientation as the first splitting variable results in no relevant conclusions about the background noise.

The overall percentage correctly predicted is 32.2%.

10. MUSIC
The dependent variable 'Music' is likely to be dependent on the independent variable 'Music'. The music is rated on 7-point Likert scale varying from very negative to very positive. The independent variable indicates that at the time of the survey no music was played.

10.1 GENERAL CONCLUSIONS
- The overall rating results concerning music are mostly neutral (47.5%), fairly positive (16.0%), positive (11.5%). In this rating, there is a distinction between the presence (n=304) or absence (n=532) of music.
- Respondent's ratings indicate no clear preference but there is a tendency for the presence of music. When music is present, the overall ratings are neutral (38.2%), fairly positive (19.4%), positive (17.4%) when no music is present, the overall ratings are neutral (52.8%), fairly positive (14.1%), positive (8.1%).

The overall percentage correctly predicted is 47.5%.

10.2 CONCLUSIONS MUSIC AND MOTIVATIONAL ORIENTATION
- The presence of music functions as the first splitting variable. Therefore,

this variable has more influence on the respondents ratings in comparison with other variables. This specific node distinguishes presence 'yes' and 'no'.
- Respondents that are hedonically motivated rate the presence of music more positive than utilitarian and both motivated consumers; the overall ratings are positive (22.9%) and very positive (11.1%), compared to positive (14.9%) and very positive (13.4%) when motivated both.
- Forcing the motivational orientation as the first splitting variable results in no relevant conclusions.

The overall percentage correctly predicted is 36.1%.

11. INDOOR/ OUTDOOR
The dependent variable 'Indoor/outdoor' is likely to be dependent on the independent variable 'Indoor/ outdoor'. The indoor/outdoor is rated on 7-point Likert scale varying from very negative to very positive.

11.1 GENERAL CONCLUSIONS
- The overall indoor/outdoor is mostly neutral (27.9%), fairly positive (19.5%), positive (25.8%), and very positive (17.2%) when it is concerns indoor. In this rating, there is no distinction between the indoor (n=230) or outdoor (n=688) of situations.
- Respondents ratings indicate a preference for an outdoor location; the overall ratings are neutral (26.3%), positive (28.1%), and very positive (17.9%), compared to neutral (32.6%), fairly positive (24.8%), positive (19.1%) for an indoor location.

The overall percentage correctly predicted is 29.2%.

11.2 CONCLUSIONS INDOOR/ OUTDOOR AND MOTIVATIONAL ORIENTATION
- The presence of indoor functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison

with other variables. This specific node distinguishes indoor 'yes' or 'no'.

- As previously concluded, respondents rate the outdoor location more positive regardless of their motivational orientation; the overall ratings are positive (28.3%) and very positive (17.0%), compared to positive (19.1%) and very positive (14.7%) when indoor is yes.
- The decision tree with no forced first variable lacks of further relevant conclusions. Therefore, the variable 'consumers motivational orientation' is forced as first splitting variable. The forced first variable 'consumers motivational orientation' lacks of further relevant conclusions apart from emphasizing that regardless of their motivational orientation respondents prefer no indoor.

The overall percentage correctly predicted is 27.9%.

12. GREENERY

The dependent variable 'Greenery' is likely to be dependent on the independent variable 'Greenery'. The greenery is rated on 7-point Likert scale varying from very negative to very positive. During the inventory of the survey locations the amounts of greenery were taken in account.

12.1 GENERAL CONCLUSIONS

- The overall greenery is mostly neutral (23.6%), fairly negative (18.7%), negative (15.9%). In this rating, there is no distinction between the presence (n=350) or absence (n=568) of greenery.
- Respondents ratings indicate a clear preference for the presence of greenery in the shopping environment; the overall ratings are fairly positive (18.3%), positive (15.1%) and very positive (6.9%), compared to fairly positive (11.8%), positive (6.0%) and very positive (3.2%) when it is absent.
- The overall conclusion is that the respondents are more positive when greenery is present at the survey locations. However, although it is the

last splitting variable, respondents rate the greenery more positive when it is present but when the amount is smaller than or equal to 8, compared to an amount lager than 8 but smaller than or equal to 17.

The overall percentage correctly predicted is 25.2%.

12.2 CONCLUSIONS GREENERY AND MOTIVATIONAL ORIENTATION

- The amount of greenery functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with other variables. This specific node distinguishes greenery equal or less than 16.5 and more than 16.5.
- Other than emphasizing a clear preference for greenery no forced first variable lacks of further relevant conclusions.

The overall percentage correctly predicted is 26.6%.

Greenery with forced first splitting variable

- The decision tree with the forced first variable reveals that hedonic motivated respondents are slightly more positive about greenery; the overall ratings are positive (10.5%) and very positive (4.5%), compared to positive (8,0%) and very positive (4.3%) when motivated utilitarian or both. The hedonically motivated respondent prefer a greenery amount of more than 16.5.

The overall percentage correctly predicted is 24.6%.

13. FURNITURE

The dependent variable 'Furniture' is likely to be dependent on the independent variable 'Furniture'. The furniture is rated on 7-point Likert scale varying from very negative to very positive. The independent variable indicates actual presence of furniture (yes/no).

13.1 GENERAL CONCLUSIONS

- The overall furniture appreciation is mostly neutral (28.4%), fairly negative (20.2%) or fairly positive (14.8%). In this rating, there is no distinction between the presence or absence of furniture.
- Respondents rate the furniture more positive when it is present; the overall ratings are neutral (24.3%), fairly positive (25.2%) and positive (21.7%), compared with neutral (29.0%), fairly positive (13.3%) and positive (8.5%) when it is absent.

The overall percentage correctly predicted is 28.5%.

13.2 CONCLUSIONS FURNITURE AND MOTIVATIONAL ORIENTATION

- The presence of furniture functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with the other variable. This specific node distinguishes the presence of furniture 'yes' or 'no'.
- Other than emphasizing a clear preference for furniture no forced first variable lacks of further relevant conclusions; the overall ratings are positive (8.5%) and very positive (3.9%), compared to positive (21.4%) and very positive (7.1%) when furniture is absent.

The overall percentage correctly predicted is 28.8%.

Furniture with forced first splitting variable

- The decision tree with the forced first variable reveals that hedonic and both motivated respondents are more positive about the presence of furniture; the overall ratings are positive (17.1%) and very positive (8.6%), compared to positive (9,0%) and very positive (3.5%) with the absence of furniture.

The overall percentage correctly predicted is 29.3%.

14. SHOP WINDOWS

The dependent variable 'shop windows' is likely to be dependent on:
- Shop windows;
- Advertisement signs.

The shop windows are rated on 7-point Likert scale varying from very negative to very positive. The independent variables indicate the actual conspicuousness of the shop windows and the conspicuousness of the advertisement signs (discrete/neutral/striking).

14.1 GENERAL CONCLUSIONS

- The overall shop windows appreciation is neutral (18.5%), fairly positive (30.4%) and positive (29.8%).
- The actual conspicuousness of the shop windows has the largest impact on the results and, therefore, functions as the first splitting variable.
- Respondents rate the shop windows more positive when it is discrete; the results are fairly positive (16.7%), positive (33.3%) and very positive (31.7%), compared to fairly positive (32.6%), positive (29.3%) and very positive (9.5%) when it is neutral or striking.
- The node 'Discrete' results in no further splitting variables.
- The conspicuousness of the advertisement signs has the second largest impact on the results and, therefore, functions as the second splitting variable (for the node 'Neutral; Striking').
- In the neutral and striking shop windows situation, respondents rate the conspicuousness of the advertisement signs more positive when it is neutral or discrete; the overall ratings are fairly positive (32.4%), positive (30.9%) and very positive (10.0%), compared to fairly positive (33.9%), positive (19.3%) and very positive (6.4%) when it is striking.

The overall percentage correctly predicted is 32.8%.

14.2 CONCLUSIONS SHOP WINDOWS AND MOTIVATIONAL ORIENTATION

- The appearance shop windows functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with the other variable. This specific node distinguishes the appearance in neutral; striking and discrete.
- Other than emphasizing a clear preference for the discrete appearance no forced first variable lacks of further relevant conclusions; the overall ratings are positive (33.3%) and very positive (30.6%), compared to positive (29.6%) and very positive (9,9%) when neutral or striking.

The overall percentage correctly predicted is 35.3%.

Shop windows with forced first splitting variable

- The decision tree with the forced first variable reveals that hedonic motivated respondents are more positive about the discrete appearance of shop windows; the overall ratings are positive (28.1%) and very positive (35.9%) when discrete, with positive (35.8%) and very positive (10.7%) when the appearance is neutral or striking.

The overall percentage correctly predicted is 34.8%.

15. ADVERTISEMENT SIGNS

The dependent variable 'Advertisement sign's is likely to be dependent on the independent variable 'Advertisement sign's. The advertisement signs are rated on 7-point Likert scale varying from very negative to very positive. The independent variable indicates actual conspicuousness of the advertisement signs (discrete/neutral/striking).

15.1 GENERAL CONCLUSIONS

- The overall advertisement signs appreciation is mostly neutral (34.9%), fairly positive (25.8%) or positive (17.4%).
- Respondents rate the shop windows more positive when it is neutral or

discrete; the overall ratings are neutral (34.7%), fairly positive (25.8%) and positive (18.3%), compared to neutral (35.8%), fairly positive (25.7%) and positive (11.0%) when it is striking.

- In the neutral and discrete advertisement signs situation, respondent's ratings indicate no clear preference for neutral or discrete advertisement signs; the overall ratings are neutral (33.3%), fairly positive (26.1%), positive (19.4%) and very positive (6.8%), compared to neutral (36.4%), fairly positive (25.5%), positive (17.0%) and very positive (10.1%) when it is mixed.

The overall percentage correctly predicted is 34.9%.

15.2 CONCLUSIONS ADVERTISEMENT SIGNS AND MOTIVATIONAL ORIENTATION

- The appearance advertisement signs functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with the other variable. This specific node distinguishes the appearance in neutral; discrete and striking.
- Respondents that are hedonically motivated rate the advertisement signs more positive than utilitarian motivated consumers when the appearance neutral or discrete. Furthermore they prefer a discrete appearance of advertisement signs; the overall ratings are positive (19.6%) and very positive (11.7%), compared to positive (19.5%) and very positive (8.0%) when the appearance is neutral.

The overall percentage correctly predicted is 34.5%.

Advertisement signs with forced first splitting variable

- The decision tree with the forced first variable reveals that hedonic motivated respondents are slightly more positive about the general appearance of advertisement signs; the overall ratings are positive (19.2%) and very positive (9.2%), compared to positive (16.2%) and very positive (6.0%) when motivated utilitarian or both. The forced first variable

'consumers motivational orientation' lacks of further relevant conclusions. The overall percentage correctly predicted is 34.5%.

16. WIDTH OF THE STREET
The dependent variable 'Width street' is likely to be dependent on:
- Width street;
- Crowdedness;
- Width to height ratio.

The width of the street is rated on 7-point Likert scale varying from very negative to very positive. The independent variables indicate the actual with of the street, the crowdedness (quiet/average/crowded) and the width to height ratio (numerically, width divided by the amount of storeys).

16.1 GENERAL CONCLUSIONS
- The overall width of the street appreciation is fairly positive (24.1%), positive (38.9%) or very positive (21.8%).
- The actual width of the street has the largest impact on the results and, therefore, functions as the first splitting variable.
- Respondents ratings indicate clear preference for the width of the street; the overall ratings are fairly positive (16.7%), positive (31.0%) and very positive (27.8%), compared to fairly positive (25.3%), positive (40.2%) and very positive (20.8%) when it is wider than 6.5 meters.
- The crowdedness has the second largest impact on the results and, therefore, functions as the second splitting variable.
- In the situation with a width of equal to or less than 6.5 meters, respondents rate the width of the street more positive when the crowdedness is average or quiet; the overall rating results are fairly positive (16.0%), positive (42.0%) and very positive (30.0%), compared to fairly positive (17.1%), positive (23.7%) and very positive (26.3%) when it is crowded.

- The node 'Crowdedness' in the equal to or less than 6.5 meters situation, results in no further splitting variables.
- In the situation with a width of more than 6.5 meters, respondents ratings indicate no clear preference for the crowdedness, the overall ratings are fairly positive (25.4%), positive (36.6%) and very positive (25.2%) when it is average, compared to fairly positive (25.1%), positive (43.6%) and very positive (16.5%) when it is quiet or crowded.
- The width to height ratio has the third largest impact on the results and, therefore, functions as the third splitting variable.
The overall percentage correctly predicted is 39.1%.

16.2 CONCLUSIONS WIDTH OF THE STREET AND MOTIVATIONAL ORIENTATION
- The width of the street functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with the other variable. This specific node distinguishes a width equal or less than 6.5 or larger than 6.5 meters.
- The decision tree with no forced first variable lacks of further relevant conclusions. Therefore, the variable 'consumers motivational orientation' is forced as first splitting variable.
The overall percentage correctly predicted is 39.3%.

Width of the street with forced first splitting variable
- Respondents that are hedonically motivated rate the width of the street slightly more positive when equal or less than 6.5 meters; the overall ratings are positive (28.1%) and very positive (28.1%), comparing to positive (42.0%) and very positive (19.8%) when larger than 6.5 meters.
The overall percentage correctly predicted is 39.4%.

17. HEIGHT BUILDINGS

The dependent variable 'height buildings' is likely to be dependent on:
- Height buildings;
- Width of the street;
- Width to height ratio.

The height of the buildings is rated on 7-point Likert scale varying from very negative to very positive. During the survey value options were given for height of buildings (actual dimensions), width of the street (actual dimensions) and the width to height ratio.

17.1 GENERAL CONCLUSIONS

- The overall appreciation of height buildings is mostly positive (35.8%), fairly positive (24.0%) or neutral (18.5%).
- The width of the street has the largest impact on the results and, therefore, functions as the first splitting variable.
- The splitting variable width of the street shows that the most significant differences are at a width of less or more than 6.5 meters. Respondents rate the height of the buildings more positive when the width of the street is equal to or smaller than 6.5 meters, the overall ratings are positive (31.7%) and very positive (34.9%), compared to positive (36.5%) and very positive (14.9%) when it is more than 6.5 meters.
- Concerning the node with a width of the street more than 6.5 meters, the height of the buildings functions as the splitting variable. Respondents rate the height of the buildings more positive when it is larger than 3.5 storeys; the overall ratings are positive (43.7%) and very positive (16.1%), compared to positive (30.9%) and very positive (14.0%) when it is equal to or less than 3.5 storeys.
- The width to height ratio does not function as a splitting variable and, therefore, has no significant influence on the results.

The overall percentage correctly predicted is 37.3%.

17.2 CONCLUSIONS HEIGTH BUILDINGS AND MOTIVATIONAL ORIENTATION

- The width-height ratio functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with the other variable. This specific node distinguishes a width to height ratio equal or less than 4.5 and larger than 4.5.
- The motivational orientation is the second splitting variable linked to the note larger than a width-height ratio of 4.5. Utilitarian respondents rate with to height ratop larger than 4.5 more positive than respondents that are motivated hedonic of both; the overall ratings are positive (36.9%) and very positive (15.3%), compared to positive (24.8%) and very positive (12.4%) when motivated hedonic of both.

The overall percentage correctly predicted is 38.8%.

Height of buildings with forced first splitting variable

- The decision tree with the forced first variable reveals that hedonic and utilitarian motivated respondents are more positive about a width of the street when equal or less than 6.5 meters. The forced first variable 'consumers motivational orientation' lacks of further relevant conclusions about the height of buildings.

The overall percentage correctly predicted is 38.9%.

18. WIDTH TO HEIGHT RATIO

The dependent variable 'height buildings' is likely to be dependent on:
- Width to height ratio;
- Width of the street;
- Height of buildings.

The width-height ratio is rated on 7-point Likert scale varying from very

negative to very positive. During the survey value options were given for width of the street (actual dimensions), height of the buildings (actual dimensions) and the width to height ratio.

18.1 GENERAL CONCLUSIONS
- The overall appreciation of width to height ratio is neutral (18.5%), fairly positive (25.1%) and positive (33.3%).
- The width of the street has the largest impact on the results and, therefore, functions as the first splitting variable.
- The splitting variable width of the street shows that the most significant differences are at a width of less or more than 6.5 meters. Respondents rate the width to height ratio more positive when the width of the street is equal to or less than 6.5 meters; the overall rating results are positive (31.0%) and very positive (33.3%), compared to positive (33.7%) and very positive (15.2%) when it is larger than 6.5 meters.
- Concerning the node more than 6.5 meters, the width to height ratio functions as the splitting variable. Respondents rate the width to height ratio more positive when it is equal to or smaller than 3.5; the overall ratings are positive (40.4%) and very positive (15.2%); compared to positive (28.9%) and very positive (15.1%) when it is larger than 3.5.
- Concerning the node with a width to height ratio larger than 3.5, the width to height ratio functions as the splitting variable. Respondents rate a value equal to or smaller than 4.5 meters as more positive.

The overall percentage correctly predicted is 34.5%.

18.2 CONCLUSIONS WIDTH TO HEIGHT RATIO AND MOTIVATIONAL ORIENTATION
- The width of the street functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with the other variable. This specific node distinguishes a width equal or less than 6.5 meters and larger than 6.5 meters.

- Width of the street functions as the most important variable concerning the rating of respondent regarding the width-height ratio. Overall the respondents rate the width-height ratio more positive when the width of the street is equal or less than 6.5 meters; the overall ratings are positive (30.6%) and very positive (31.5%), comparing to positive (34.0%) and very positive (15.1%) when larger than 6.5 meters.

The overall percentage correctly predicted is 35.0%.

Width to height ratio with forced first splitting variable
- The decision tree with the forced first variable emphasises that hedonic and utilitarian motivated respondents are more positive about a width of the street when equal or less than 6.5 meters. The forced first variable 'consumers motivational orientation' lacks of further relevant conclusions about the width-height ratio.

The overall percentage correctly predicted is 34.5%.

19. CROWDEDNESS
The dependent variable 'Crowdedness' is likely to be dependent on:
- Crowdedness;
- Width of the street;
- Height of buildings.

The crowdedness is rated on 7-point Likert scale varying from very negative to very positive. During the survey value options were given for crowdedness (quiet, average or crowded) and width of the street (actual dimensions).

19.1 GENERAL CONCLUSIONS
- The overall appreciation of crowdedness is neutral (22.3%), fairly positive (26.8%) and positive (32.6%).
- The width of the street has the largest impact on the results and, therefore,

functions as the first splitting variable.

- Respondents rate the crowdedness more positive when the width of the street is equal to or less than 6.5 meters; the overall ratings are positive (29.4%) and very positive (28.6%), compared to positive (33.1%) and very positive (10.0%) when it is more than 6.5 meters.
- Concerning the node equal to or less than 6.5 meters, the crowdedness functions as the splitting variable. Respondents rate the crowdedness more positive when it is average or quiet instead of crowded.
- The variable height of buildings proved not to be of any significance.

The overall percentage correctly predicted is 34.0%.

19.2 CONCLUSIONS CROWDEDNESS AND MOTIVATIONAL ORIENTATION

- The width of the street functions as the first splitting variable. Therefore, this variable has more influence on the respondents ratings in comparison with the other variable. This specific node distinguishes a width equal or less than 6.5 meters and larger than 6.5 meters.
- With respect to the motivational orientation of the respondents this decision tree, with forced or no forced first splitting variable, lacks further relevant conclusions.

The overall percentage correctly predicted is 33.1%.

6.3.1 CONCLUSIONS DECISION TREE ANALYSIS

TRANSPORTATION MODE
Respondents visiting the shopping area by car rate the accessibility of the area more positive when the distance to the nearest parking is equal to or less than 100 meters. With respect to the different motivational orientations, no clear statements can be made based on the decision tree analysis.

A short distance to the nearest public transport stop has a positive effect on the appreciation of the accessibility for respondents arriving by public transport or other transport modes, including respondents arriving by car. There is no clear distinction between rating results concerning different different motivational orientations of respondents.

RETAIL AND LEISURE
The presence of fashion and luxury shops has a significant positive influence on the appreciation of the shop offer since respondents rate the shop offer more positive when the amount of fashion and luxury shops increases. When the number of fashion and luxury shops is more than 15 shops and less than 35 all motivational orientations are more positive. Daily shopping and other shops than fashion an luxury tend to have no significant influence on the respondents.

The offer of restaurant/leisure facilities is rated highest if the amount of restaurants/leisure facilities in a certain shopping area is between 6 and 17. The restaurant or leisure facilities are rated more positive by all motivational orientations when present in a given shopping area. All motivational orientations rate the overall 'restaurants/leisure' more positive when number 'restaurants/leisure' facilities are more than 2 but equal or less than 17.

APPEARANCE
The shape of the facades is appreciated more positive by all motivational orientations when it is historical instead of clean and uniform. In the case of a diverse (historical) appearance, respondents prefer a discrete conspicuousness of shopping windows. Respondents that are hedonic motivated rate the overall shape of facades, with neutral shop windows and with clean and uniform (contemporary) shapes of facades more positive than the utilitarian motivated. In general, the material of the facades is rated more positive when it is historical. Contrary to expectations utilitarian motivated

consumers rated the historical facades and historical material of facades more positive than hedonic motivated respondents. Distinguishing indoor and outdoor locations, the respondent's ratings indicate a clear preference for an outdoor location regardless of their motivational orientation. It should be taken into account that the weather conditions during the surveying days were good since there were three sunny days, one partially clouded day and one clouded day. There were no rainy days.

Excluding the actual shape of the facades and examining only the shop windows with advertisement signs as an added variable, respondents are more positive when the conspicuousness of both variables is discrete. For advertisement signs as an individually examined item, the results are similar. Hedonic motivated consumers rated the conspicuousness of both shop windows and advertisement signs more positive when neutral or discrete. Comparing to the two characteristics mentioned before, the advertisements signs have the least influence on the respondent's ratings of the shape of the facades. In both diverse (historical) and clean and uniform situations, respondents prefer discrete advertisement signs. Respondents that are hedonic motivated prefer discrete shop windows and rate discrete advertisement signs more positive than utilitarian shoppers.

The material of the pavements is in general appreciated more positive when it is rough, this is contrary to the preference of smooth material by hedonic motivated shoppers. Linking the gender of the respondent to the appreciation of the pavement material nullifies the preference of rough materials for female respondents. However, the results concerning females also indicate no preference for smooth pavement materials. This obviously results in the fact that males show a clear preference for rough materials.

ENVIRONMENT

Background noise seems to be more positive when the level of background noise is low. On locations with low background noise, respondents prefer a quiet or average crowdedness. Music was only present at locations where the background noise was average or high, and had a positive effect on the respondent's ratings. Respondents that are hedonically motivated rate the presence of music more positive than utilitarian and consumers with mixed motivations.

Examining the presence of greenery and furniture shows that it has a positive influence, regardless of their motivational orientation. Hedonic motivated consumers are slightly more positive when greenery and furniture is present than utilitarian consumers. Concerning the amount of light it is found that respondents are more positive when brightly lit.

DIMENSIONS

The decision tree analysis concerning the width of the street, implementing the actual width of the street, the crowdedness and the width to height ratio, proves that the width of the street has the largest impact on the results. Respondents prefer a width equal to or smaller than 6.5 meters. This is particularly noticeable with hedonic motivated consumers who rate this slightly more positive than utilitarian motivated consumers.

The dependent variables height of the buildings and the width to height ratio are both separately linked to the independent variables height of the buildings, width of the street and width to height ratio. In both cases, the width of the street has the most influence and, again, there is a strong preference for a width equal to or smaller than 6.5 meters. Concerning the appreciation of the height of the buildings when the width of the street is more than 6.5 meters, the actual height of the buildings functions as the

most important variable and results in a more positive appreciation when the buildings are higher than 3 storeys. Distinguishing the motivational orientations, the utilitarian motivated shopper rate this height more positive when the width to height ratio is larger than 4.5 compared to hedonic or both motivated shopper. Concerning the height of buildings and width to height ratio no further significant conclusions with respect to the consumers motivational orientation can be done.

The large effect of the width of the street is once again confirmed by the appreciation of the crowdedness. Performing the analysis with the crowdedness, width of the street and the height of the buildings results in a more positive crowdedness appreciation when the width of the street is equal to or smaller than 6.5 meters. In that situation, respondents prefer a quiet or average crowdedness.

6.4 DECISION TREE ANALYSIS ON FACTORS
The factors are rescaled into the 7-point Likert scales varying from very negative to very positive. This paragraph describes the decision tree analysis, linking the factors relevant independent variables. The factors concern dimensions, architecture and environment.

1. FACTOR DIMENSIONS
The factor 'Dimensions' is likely to be dependent on the latent variables:
- Width of the street;
- Height of the buildings;
- Width to height ratio;
- Crowdedness.

The factor 'Dimensions' is rated on 7-point Likert scale varying from very negative to very positive. The width of the street and the height of the

buildings are measured in meters and the width to height ratio is the width of the street divided by the number of storeys. The crowdedness is measured in 'quiet', 'average' or 'crowded'.

1.1 GENERAL CONCLUSIONS
- The overall dimensions ratings are neutral (35.4%), fairly positive (27.9%) and positive (10.3%).
- The crowdedness has the largest impact on the results and, therefore, functions as the first splitting variable.
- The factor dimensions has more positive, but also more negative ratings when the crowdedness is crowded. In the crowded situation, the width of the street functions as the splitting variable. When the crowdedness is average or quiet, the height of the buildings functions as the splitting variable.
- When the crowdedness is crowded, respondents rate the dimensions more negative when the width of the street is equal to or less than 6.5 meters; the overall ratings are negative (17.3%) and very negative (2.7%), compared to negative (9.9%) and very negative (0.9%) when it is more than 6.5. When this width is more than 6.5 meters, respondents prefer a height of the buildings over 4 storeys.
- When the crowdedness is average or quiet, respondents rate the dimensions more positive when the height of the buildings is more than 4 storeys; the overall ratings are fairly positive (30.3%) and positive (11.2%), compared to fairly positive (26.8%) and positive (8.2%) when it is equal to or less than 4 storeys.
- When the height of the buildings is equal to or less than 4 storeys, respondents prefer a quiet crowdedness instead of an average crowdedness. When the height of the buildings is more than 4 storeys, respondents prefer an average crowdedness.

The overall percentage correctly predicted is 35.7%.

1.2 CONCLUSIONS FACTOR DIMENSIONS AND MOTIVATIONAL ORIENTATION

- The motivational orientation of the respondent functions as the third splitting variable and the first splitting variable remains 'Height of buildings'. To conclude: the respondent's motivational orientation does not have the most influence on the results.
- With respect to the motivational orientation of the respondents this decision tree, with forced or no forced first variable, lacks further relevant conclusions.

The overall percentage correctly predicted is 37.1%.

2. FACTOR ARCHITECTURE

The factor 'Architecture' is likely to be dependent on the latent variables:
- Material facades;
- Shape facades;
- Colour of facades.

The factor 'architecture' is rated on 7-point Likert scale varying from very negative to very positive. The material of the facades is measured in 'historical' or 'contemporary and the shape of the facades in 'diverse (historical)' or 'clean and uniform'.

2.1 GENERAL CONCLUSIONS

- The overall architecture ratings are neutral (34.2%), fairly positive (32.7%) or positive (13.0%).
- The shape of the facades has the largest impact on the results and, therefore, functions as the first splitting variable.
- Respondents rate the architecture more positive when the shape of the facades is diverse (historical); the overall ratings are fairly positive (39.6%) and positive (18.3%), compared to fairly positive (26.0%) and positive (8.0%) when it is clean and uniform.
- The diverse (historical) shape of facades has no further splitting variables.

- When the shape of the facades is clean and uniform, the colour of the facades functions as the splitting variable. Respondents rate the architecture more positive when the colour of the facades is bright; the overall ratings are fairly positive (31.8%) and positive (9.6%), compared to fairly positive (19.9%) and positive (6.2%) when it is dark.

The overall percentage correctly predicted is 38.7%.

2.2 CONCLUSIONS FACTOR ARCHITECTURE AND MOTIVATIONAL ORIENTATION

- The motivational orientation of the respondent functions as the second splitting variable and the first splitting variable remains 'Shape of facades'. To conclude: the respondent's motivational orientation does not have the most influence on the results.
- Respondents that are motivated both hedonic and utilitarian rate the shape of the facades when diverse more positive than hedonic motivated consumers; the overall ratings are fairly positive (40.7%) and positive (22%), compared to fairly positive (36.2%) and positive (18.3%) when hedonic motivated. Utilitarian motivated respondents rate the diverse shape of facades the least positive of the motvational orientations.
- When the shape of the facades is clean and uniform, the colour of the facades functions as the splitting variable.
- Respondents that are motivated hedonically rate the architecture more positive when the colour of the facades is bright comparing to respondents that are motivated utilitarian of both; the overall ratings are fairly positive (35.0%) and positive (11.7%), compared to fairly positive (28.4%) and positive (6.4%) when motivated utilitarian or both.
- There are no further relevant conclusions concerning the motivational orientation. Therefore, the motivational orientation is forced to function as the first splitting variable.

The overall percentage correctly predicted is 39.2%.

Architecture with forced first splitting variable.

- Forcing the motivational orientation as the first splitting variable results in a node with respondents that are motivated both or hedonic and a node with respondents that are motivated utilitarian.
- Respondents that are utilitarian motivated rate the shape of facades more positive when actual shape of facades is historical; the overall ratings are fairly positive (45.5%) and positive (11.4%), compared to fairly positive (24.0%) and positive (6.4%), when the shape of facades are clean and uniform (modern).

The overall percentage correctly predicted is 39.2%.

3. FACTOR ENVIRONMENT

The factor 'environment' is likely to be dependent on the latent variables:
- Greenery;
- Furniture.

The factor 'environment' is rated on 7-point Likert scale varying from very negative to very positive. The variable 'greenery' is measured in a numeric amount and the furniture is measured in its appearance.

3.1 GENERAL CONCLUSIONS

- The overall environment rating results are neutral (41.6%), fairly positive (13.0%) or positive (4.8%).
- The furniture has the largest impact on the results and, therefore, functions as the first splitting variable.
- Respondents rate the environment more positive when there is furniture present; the overall ratings are negative (2.6%), fairly positive (17.4%) and positive (7.8%), compared to negative (26.0%), fairly positive (12.4%) and positive (4.4%) when it is absent.
- When there is furniture present, there are no further splitting variables.

- When there is no furniture present, the presence of greenery functions as the splitting variable. The environment (on location without furniture) is rated more positive when there is greenery present; the overall ratings are fairly positive (12.9%) and positive (7.7%), compared to fairly positive (12.0%) and positive (1.8%) when it is absent.

The overall percentage correctly predicted is 41.6%

3.2 CONCLUSIONS FACTOR ENVIRONMENT AND MOTIVATIONAL ORIENTATION

- The motivational orientation of the respondent functions as the third splitting variable and the first splitting variable remains 'Furniture'. To conclude: the respondent's motivational orientation does not have the most influence on the results.
- There are no further relevant conclusions concerning the motivational orientation other than emphasising more general conclusionsTherefore, the motivational orientation is forced to function as the first splitting variable.

The overall percentage correctly predicted is 42.2%

Architecture with forced first splitting variable.

- Forcing the motivational orientation as the first splitting variable results in a node with respondents that are motivated hedonic and a node with respondents that are motivated utilitarian or both.
- Respondents that are utilitarian motivated rate the environment more negative when there is no furniture or greenery present than respondents that are motivated both; the overall ratings are fairly negative (31.0%) and negative (25.0%), compared to fairly negative (27.7%) and negative (14.3%) when the respondent is motivated both.

The overall percentage correctly predicted is 42.4%

6.4.1 CONCLUSIONS DECISION TREE ANALYSIS ON FACTORS

The results arising from the factor 'Dimensions', containing the latent variables 'Width of the street', 'height buildings', 'Width to height ratio' and 'Crowdedness', show similar conclusions as these latent variables individually do. The crowdedness and width of the street show the most importance and cause more positive dimension ratings. In crowded situations, respondents are more negative when the width of the street is equal to or smaller than 6.5 meters. The decision tree on the individual characteristic 'Width of the street' proves that respondents in general prefer streets smaller than 6.5 meters. To conclude, the crowdedness has clear effect on the appreciation of the width of the street, which functions as latent variable of the factor 'Dimensions'. Respondents on location with street wider than 6.5 meters prefer a buildings height that is over 4 storeys.

The factor 'Architecture', which is based on 'Material of facades', 'Shape facades', is mainly dependent on the shape of facades and rated more positive when this is diverse (historical). This preference is mostly noticeable for utilitarian motivated respondents. Respondents that are motivated hedonically rate the architecture more positive when the colour of the facades is bright comparing to respondents that are motivated utilitarian of both

Performing the analysis on the factor containing greenery and furniture and linking it to these variables indicates that, for all motivational orientations, the environment is rated more positive when there is furniture and greenery present.

6.5 THE MULTINOMIAL LOGIT MODEL

This section describes the goal and elaboration of the Multinomial Logit (MNL) model. The first part clarifies how the model functions and to which results it is supposed to lead. Firstly, the model is applied including a set of relevant characteristics to determine the effect of these variables on the respondent's choice of favourite shopping location. Thereafter, the same method is used to provide more insight into the respondents' favourite location concerning sphere. The last section argues the MNL tests which are based on the same principle, but includes the motivation orientation of the respondents

6.5.1 MODELING PREFERENCES

In order to investigate which independent variables play a role in the preference or selection of a particular shopping area by shoppers, the multinomial logit model is used during this study. By using the MNL model, the probability which shopping area within Maastricht or 's-Hertogenbosch has the preference by the respondents can be calculated. The physical characteristics may play an important role in the overall attractiveness of a shopping area. These physical characteristics or parameters can provoke either a positive or negative association with the particular shopping area and some of these can be more important than others.

The inventory of the physical characteristics has been done for the various survey locations within Maastricht and 's-Hertogenbosch. These characteristics have been previously described in chapter four as part of the analysis of the survey locations. Because each of the variables has a possible influence on the appreciation of the specific shopping area, it is necessary to estimate the parameters for the various variables. The degree of influence of these variables is determined by the statistical analysis program Limdeb. This program estimates the model by maximum likelihood estimation. All physical characteristics serve as variables in the model. Nominal variables are not

prohibited in the MNL model. Therefore, dummy variables are created using only the values '1' when a certain aspect is factual, and '0' when a certain aspect is not factual (appendix I). The estimated parameters in the model reveal the usefulness and the positive or negative influence of each of these physical characteristics. The MNL model is based on the assumption that each individual i has a number of alternatives which form the choice set C_i. This choice set may differ across individuals.

Each of the alternatives consists of a number of characteristics (k). The score of characteristic k of alternative j is denoted by X_{ijk}. All of the characteristics of alternative j have a certain usefulness (utility). The total of this utility for each of the characteristics of alternative j is achieved by using the linear additive function. The structural utulity of alternative j is the sum of the scores of the weighted characteristics of alternative i.

$$V_{ij} = \sum_k \beta_k \neg X_{ijk}$$
    - V_{ij} the structural utility of alternative j for individual i
    - β_k the weight for characteristic k
    - X_{ijk} the score of characteristic k of alternative j for individual i

All Individuals have different preferences and each of the physical characteristics will be obtained by sensory perception. It is plausible that the utility of a certain alternative is not constant over time for each of the individuals and differs across individuals. Besides the structural utility of the alternative, a second component is included to take the differences across individuals and time into account. Furthermore, the error component may account for measurement errors and model specification errors. The sum of these two components is equal to the total random utility (U_{ij}) of alternative j for individual i: $U_{ij} = V_{ij} + \varepsilon_{ij}$

It is assumed that individuals always choose the alternative with the highest utility from the set of alternatives. The probability that individual i will choose alternative j ($p_{ij}|C_i$) is equal to the probability that the total utility of alternative j for individual i (U_{ij}) is higher than the total utility of all of the other alternatives in the choice set. To determine the probability that a certain alternative will be chosen from the total set of alternatives, an assumption about the statistical distribution of the error component is necessary. Predominantly, the double exponential distribution is used (Johnson & Kotz, 1970). In addition, it is assumed that the variance of the error components is equal for all alternatives. Based on these assumptions the multinomial logit model is defined as follows:

$$p(_{ij}|C_i) = \exp(V_{ij}) / \sum_m \exp(V_{im})$$
    - $p(_{ij}|C_{ij})$ the probability that individual i chooses for alternative j from choice set C_i.
    - V_{ij} the structural utility of alternative j for individual i.

6.5.2 APPLYING THE MULTINOMIAL LOGIT MODEL

Firstly, the variables (the characteristics of the alternative shopping locations) are tested one by one in the model to explore the contribution of each variable to correctly predict the most preferred shopping location. Next, given the most promising characteristics, different combinations of dissimilar characteristics were entered into the model. The combination witch best predicts the chosen alternatives can be considered as the optimal model. This resulted in a coefficient and a level of significance for each individual variable (characteristic). The coefficient indicates to which degree the variable influences the utility and the level of significance indicates whether this coefficient is different from zero. A coefficient is significant when the corresponding level of significance is less or equal then 0.05. The log-likelihood is a measure of goodness of fit. A value close to 0 indicates a good

fit. The variables that are inserted in the model are tested for correlation (see appendix J). Variables with high mutual correlations should not be entered together into the model

If the coefficients are significant and have the expected sign, it is required to verify how well the model predicts the observed choice behaviour. To verify this, the Rho² is calculated given the log-likelihood of the optimal model and the log-likelihood of the null model. The parameters (coefficients) in the null model are all zero, implying that the probability that an individual chooses for a given alternative is equal to 1 /J, where J consists of the number of alternatives in the choice set. The value of Rho² lies, in principle, between 0 and 1. A high Rho² score indicates that the model performs well. In general, the model performs reasonable if Rho² exceeds 0.2. If the value is zero, the model is not better then the null model.

6.5.3 RESULTS FAVOURITE LOCATION

Each individual characteristic was tested with the MNL model to distinguish the characteristics suitable for further analysis. Removing characteristics with a significance level larger than 0.05 or with fixed parameters leads to 18 characteristics appropriate for further analysis regarding the favourite location (Table 6.5). The combination of characteristics 'Fashion and luxury shops', 'Daily shops', 'Restaurants/leisure outlets', 'Shape of facades' and 'Distance to public transport stop' performs the best with Rho2 = 0,0410 (log-likelihood optimal model = -957.2949 and log-likelihood null-model = -998.2112). Further results regarding the favourite location can be found in Table 6.4.

The parameter for the characteristic 'Fashion and luxury shops' seems to indicate that respondents prefer a higher number of these shops due to the positive coefficient. The utility value for this characteristic is 1.005. This means

that if an area scores '1' on this attribute, the utility of the area increases with 1.005. The presence of daily shops results in an increase of the utility with 0.445. Restaurants and leisure facilities located in the specific shopping area lead to a decrease of utility with 0.629 when the amount is larger than 6. The utility of a location increases with 0.293 when the shape of the facades is diverse (historical) and the utility increases with 0.515 when the distance to the nearest public transport stop is equal or less than 150 meters.

6.5.4 RESULTS SPHERE

Each individual characteristic was tested with the MNL model to distinguish the characteristics suitable for further analysis. Removing characteristics with a significance level larger than 0.05 or with fixed parameters leads to the 22 characteristics appropriate for further analysis (Table 6.5). The combination of the characteristics 'Shape of facades', 'Colour of facades (Dark)', 'Amount of light (Low)', 'Background noise (High)' and 'Width of the street' performs the best with Rho2 = 0,0744 (log-likelihood = -917.0171 and log-likelihood null-model= -990.7564). The estimated values can be found in Table 6.6.

The utility of the area increases by 1.184 when the variable 'Shape of facades' scores '1'. This means that the utility increases when the shape of the facades is diverse (historical) instead of clean and uniform. When the colour of the facades is dark, the utility increases by 0.091 and when the amount of light

TABLE 6.4 - COMBINATION OF CHARACTERISTICS FAVOURITE LOCATION

CHARACTERISTICS	COEFFICIENT	P[|Z|]>z]|
Fashion and luxury shops (>15 shops/ ≤15 shops)	1.0048172	0.0000
Daily shops (>1 shops/ ≤1 shops)	0.44477915	0.0001
Restaurants/leisure outlets (>6 shops/ ≤6 shops)	-0.6292883	0.0041
Shape of facades (Historical/ Clean and uniform)	0.29329768	0.0233
Distance to public transport stop (≤150 m./ >150 m.)	0.51547568	0.0002

TABLE 6.5 - CHARACTERISTICS FAVOURITE LOCATION AND SPHERE

CHARACTERISTICS FAVOURITE LOCATION	CHARACTERISTICS SPHERE
1. Accessibility	1. Accessibility
Distance to parking facility	Distance to parking facility
Distance to public transport	Distance to public transport
2. Shops	2. Shops
Fashion and luxury	Fashion and luxury
Daily	Daily
Other	Other
3. Restaurants/ leisure outlets	3. Restaurants/ leisure outlets
4. Shape of facades	4. Shape of facades
5. Material of the facades	5. Material of the facades
6. Material of the pavements	6. Material of the pavements
7. Colour of the facades (dark and bright)	7. Colour of the facades (dark and bright)
8. Colour of the pavements	8. Colour of the pavements
9. Amount of light (high)	9. Amount of light (low and high)
10. Background noise (high)	10. Background noise (low and high)
11. Music	11. Music
12. Smell	12. Smell
13. Indoor	13. Indoor
14. Greenary (amount)	14. Greenary
15. Street furniture	15. Street furniture
16. Shop Windows (striking)	16. Shop Windows (discrete and striking)
17. Advertisement signs (discrete and striking)	17. Advertisement signs (discrete and striking)
18. Tidiness	18. Tidiness
19. Width of the street	19. Width of the street
20. Height of the building	20. Height of the building
21. Width to height ratio	21. Width to height ratio
22. Crowdedness	22. Crowdedness
24. Colour of the light	24. Colour of the light
25. Elevation	25. Elevation
26. Weather	26. Weather

TABLE 6.6 - COMBINATION OF CHARACTERISTICS SPHERE

CHARACTERISTICS	COEFFICIENT	P[|Z|]>z]|
Shape of facades (Historical / Clean and uniform)	1.18442586	0.0000
Colour of facades (Dark/ Mixed)	0.09090205	0.0005
Amount of light (Low/ Average)	1.06839462	0.0002
Background noise (High/ Average)	-0.59684380	0.0016
Width of the street (>6.5 meters/ ≤6.5 meters)	-0.35535489	0.0046

is low, the utility increases by 1.068. The coefficient of the background noise (high) is -0.597. Therefore, a high background noise results in a decreasing location utility of 0.597. The utility of the location increases when the width of the street is less than 6.5 meters. This is because the utility decreases with 0.355 when this variable scores '1', which is the case when the width is more than 6.5 meters.

6.5.5 PREFERENCE FAVOURITE LOCATION AND SPHERE
Subsequently, the probability that a survey location is chosen is determined. Therefore, the utility of each survey location is determined by summing the products of estimated parameters and scores of corresponding physical characteristics. This will be reported in the following subsections.

Maastricht
The least preferred shopping location in Maastricht is Mosae Forum (Table 6.7). The probability for this location to be the first choice is 16.1%. The location Stokstraat comes in at third place with 22.5% probability to perform be selected as first choice. Slightly better than Stokstraat is the Entre Deux which is the second most preferred location to be chosen (26.2%). The Maastrichter Brugstraat has the highest probability to be chosen as favourite location (35.1%).

Mosae Forum seems to be the shopping area least likely to be chosen as favourite location concerning sphere (table 6.7). The probability for this location to be the first choice is 6.3%. Entre Deux comes at the third place with 11.4% probability to be chosen as first choice. The second most preferred location to be chosen as first choice is the Maastrichter Brugstraat (33.9%). The Stokstraat has the highest probability to be chosen regarding the sphere in the area (48.4%).

's-Hertogenbosch
The least preferred shopping location in 's-Hertogenbosch is Burgemeester Loeffplein (Table 6.8). The probability for this location to be the first choice is 13.5%. The location Arena comes in at the third place with 21.1% probability to be the first choice. The Kerkstraat (24.5%) is slightly better than Arena and the Hinthamerstraat has the highest probability to be chosen as favourite location (41.0%).

Burgemeester Loeffplein seems to be the shopping area least likely to be chosen as favourite location concerning sphere (table 6.8). The probability for this location to be the first choice is 10.9%. Arena comes at the third place with 17.5% probability to be the first choice. The most likely locations to be chosen as first choice areKerkstraat (35.8%) and Hinthamerstraat (35.8%).

Validation
In tables 6.7 to 6.8, the percentage each location is preferred according to the survey is reported as well. Comparing model predictions with the actual survey results can be considered as a means of validating the MNL model. The percentages according to the survey show a reasonable degree of similarity with model predictions.

6.6 THE MULTINOMIAL LOGIT MODEL AND MOTIVATIONAL ORIENTATION
This section again concerns a multinomial logit analysis but distinguishes itself from the previous chapters due to the implementation of the respondent's motivational orientation. The main purpose is to determine which

TABLE 6.7 - RESULTS FAVOURITE LOCATION AND SPHERE OF MAASTRICHT

SURVEY LOCATIONS	V	EXP(V)	P(β)	MODEL	SURVEY
FAVOURITE LOCATION					
Maastrichter Brugstraat	1.22	3.40	0.35	35.1%	29.7%
Stokstraat	0.78	2.18	0.23	22.5%	27.7%
Entre Deux	0.93	2.53	0.26	26.2%	25.9%
Mosae Forum	0.44	1.56	0.16	16.1%	16.7%
SPHERE					
Maastrichter Brugstraat	0.83	2.29	0.34	33.9%	28.4%
Stokstraat	1.18	3.27	0.48	48.4%	40.5%
Entre Deux	-0.26	0.77	0.11	11.4%	19.8%
Mosae Forum	-0.86	0.42	0.06	6.3%	11.3%

TABLE 6.8 - RESULTS FAVOURITE LOCATION AND SPHERE OF 'S-HERTOGENBOSCH

SURVEY LOCATIONS	V	EXP(V)	P(β)	MODEL	SURVEY
FAVOURITE LOCATION					
Hinthamerstraat	1.11	3.03	0.41	41.0%	40.7%
Kerkstraat	0.59	1.81	0.24	24.5%	24.4%
Arena	0.44	1.56	0.21	21.1%	27.2%
Burgemeester Loeffplein	0	1	0.14	13.5%	7.7%
SPHERE					
Hinthamerstraat	0.83	2.29	0.36	35.8%	37.1%
Kerkstraat	0.83	2.29	0.36	35.8%	34.2%
Arena	0.12	1.12	0.18	17.5%	18.1%
Burgemeester Loeffplein	-0.36	0.70	0.11	10.9%	10.6%

characteristics affect the utility of a location and if and how it depends on the motivational orientation of the consumer. The analyses are based on the characteristics that proved to be of significant influence in the previous MNL analyses. First, the results concerning the favourite location are described, then follows the favourite location regarding sphere.

6.6.1 FAVOURITE LOCATION AND FAVOURITE LOCATION CONCERNING SPHERE
Subsequently, the probability that a survey location is chosen is determined. The utility of each survey location is determined by several parameters which have been estimated for each physical characteristic. Linking the characteristics to the respondents motivational orientation provides the following set of variables:

Dummy Y_1	Hedonic motivated	Dummy $Y_1 =$	1
	Utilitarian motivated	Dummy $Y_1 =$	-1
	Both	Dummy $Y_1 =$	0
Dummy Y_2	Hedonic motivated	Dummy $Y_2 =$	0
	Utilitarian motivated	Dummy $Y_2 =$	-1
	Both	Dummy $Y_2 =$	1

Each regular variable is multiplied by Y_1 and Y_2, yielding possible interaction variables. By stepwise adding and removing these interaction variables to the models presented above, the most optimal model was obtained.

CONCLUSION FAVOURITE LOCATION
Earlier analysis showed that the characteristics 'Fashion and luxury shops', 'Daily shopping', 'Restaurants', 'Shape of facades' and 'Distance to public transport stop' are significant for the respondents first choice of the favourite location. Each regular variable is multiplied by Y1 and Y2, yielding interaction variables.

The coefficients indicate that the motivational orientation significantly affects the utility assigned to the shape of facades regarding the choice of the respondent's favourite location.

The base part worth utility for the shape of facades is equal to 0.350. This means that if an area scores '1' on this attribute, the utility of the area increases by 0.350 However, this value increases by 0.241 in the case of hedonic motivated consumers and decreases by 0.241 in the case of consumers that are motivated both hedonic and utilitarian. For utilitarian consumers, the value remains the base part worth utility of 0.350. The other characteristics have no significant interaction, therefore these characteristics do not depend on the motivational orientation of the consumer as can be seen in Table 6.9. The Rho2 for this model is 0.041622.

The probability first choice in appendix K shows that respondents that are hedonic motivated in both Maastricht and 's-Hertogenbosch prefer historic shopping areas comparing to respondents that are motivated utilitarian of both. Probability first choice model in appendix K lacks further relevant statements.

TABLE 6.9 - CHARACTERISTICS FAVOURITE LOCATION

CHARACTERISTICS	COEFFICIENT	P[|Z|]>z]|
Fashion and luxury shops (>15 shops/ ≤15 shops)	0.97244482	0.000
Daily shops (>1 shop/ ≤1 shop)	0.43490638	0.0001
Restaurants/leisure outlets (>6 shops/ ≤6 shops)	-0.66122509	0.0034
Shape of facades (Historical/ Clean and uniform)	0.349410107	0.0101
Distance to public transport stop (≤150 m./ >150 m.)	0.48739469	0.0006
SIGNIFICANT		
Shape of facades	**0.24114098**	**0.0108**

CONCLUSION FAVOURITE LOCATION CONCERNING SPHERE

The characteristics 'Shape of facades', 'Colour of facades (Dark)', 'Amount of light (Low)', 'Background noise (High)' and 'Width of the street' appeared to be significant for the respondent's first choice of the favourite location concerning sphere. Linking these characteristics to the motivational orientation of the respondent provides an additional set of variables. The results of adding interactions with the motivational orientation are listed in Table 6.6.

Contrary to the coefficients of the favourite location the coefficients influencing the favourite location concerning sphere indicate that the physical charateristics do not have any significant interaction with the consumers motivational orientation. Therefore no specific charateristic contributes to a more positive sphere on a certain location from the consumers motivational orientations point of view.

6.7 CONCLUSIONS OF THE MULTINOMIAL LOGIT MODEL

In order to investigate which independent variables play a role in the preference or selection of a particular shopping area by shoppers, the multinomial logit model is used. Removing characteristics with a significance level larger than 0.05 or with fixed parameters, leads to 18 characteristics appropriate for further analysis regarding the favourite location. Regarding these variables, the combination of characteristics 'Fashion luxury shops', 'Daily shops', 'Restaurants/leisure outlets', 'Shape of facades' and 'Distance to public transport stop' performs the best. Testing the 22 characteristics appropriate for further analysis regarding the sphere, proves that the combination of the characteristics 'Shape of facades', 'Colour of facades (Dark)', 'Amount of light (Low)', 'Background noise (High)' and 'Width of the street' leads to the best results.

Taking the motivational orientation of the consumers into consideration in interaction with the observed characteristics, in choosing the favourite location the significant variable, according to the MNL analysis, appeared to be the shape of the facade. This value increases in the case of hedonic motivated consumers and decreases for consumers that are motivated both hedonic and utilitarian. The value shape of the facades for utilitarian consumers remains constant, thus of no influence in choosing their favourite location. The coefficients of the favourite location concerning sphere show that the characteristics have no significant interaction, therefore these characteristics do not depend on the motivational orientation of the consumer.

7. CONCLUSIONS AND RECOMMENDATIONS

This chapter describes the conclusions based on the literature review and data analyses. The goal of this research was to empirically determine which – and how – atmospherics contribute to the experiential value of the consumer, taking into account differences between the different motivational orientations of the shoppers. Decision tree analyses and multinomial logit analyses were performed to derive results from the dataset that was obtained by means of a survey. For the decision tree analysis, the dependent variables and factors, both representing the respondent's ratings regarding appreciation of shopping locations, were linked to independent variables representing spatial characteristics that are likely to influence the respondent's appreciation. This provides insight into the significant effects of certain variables on the rating scores of the respondents. The MNL analyses revealed which location respondents choose as most favourite location or which is the most preferable location regarding sphere, and which characteristics contribute to this choice.

This chapter is organized by firstly answering the sub questions and the main question. Thereafter, the respondents' most appreciated shopping location according to this study will be described. The final part of the conclusion sector discusses the results of the MNL model and finally, this section provides recommendations for further research, possible optimizations of the current study and some managerial recommendations.

The problem definition that will be answered is:

Which – and how do – atmospherics of an inner-city shopping area contribute to the experiential value of the consumer, differentiated by shoppers motivational orientation?

7.1 CONCLUSIONS
The problem definition is answered subsequently answering the following research questions:

1. How can experiential value be explained?
The literature review provided the answer to this question. Consumers in general are more willing to spend more time and money for a certain experience during a shopping trip. The experiential value is something personal and a measure of attractiveness of a shopping area based on interpretations and feelings provoked by the environment. Therefore, positive appreciated environmental characteristics lead to positive effects on the experiential value.

2. Which motivational orientations underlie consumer behavior?
The existing literature shows that two fundamental motivational orientations underlie the different shopping motives:

- Utilitarian; task-related, efficient and rational;
- Hedonic; subjective and personal, resulting in playfulness and fun.

The hedonic orientated consumers derive inherent satisfaction from the shopping activity itself while on the other hand the task orientated consumer engages in shopping out of necessity.

3. How can 'atmospherics' be defined to provide useful characteristics of the shopping area.
Atmospherics are attributes that may influence the consumers' perception about a specific shopping area. The literature review led to the definition that an atmospheric is an important environmental cue that provides consumers with an indication of the location quality. This definition includes items such as ambience, colour, smell, music and layout. Besides these items, other and more tangible aspects proved to be of importance for this study. Academic literature resulted in a list of 35 items which was shortened based on interviews with professionals in the field of retail. The eventual 25 characteristics can

TABLE 7.1 - FINAL ATMOSPHERIC CHARACTERISTICS

CHARACTERISTICS

• Accessibility	• Colour pavement	• Greenery	• Height buildings
• Shops	• Amount of light	• Furniture	• Width – Height ratio
• Restaurants/ leisure	• Background noise	• Shop Windows	• Crowdedness
• Shape of facades	• Music	• Advertisement Signs	• Other Visitors
• Material facades	• Smell	• Tidiness	• Colour of light
• Material pavement	• Indoor/ outdoor	• Width street	• Elevation
• Colour facades			

be described as tangible and intangible aspects of a shopping location that influences the environment perception and the behaviour of the consumer (Table 7.1).

4. Which – and how do – atmospherics contribute to the experiential value?
The following atmospherics affect the appreciation of the shopping location positively and therefore, have a positive influence on the experiential value.

Respondents in general prefer a historical appearance of the facades and pavements, and the shop windows and advertisement signs are preferably of low conspicuousness. The results show a preference for outdoor locations and narrow streets with a width of less than 6.5 meters. Locations with wider streets results in a more positive appreciation when the height of the buildings is more than 3 storeys. The crowdedness has the most positive influence when it is average or quiet.

5. What are the differences in experiential value between the motivational orientations?
Based on the conclusions and analyses, a good appreciated shopping location should be designed according to the following aspects.

A GOOD APPRECIATED SHOPPING LOCATION
Interesting findings were that all motivational orientations prefer an outdoor location with a historical appearance in both the shape and material of the facade. Contrary to expectations utilitarian motivated consumers rated the historical facades and historical material of facades more positive than hedonic motivated respondents. The presence of greenery, furniture and music in shopping locations appeared to be appreciated by all motivational orientations. This is especially the case for hedonic motivated consumers which also preferred narrow streets, discrete shop windows and rate discrete advertisement signs more positive than utilitarian shoppers.

FAVORITE SHOPPING LOCATION AND BEST SPHERE LOCATION
Based on the results of the MNL analysis, to optimize a shopping location's probability being considered a favourable shopping location, the locations should be characterised by the following characteristics:

- Fashion and luxury shop   the amount should exceed 15;
- Daily shops   should be present
- Restaurants/leisure outlet: the amount should exceed 4
- Shape of facades: should be historical
- Distance nearest public transport stop: should be equal to or less than 150 m.

However, the most appreciated shopping location in terms of sphere is characterised by:

- Shape of facades   should be diverse (historical);
- Colour of facades   should be dark;
- Amount of light   should be low;
- Background noise   should be average level;
- Width of the street   should be equal to or less than 6.5 m.

Taking the motivational orientation of the consumers into consideration in interaction with the observed characteristics, in choosing the favourite location the significant variable, according to the MNL analysis, appeared to be the shape of the facade. This value increases in the case of hedonic motivated consumers and decreases for consumers that are motivated both hedonic and utilitarian. The value shape of the facades for utilitarian consumers remains constant, thus of no influence in choosing their favourite location. The coefficients of the favourite location concerning sphere show that the characteristics have no significant interaction, therefore these characteristics do not depend on the motivational orientation of the consumer.

The existing academic literature on the contribution of physical characteristics of inner-city shopping areas concerning consumer experience concludes that the attributes: merchandising, services, accessibility, atmospherics, security and entertainment significantly influence the experiential value of consumers. This study complements the existing literature by measuring the effects of atmospherics on the experiential value of a shopping area. The result prove that the experiential value indeed is dependent from the atmospherics and their appreciation. The conclusions above confirm and reject some of the expectations that were made after conducting the literature review. As expected, the shape of the facades for hedonic motivated consumers has proven an important influence in choosing their favourite location. The most striking and unexpected of these is that utilitarian motivated consumers rated the historical facades and historical material of facades more positive than hedonic motivated respondents.

7.2 RECOMMENDATIONS FOR FURTHER RESEARCH

This research focuses on two cities, namely Maastricht and 's-Hertogenbosch. Both cities possess many common characteristics and are both located in the southern part of The Netherlands. This results in several restrictions, such

as; (demographic) personal characteristics are limited to the consumers that mostly live in the surrounding areas, only mid-size cities and inner city shopping areas are included in this study, the concerning locations have a clear distinction between a historical and non-historical appearance, obtained data is limited to the environmental characteristics of the eight survey locations. Obtaining the data occurred using surveys on the regarding shopping locations, which were established using literature and expert interviews. Although there was some additional information given by several respondents, the data is restricted to the answers obtained by the questions that were listed in the survey. This has the advantage that the amount of respondents is very high, but has the disadvantage that there is nearly any useable data beyond the survey data. Combining the obtained data with qualitative research will broaden the scope of the research. Another approach is to start with qualitative research among consumers on the shopping locations, and use this information gathering method, together with the expert interviews, to compile the questions for the survey.

Although, this study has a large number of environmental characteristics, there are more characteristics that can be useful for further research. On the other hand, this research has a comprehensive approach and it is likely that focussing on fewer individual aspects will result in other and more profound relationships and conclusions.

This study can be divided into two result-oriented studies, with general findings on one hand, and findings related to consumers' motivational orientation on the other hand. Two other studies, which are based on the same data set, concentrate at other (context) variables. The focus in these studies is on the comparison of historical and non-historical areas and the consumers' age. There are several possibilities for further research to a focus on a certain aspect, for instance: the consumers' gender, income class,

education level or other environmental characteristics such as an indoor or outdoor shopping area. The survey locations could also be taken in broader perspective by enlarging the survey area within the inner city shopping area.

To finish, recommendations towards shopping center developers and managers can be made to implement certain physical characteristics of this study which considered to have an important positive influence on the experiential value of the consumers when visiting a particular shopping location.

REFERENCES

Ahn, K.H. and Ghosh, A. (1989). Hierarchical models of store choice. *International Journal of Retailing*, Vol. 4 No. 5, pp. 39 – 52.

Allard T., Babin B.J., and Chebat J.C. (2009). When income matters: Customers evaluation of shopping mall's hedonic and utilitarian orientations. *Journal of Retailing and Consumer Services,* (16)*, 40–49*

Alqahtani, S.S. (2011). Shopping Centers Attractions, Saudi Customers Perspective. Retrieved from http://www.wbiconpro.com/507-Saleh.pdf.

Angell R., Megicks J., Memery J., Heffernan T. & Howell R.(2012). Understanding the older shopper: A behavioural typology. *Journal of Retailing and Consumer Services,* (19), 259–269.

Arcadis (2012). Mosae Forum Maastricht. Retrieved from http://www.arcadis.nl/projecten/Pages/Mosae%20Forum%20Maastricht.aspx

Arnold M.J. & Reynolds K.E. (2003). Hedonic shopping motivations. *Journal of Retailing,* (79), 77-95.

Arnold M.J., Reynolds K.E. (2012). Approach and Avoidance Motivation: Investigating Hedonic Consumption in a Retail Setting. *Journal of Retailing*, (in press).

Babin B.J., Darden W.R. & Griffin M. (1994). Work and or fun, measuring hedonic and utilitarian shopping value. *Journal of consumer research,* (20), 644-656.

Bell, S. (1999). Image and consumer attraction to intraurban retail areas: an environmental pshychology apporach, *Journal of Retailing and Consumer services*, No. 6, pp. 67-78.

Bellenger, D., Robertson, D. and Greenberg, B. (1977). Shopping centre patronage motives, *Journal of Retailing*, Vol. 53 No. 2, Summer, pp. 29-38.

Bellenger D.N., Korgaonkar P.K. (1980). Profiling the recreational shopper. *Journal of retailing*, (56), 77-91.

Bitner, M.J. (1992). Servicescapes: the impact of physical surroundings on customers and employees. *Journal of Services Marketing*, Vol 16, No. 6, pp. 515 – 534.

Borges A., Chebat J.C. & Babin B.J. (2010). Does a companion always enhance the shopping experience. *Journal of Retailing and Consumer Services,* (17), 294–299.

CBS (2010a). Gemeente Op Maat: Maastricht. Retrieved from http://www.cbs.nl/NR/rdonlyres/42D1B9E0-917F-4F37-A390-265DF480BE92/Maastricht.pdf.

CBS (2010b). Gemeente Op Maat:'s-Hertogenbosch. Retrieved from http://www.cbs.nl/NR/rdonlyres/42D1B9E0-917F-4F37-A390-265DF480BE92/0/Maastricht.pdf.

Chebat, J.C., Sirgy, J. and Grzeskowiak, S. (2010). How can shopping mall management best capture mall image. Journal of Business Research, Vol 63. pp. 735–740.

Chebat J.C. , Gélinas-Chebat C. &Therrien K. (2005). Lost in a mall, the effects of gender, familiarity with the shopping mall and the shopping value on

shoppers wayfinding process. *Journal of Business Research,* (58), 1590–1598.

Chebat J.C., Gélinas-Chebat C. & Therrien K. (2007). Gender-related wayfinding time of mall shoppers. *Journal of Business Research* (61), 1076–1082.

Cox. A.D., Cox D., Anderson R.D. (2005). Reassessing the pleasures of store shopping. *Journal of Business Research,* (58), 250-259.

CRS Group (2012). Branding Winkelcentrum. Retrieved from http://crsgroup. nl/wordpress/2012/04/04/vastgoed/

Deckers J.C. (2005). Op de voet gevolgd. Een onderzoek naar het routekeuzegedrag en de waardering voor pleinen van voetgangers in de binnenstad van Maastricht. Eindhoven: University of Technology Eindhoven.

Den Bosch (2011). Geschiedenis van Den Bosch. Retrieved from http://www. kunsttrip.nl/steden/maastricht/geschiedenis.htm

Dennis, C. Marsland, D. and Cockett, T. (2001). The mystery of consumer behavior: market segmentation and shoppers' choiches of shopping centers". *International Journal of New Product Development and Innovation Management*, September/ October, pp. 223-239.

Donovan, R., and Rossiter, J. (1982). Store atmosphere: an environmental psychology approach. *Journal of retaling*, Vol. 58, pp. 34-57.

Farrag, D.A., El Sayed, I.M. and Belk, R.W. (2010). Mall Shopping Motives and Activities, A Multimethod Approach. *Journal of International Consumer Marketing*, Vol. 22 No.2, pp. 95-115.

Farrel, J. (2003). One nation under goods: malls and the seductions of American Shopping, Smithsonian, pp 15.

FGH bank (2010). FGH Vastgoedbericht 2010. Utrecht.

FGH bank (2012). FGH Vastgoedbericht 2012. Utrecht.

Finn, A. & Louviere, J. (1996). Shopping centre image, consideration, and choice: anchor store contribution. *Journal of Business Research*, Vol. 35, pp. 241-251.

Gardner M. P. & Siomkos G. J. (1986). Toward a Methodology for Assessing Effects of In-store Atmosphere. *Advances in Consumer Research*, Vol. 13, pp. 27-31

Gautschi, D.A. (1981). Specification of patronage models for retail centre choice, *Journal of Marketing Research*,Vol. 18, May, pp. 162-174.

Frasquet, M., Gil, L. and Molla, A. (2001). Shopping centre selection modeling: a segmentation approach. *International Reviews of Retail Distribution and Consumer Research*, Vol. 11 No. 1, pp. 23-38.

HBD (2011). Multi-channel Monitor 2011. Rotterdam: Blauw Research

Heijde, van der & Peddemors (2006). Uitbreiding winkelgebieden in middelgrote binnensteden. *Real Estate Magazine,* 47, 20-23. Retrieved from http://www.stedplan.nl/downloadDoc.php3?id=20 http://www. stedplan.nl/downloadDoc.php3?id=20.

Holland History (2012). The city of Den Bosch, 's-Hertogenbosch, North Brabant. Retrieved from http://www.hollandhistory.net/holland_country_and_cities/den-bosch/den-bosch-holland.html

Howell, R. & Rogers, J. (1980). Research into shopping mall choice behavior. *Advances in Consumer Research*, Vol. 8, pp. 671-681.

Howel, K. (2005). Using shopping mall attributes to revitalize Australian small town retailing. In marketing: Building business, shaping society. Proceedings of the 2005 Academy of Marketing Conference. Helensburgh (Sco): Western Publishers, pp 1-13.

Hull, R. B., & Harvey, A. (1989). Explaining the emotion people experience in suburban parks. *Journal of Environment & Behavior*, Vol. 21, pp.323-345.

Ibrahim, M.F. and Ng, C.W. (2002). Determinants of entertaining shopping experiences and their link to consumer behaviour, Case studies of shopping centers in Singapore. *Journal of Leisure Property,* Vol. 2 No.4, pp. 338-357.

Jacobs, A.B. (1995). Great streets. MIT Press Ltd

Johnson, N.L., and Kotz, S. (1970) Continuous univariate distributions. New York: Houghton Miffin

Jackson V., Stoel L., & Brantley A. (2010). Mall attributes and shopping value, differences by gender and a generational cohort. *Journal of Retailing and Consumer Services*, (18), 1–9.

Kaltcheva V.D. & Weitz B.A. (2006). When should a retailer create an exciting store environment. *Journal of Marketing,* (70), 7–118.

Keizer, B. (2009). Trends in Retail 2009-2010: wake-up call? Het nieuwe 'consumentisme'. *Retail Trends*, 6 (10), 18-22.

Kooijman, D. (1999). Machine en theater. Ontwerp concepten van winkelgebouwen. Rotterdam: Uitgeverij 010.

Kunsttrip (2012). De geschiedenis van Maastricht. Retrieved from http://www.kunsttrip.nl/steden/maastricht/geschiedenis.htm

Laning M. and Vosjan T. (2011). Consument zoekt winkelbeleving die hem raakt. *Vastgoedmarkt*.

Lee,S.L., Ibrahim,M.F. and Hsueh-Shan, C. (2005). Shopping-centre attributes affecting male shopping behavior. *Journal of Retail and Leisure Property*, Vol. 4 No 4, pp. 324 -340.

Lunardo R. and Mbengue A. (2009). When atmospherics lead to inferences of manipulative intent Its effects on trust. *Journal of Retailling and Consumer Services*, (in press).

Mägi A.W. & Julander C.R. (2005). Consumers store-level price knowledge, Why are some consumers more knowledgeable than others. *Journal of Retailing,* (81), 319–329.

Martineau, P. (1958). The personality of the retail store. Harvard Business Reviews, Vol.36 No. 1, pp. 47-55.

Massicotte M.C., Michon R., Chebat J.C., Sirgy M.J. & Borges A. (2011). Effects of mall atmosphere on mall evaluation, Teenage versus adult shoppers. *Journal of Retailing and Consumer Services*, (18), 74–80.

Nevin, J. and Houston, N. (1980). Image as a component of attraction to intraurban shopping arreas. *Journal of Retailing*, Vol. 56 No. 1, Spring, pp. 77-93.

NRW (2011). Consumentenbeleving in winkelgebieden. Hallo, valt hier nog wat te beleven?

Pentecost R. & Andrews L. (2010). Fashion, retailing and the bottom line, the effect of generational cohorts, gender, fashion fanshop, attitudes and impulsive buying on fashion expenditure. *Journal of Retailing and Consumer Services,* (17), 43–52.

Quartier, K.,Christiaans, H., (2007). Retail design: Exploring atmospheric tools for creating experiences that influence consumers' mood and behaviour in retail spaces. Paper published in the proceedings of the Interiorsforumworld: 'designing designers: light as an architectural matter', Milan, Italy, 1-3 October, No. 07, pp. 68-82.

Raajpoot N.A., Sharma A., and Chebat J.C. (2008). The role of gender and work status in shopping center patronage. *Journal of Business Research,* (61), 825–833.

Ragagopal (2009). Growing shopping malls and behaviour of urban shoppers. *Journal of Retail & Leisure Property,* Vol. 8 No, 2, pp. 99–118.

Rintamäki T., Kanto A., Kuusela H., Spence M.T., (2006). Decomposing the value of department store shopping into utilitarian, hedonic and social dimensions: Evidence from Finland. *International Journal of Retail & Distribution Management,* (34), 6–24.

Roots and AnalyZus (2011). Winkelleegstand in 2020, Hoe internetgebruik en bevolkingsontwikkeling onze binnensteden beïnvloeden. Retrieved from: www.rootsadvies.nl/downlaiadsnewmessage/66/8cef5a17cbc3e0/factsheet-winkelleegstand.pdf.

Sit, J., Merrilees, B., Birch, D. (2003). Entertainment-seeking shopping centre patrons: the missing segments. *International Journal of Retail and Distribution Management*, 31, pp. 80-94.

Stone G. P. (1954). City shopper and urban identification, observations on the social psychology of city life. *American Journal of Sociology*, (60), 36-45.

Tauber E. (1972) Why do people shop. *Journal of Marketing*, (36), 46-59.

Tsai, S. (2009). Shopping mall management and entertainment experience: a cross-regional investigation. *The Service Industries Journal*. Vol. 30 No.3, pp. 321-337.

Turley L.W. and Milliman R.E. (2000). Atmospheric effects on shopping behavior, A review of the experimental evidence. *Journal of Business Research*, (49), 193–211.

Veenstra, M. (2012) De toekomst van retail: focus op bezoeker en experience. Retrvieed from: http://www.frankwatching.com/archive/2012/02/21/de-toekomst-van-retail-focus-op-bezoeker-en-experience/.

Verhoef P.C., Lemon K.N., Parasuraman A, Roggeveen A, Tsiros M., Schlesinger L.A (2009). Consumer Experience Creation: Determinants, Dynamics an Management Strategies. *Journal of Retailing* (85), 31-41.

Verma, R. (2007). Unlocking the secrets of customers. Cornell Center for Hospitality Research Report, pp 7.

Vosters C. (2008). Wat wil de nieuwe consument? Een onderzoek naar de behoeften van de consument en de ontwikkeling van nieuwe vormen van detailhandel. Nijmegen: Radboud University.

Wagner T. & Rudolph T. (2010). Towards a hierarchical theory of shopping motivation. *Journal of Retailing and Consumer Services*, (17), 415-429.

Wakefield, K.L. and Baker, J. (1998). Excitement at the mall: determinants and effects on shopping response. *Journal of Retailing*, Vol. 74 No. 4, pp. 515-539.

Wee, C.H. (1986). Shopping area image: its factor analytic structure and relationships with shopping trips and expenditure behavior. *Advances in Consumers Research*, pp. 48-52.

Weisbrod, G., Parcells, R., and Kern, C. (1984). A disaggregate model for predicting shopping area market attraction. *Journal of retailing*, Vol. 60, No. 1, Spring, pp. 65-83.

Westbrook R. A. & Black W. (1985). A motivation-based shopper typology. *Journal of Retailing*, (61), 78–103.

Wijnen G.J. (2010). Shopping behavior of expatriates. A cross-cultural study of American, British and Japanese expatriates in Amstelveen and Amsterdam. Eindhoven: University of Technology Eindhoven.

Wong, K.M., Lu, Y. and Yuan, LL. (2001). SCATTR: an instrument for measuring shopping centre attractiveness. *International Journal of Retail & Distrubition*, Vol 29 No.2, pp. 76-86.

Wong, Y., Osman, Syuhaily, O., Jamaluddin, A. and Yin-Fah, B.C (2012). Shopping motives, store attributes and shopping enjoyment among Malaysian youth. *Journal of Retailing and Consumer Services*, No. 19, pp. 240–248.

de Zeeuw F. (2012). Nederlandse woningen niet te duur. *Vastgoedmarkt*, 39, May, 20-21.

APPENDIX LIST

APPENDIX A - INTERVIEW

EXPERTS	FUNCTION	COMPANY
S. Bervoets	Centre manager	Multi Corporation
drs. I. Ploegmakers MRICS*	Manager Consultancy	WPM Groep
drs. ing. A. Ruigrok*	Ass. Director Research	Multi Corporation
B. Vervliet	Marketing	Multi Corporation
drs. F. Wigman**	Director	BRO

*   Committee member of the Dutch council of shopping centers (NRW).

**   Committee member of Platform Binnenstadsmanagement.

INTERVIEW NOTES

To complete my master Real estate Management & Development I am carrying out a research into consumer experience at inner-city shopping centers.

Through these interviews, I try to get clear which resources are being used by market parties to create an attractive shopping centre for consumers. More specifically, which resources are being used by market parties to create an atmospheric within the shopping centre, which fits the needs of the consumers? The interviews will be conducted among different disciplines, whose playing a significant role in the developing or exploitation phase of shopping centers. The results will be compared with academic literature. The results of the interviews and the academic literature will serve as the basis for further research among the users of shopping centers: the consumers.

This is interview contains questions about your involvement in the retail sector, the causes and effects of and the solutions of the upcoming problems in shopping areas, and finally in more detail about the role of atmospherics in shopping centers. Are there any questions, so far?

1. ROLE
- Could you briefly describe your function within the organization?
- Could you tell me in which way you are involved in the development or exploitation phase of shopping centers?

2. CAUSES AND EFFECTS
- What do you think, are the biggest upcoming problems / trends within the retail sector in shopping centers?
- What do you think, are the efforts of these problems?
- Are there, and if so, please explain the opportunities to tackle these problems?

3. INFLUENCE OF ATMOSPHERICS
The Academic literature and the Dutch Council of Shopping Centers suggest consumer behaviour and more specifically atmospherics as the most import solutions for the vacancy in shopping areas. In common approximately 30 minutes I would like to ask some questions about the role of atmospherics within a shopping centre.

4. HOW WOULD YOU DESCRIBE ATMOSPHERICS WITHIN A SHOPPING AREA?
To what extent is thinking about the concept atmospherics customary within your discipline? And in other disciplines? Do you know successful/ unsuccessful projects where remarkably focus is puttd

Do you think market parties experience atmospherics as a solution to solve the vacancy in shopping centers? Where does that appear from:
- Changing design principles?
- Increasing promotion budget
- Changing mind-set (shift to demand side)

What is the experience you have with atmospherics in shopping centers? How would you prefer?
- Successful experiences
- Unsuccessful experiences

How could you describe the role of atmospherics in comparison with other characteristics as accessibility, services, security, and retail supply? Would you prefer to see things differently? In which way/ with which measures should the market imply atmospherics into shopping centers with the purpose to meet the needs of consumers? Are that only existing measures or is there a new trend upcoming?

Roughly, there are 35 variables (table A.2) which contribute to atmospherics in shopping centers. I would like to know the expected effect of each measure (large or small) / I would like you to rank the measures in order of importance.

TABLE A.2 - ATMOSPHERIC CHARACTERISTICS

CHARACTERISTICS

• Indoor/ Outdoor	• Flooring	• Amount of light
• Accessibility	• Furniture	• Smell
• Advertisement	• Greenery	• Shape facades
• Air conditioned	• Height buildings	• Shop windows
• Architecture	• Location	• Size of the centre
• Background noise	• Material pavement	• Social Interactions
• Bars and Restaurants	• Material facades	• Spaciousness
• Colour pavement	• Music	• Temperature
• Colour facades	• Tidiness	• Traffic Flow
• Crowdedness	• Other visitors	• Width street
• Decoration	• Parking	• Width – Height ratio
• Entrances	• Shops	

Starting with most important (1) and ending with less important (35)

Do you like to add something to this conversation or do you want to make a point what could contribute to the research?

Many thanks. In due course I will send you the results.

APPENDIX B - SURVEY EXAMPLE 'S-HERTOGENBOSCH

Volgnummer	2				

O Hinthamerstraat
O Kerkstraat
O Arena
O Burg. Loeffplein

ENQUÊTE AFSTUDEERONDERZOEK CONSUMENTENBELEVING

Wij zijn vier afstudeerstudenten aan de Technische Universiteit en willen u voor ons afstudeerproject graag een aantal vragen stellen.

De enquête betreft deze specifieke locatie.

Bij voorbaat vriendelijk bedankt. Jeffrey, Wouter, Tim en Rick

1. Winkelmotivatie

1. Het doel van mijn bezoek is:
O   Doelgericht winkelen
O   Winkelen voor plezier
O   Beide
O   Anders, namelijk: ……

2. Toen ik ging winkelen, was mijn humeur:
Slecht   O   O   O   O   O   O   O   Goed

In hoeverre bent u het eens met de volgende stellingen?

	Oneens			0			Eens
3. Het winkelen is een waar genoegen	O	O	O	O	O	O	O
4. Vergeleken met andere dingen die ik had kunnen doen, is de tijd die ik aan het winkelen besteed werkelijk plezierig	O	O	O	O	O	O	O
5. Ik vind het leuk om me te verdiepen in spannende nieuwe producten	O	O	O	O	O	O	O
6. Het winkelen geeft mij een avontuurlijk gevoel	O	O	O	O	O	O	O

Vul de volgende drie vragen alleen in als u klaar bent met winkelen.

	Oneens			0			Eens
7. Met het winkelen heb ik precies bereikt wat ik wilde	O	O	O	O	O	O	O
8. Ik heb niet kunnen kopen wat ik werkelijk nodig had	O	O	O	O	O	O	O
9. Tijdens het winkelen heb ik precies die dingen gevonden waarnaar ik op zoek was	O	O	O	O	O	O	O

In welke mate zijn volgende aspecten van toepassing op wat u ervaart / heeft ervaren op deze locatie. Het gaat niet om de winkels die u ziet, maar om de omgeving.

	Helemaal van toepassing ↓			0			Helemaal van toepassing ↓
10. Oncomfortabel	O	O	O	O	O	O	O	Comfortabel
11. Deprimerend	O	O	O	O	O	O	O	Vrolijk
12. Kleurloos	O	O	O	O	O	O	O	Kleurrijk
13. Saai/Eentonig	O	O	O	O	O	O	O	Levendig

2. Beoordeling aspecten

Hoe beoordeelt u de volgende punten over deze specifieke locatie:

	--			0			++
14. Bereikbaarheid.	O	O	O	O	O	O	O
15. Winkelaanbod.	O	O	O	O	O	O	O
16. De horecagelegenheden (indien aanwezig).	O	O	O	O	O	O	O
17. Vorm van de gevels.	O	O	O	O	O	O	O
18. Materiaalgebruik gevels.	O	O	O	O	O	O	O
19. Materiaalgebruik bestrating.	O	O	O	O	O	O	O
20. Kleurgebruik gevels.	O	O	O	O	O	O	O
21. Kleurgebruik bestrating.	O	O	O	O	O	O	O
22. Hoeveelheid licht.	O	O	O	O	O	O	O
23. De achtergrondgeluiden.	O	O	O	O	O	O	O
24. De muziek (indien aanwezig).	O	O	O	O	O	O	O
25. De geur in de winkelstraat.	O	O	O	O	O	O	O
26. Het feit dat de straat niet/wel overdekt is.	O	O	O	O	O	O	O
27. Groenvoorzieningen.	O	O	O	O	O	O	O
28. Meubilair in de straat.	O	O	O	O	O	O	O
29. Winkeletalages.	O	O	O	O	O	O	O
30. De reclame in de straat.	O	O	O	O	O	O	O
31. Netheid.	O	O	O	O	O	O	O
32. Breedte van de winkelstraat.	O	O	O	O	O	O	O
33. Hoogte van de gebouwen in de winkelstraat.	O	O	O	O	O	O	O
34. Breedte-hoogteverhouding winkelstraat.	O	O	O	O	O	O	O
35. Het druktebeeld.	O	O	O	O	O	O	O
36. De andere bezoekers.	O	O	O	O	O	O	O
Vraag 75 en 76 alleen van toepassing op winkelcentrum Arena							
75. Kleur van het licht	O	O	O	O	O	O	O
76. Hoogteverschil	O	O	O	O	O	O	O

90

Hoe bekend bent u met de onderstaande locaties?

	Onbekend			0			Bekend
37. Hinthamerstraat	O	O	O	O	O	O	O
38. Kerkstraat	O	O	O	O	O	O	O
39. Arena	O	O	O	O	O	O	O
40. Burgemeester Loeffplein	O	O	O	O	O	O	O

Wat is uw algemeen oordeel van de onderstaande locaties?

	Negatief			0			Positief
41. Hinthamerstraat	O	O	O	O	O	O	O
42. Kerkstraat	O	O	O	O	O	O	O
43. Arena	O	O	O	O	O	O	O
44. Burgemeester Loeffplein	O	O	O	O	O	O	O

45. Op welke locatie verblijft u het liefst? Geef dit aan met de cijfers 1 (eerste keuze) t/m 4 (laatste keuze).

………. Hinthamerstraat

………. Kerkstraat

………. Arena

………. Burgemeester Loeffplein

46. Wat is de voornaamste reden voor uw voorkeur?

…….

…….

47. Welke locatie vindt u het meest sfeervol? Geef dit aan met de cijfers 1 (eerste keuze) t/m 4 (laatste keuze).

………. Hinthamerstraat

………. Kerkstraat

………. Arena

………. Burgemeester Loeffplein

48. En waarom?

…….

…….

In hoeverre bent u het eens met de volgende stellingen?

	Oneens			0			Eens
49. Deze locatie geeft mij een ontspannen/relaxed gevoel.	O	O	O	O	O	O	O
50. Deze locatie weerspiegelt het soort persoon dat ik ben.	O	O	O	O	O	O	O
51. Wat mij betreft zijn er betere locaties dan deze locatie.	O	O	O	O	O	O	O
52. Deze locatie geeft mij een gelukkig/blij gevoel.	O	O	O	O	O	O	O
53. Deze locatie geeft mij het gevoel dat ik mezelf kan zijn.	O	O	O	O	O	O	O
54. Deze locatie vervult mijn behoefte beter dan elke andere locatie.	O	O	O	O	O	O	O
55. Deze locatie is een van mijn favoriete locaties.	O	O	O	O	O	O	O
56. Deze locatie zegt weinig over wie ik ben.	O	O	O	O	O	O	O
57. Deze locatie is de beste locatie om de dingen te doen waar ik het meest van geniet.	O	O	O	O	O	O	O
58. Ik zou deze locatie niet missen als deze er niet meer zou zijn.	O	O	O	O	O	O	O
59. Deze locatie is een goede afspiegeling van mijn identiteit.	O	O	O	O	O	O	O
60. Deze locatie is een goede locatie om de dingen te doen die ik het leukst vind.	O	O	O	O	O	O	O

5. Persoonsinformatie

61. Wat is uw leeftijd?

…….. jaar

62. Wat is uw geslacht?
O Man   O Vrouw

63. Wat is uw postcode?

…………………………………

64. Wat is uw huishoudensamenstelling?
O Alleenstaand zonder kinderen   O Alleenstaand met …. kinderen
O Samenwonend zonder kinderen   O Samenwonend met …. kinderen
O Student   O Anders: ……………………..

65. Wat is uw opleidingsniveau
O Basisonderwijs
O Middelbaar onderwijs
O MBO
O HBO
O Universiteit

66. Wat is uw beroepsactiviteit?
O Student   O Werkend   O Werkloos   O Gepensioneerd

67. Wat is het netto maandinkomen van uw huishouden?
O € 1.200 of minder per maand
O € 1.200 tot € 2.000 per maand
O € 2.000 tot € 4.000 per maand
O € 4.000 tot € 6.000 per maand
O € 6.000 tot € 8.000 per maand
O € 8.000 of meer per maand

68. Met wie bent u hier?
O Alleen   O Familie   O Vrienden

69. Samenstelling groep aanwezigen (<u>inclusief</u> uzelf):

Aantal vrouw(en): ……..   Aantal man(nen): ……..   Aantal kind(eren): ……..

70. Hoe bent u hier gekomen?
O Auto   O Fiets   O Openbaar vervoer   O Lopend   O Anders: ……………………..

71. Hoe vaak komt u hier om te winkelen?
O 2x per week of meer   O Wekelijks   O 2x per maand   O Maandelijks   O Minder

Hartelijk bedankt voor uw deelname

Wij danken u hartelijk voor uw deelname aan deze enquête. Mocht u geïnteresseerd zijn in de resultaten, vul dan hier uw e-mailadres in:
                    ………………………………………………………………………………………………………

Invullen door enquêteur

72. Drukte in straat: …………………………………………………………………………… (foto)

73. Weersomstandigheden: …………………………………………………………………………… (foto)

00. Volgnummer:

2	……	……	……	……
Stad	Locatie	Datum	Tijd	Enquêteur

Richtlijnen volgnummer
1.   Stad reeds ingevuld ('s-Hertogenbosch = 2)
2.   Locatie als volgt:
        1 = Hinthamerstraat
        2 = Kerkstraat
        3 = Arena
        4 = Burgemeester Loeffplein
3.   Datum als volgt: dag en maand aan elkaar
        →5 juli wordt '0507'
4.   Tijd op het moment van afronden weergeven in uren en minuten
        → 12:34u wordt '1234'
5.   Enquêteurnummer weergeven volgens onderstaande lijst:
        1. Boerebach, Jeffrey
        2. Dijkman, Wouter
        3. Op Heij, Tim
        4. Willems, Rick
        5.
        6.
        7.
        8.

APPENDIX C - SURVEY MANUAL

Dit onderzoek dient een indicatie te geven hoe de consument de betreffende winkellocatie ervaart. Hierbij wordt enerzijds onderscheid gemaakt tussen historische en moderne – of in vaktermen 'planmatige' – settings, de motivatie van de consument om de locatie te bezoeken en de overeenkomsten of verschillen die tot verschillende typen consumenten behoren. De focus ligt op de fysieke kenmerken van de omgeving en deze komen derhalve duidelijk naar voren in de enquête.

De enquête is duidelijk opgebouwd en maakt voornamelijk gebruik van de zogeheten 'Likert' schalen. Deze handleiding beschrijft stap voor stap hoe de enquête afgenomen dient te worden. De volgende stappen worden doorlopen:
- Aanspreken respondent en eventueel non-respons;
- Invullen vragenlijst;
- Vragen voor motiveringen (indien van toepassing);

1. Aanspreken respondent

Mogelijke manier van aanspreken:
"Goedemiddag, ik ben ……. . Student van de Technische Universiteit Eindhoven doen momenteel onderzoek onder bezoekers van deze locatie. Zou ik u hier een aantal vragen voor mogen stellen? Het duurt wellicht enkele minuten en u zou ons er enorm mee helpen."

Non-respons:
Als de respondent weigert, dienen de volgende gegevens op het aparte 'non-responseformulier' ingevuld te worden:
- Geslacht;
- Leeftijd (geschat) volgens de schalen: jonger dan 18, 19-25, 26-35, 36-45, 46-55, 56-65, 65 of ouder;
- Groepsgrootte, aantal volwassen en aantal kinderen (jonger dan 18).

2. Invullen vragenlijst

Het invullen van de enquête wijst voor zich. Desondanks enkele richtlijnen per onderdeel:

1. Winkelmotivatie
Dit onderdeel is bedoeld om te bepalen wat de reden is van de respondent om de locatie te bezoeken. In eerste instantie middels een specifieke vraag (vraag 1) en vervolgens op een meer wetenschappelijke wijze (vraag 3 t/m 9).
De vragen 10 t/m 13 betreffen 'vagere' beoordelingen van de omgeving als voorbereiding op de daaropvolgende specifieke aspecten.

2. Beoordeling aspecten
De vragen 14 t/m 36 en 75 en 76 behandelen meer tastbare aspecten een gaan specifiek over de locatie. Respondenten beoordelen de aspecten op een schaal van zeer negatief (--) tot zeer positief (++).

3. Algemeen oordeel
Hier worden de vier locaties in de stad met elkaar vergeleken. Daarvoor is het eerst noodzakelijk te weten hoe bekend de respondent is met de locaties (vraag 37 t/m 40). De vragen 41 t/m 44 zijn bedoeld om een totaaloordeel te geven van de vier locaties. Vervolgens wordt de respondent gevraagd de locaties te ordenen met de variabelen verblijfsvoorkeur en mate van sfeer als uitgangspunten.

4. Sense of place
De stellingen 49 t/m 60 wijzen voor zich. De respondent geeft hier aan in hoeverre hij/zij het eens is met deze stellingen.

---

5. Persoonsinformatie
Enkele vragen uit dit gedeelde kan de enquêteur zelf invullen. De anderen worden aan de respondent gevraagd.

6. Bedanken voor deelname
LET OP: dit onderdeel uitvoeren nadat de respondent om motivaties voor extreme waarden (zie deze handleiding onderdeel '3. Motiveringen'.

Na het invullen van de enquête dient de respondent vriendelijk bedankt te worden. Wanneer hij/zij inzicht wil hebben in de resultaten, dient hij/zij zijn e-mailadres in te vullen.

7. Enquêtegegevens
Middels foto's en tekst worden het druktebeeld en de weersomstandigheden vastgelegd.

Volgnummer
Zowel op de eerste als de laatste pagina van de enquête dient het volgnummer te worden ingevuld. Dit is van groot belang om de data te kunnen ordenen bij verwerking. Het volgnummer bestaat uit vijf delen:

1. Stad	2. Locatie	3. Datum	4. Tijd	5. Enquêteur

1. Reeds ingevuld
  (Maastricht = 1, 's-Hertogenbosch = 2);
2. Locatie
  (Maastricht → Maastrichter Brugstraat = 1, Stokstraat = 2, Entre Deux = 3, Mosea Forum = 4, 's Hertogenbosch → ….. = 1, ….. = 2, …… = 3, …… = 4)
4. Datum
  in vier cijfers → 5 juli wordt 0507
5. Tijd
  in vier cijfers de tijd van afronden enquête → 12:34u wordt 1234
6. Enquêteur
  cijfer volgens lijst bij enquêteformulier.

3. Motiveringen

Nadat de enquête is doorlopen, is het relevant te weten waarom respondenten voor eventuele extreme waarden hebben gekozen. Dit gebeurt na afloop van de enquête zodat de respondent niet beïnvloed wordt tijdens de enquête. De buitenste twee opties op de Likert schalen behoren tot de extreme waarden:

--		0			++	
O	O	O	O	O	O	O

Het doorvragen met de vraag 'Waarom?' is alleen nodig bij '2. Beoordeling aspecten'.

APPENDIX D - PHYSICAL CHARACTERISTICS AND VALUE OPTIONS

INDEPENDENT VARIABLES	VALUE OPTIONS
1. Accessibility	
Distance to parking facility	Real value (m.)
Distance to public transport	Real Value (m.)
2. Shops	
Fashion and luxury	Amount of shops survey location
Daily	Amount of shops survey location
3. Leisure and restaurants	Amount of facilities
4. Shape of facades	1. divers (historical) / 2. clean and uniform
5. Material of the facades	1. Historical / 2. contemporary
6. Material of the pavements	1. Rough/ 2. Smooth
7. Colour of the facades	1. Dark / 2. Mixed / 3. Bright
8. Colour of the pavements	1. Dark / 2. Mixed / 3. Bright
9. Amount of light	1. Low / 2. Average / 3. High
10. Background noise	1. Low / 2. Average / 3. High
11. Music	1. No / 2. Yes
12. Smell	1. Bad / 2. None / 3. Good
13. Indoor	1. No / 2. Yes
14. Greenary	Amount of trees/ bushes
15. Street furniture	1. No / 2. Yes
16. Shop Windows	1. Discrete / 2. Neutral / 3. Striking
17. Advertisement signs	1. Discrete / 2. Neutral / 3. Striking
18. Tidiness	1. Bad / 2. Average / 3. Good
19. Width of the street	Real value (m.)
20. Height of the building	Number of storeys
21. Width to height ratio	With of the street divided by number of storeys
22. Crowdedness	1. Quiet / 2. Average / 3. Crowded
23. Other Visitors	No scale
24. Colour of the light	1. Cool / 2. Average / 3. Warm
25. Elevation	1. No / 2. Yes
26. Weather	1.Rainy / 2.Clouded / 3. Partially clouded / 4. Sunny

DESCRIPTION OF THE NON-OBJECTIVE MEASURABLE VARIABLES

The description of the non-objective measurable variables will be explained based on photographs of several survey locations in both Maastricht and 's-Hertogenbosch.

FIGURE D1 - STOKSTRAAT IN MAASTRICHT

FIGURE D2 - MOSAE FORUM IN MAASTRICHT

4. Shape of facades: historical	4. Shape of facades: clean and uniform
5. Material of the facades: historical	5. Material of the facades: contemporary
6. Material of the pavements: rough	6. Material of the pavements: smooth
7. Colour of the facades: mixed	7. Colour of the facades: bright
8. Colour of the pavements: bright	8. Colour of the pavements: bright
16. Shop Windows: discrete	16. Shop Windows: striking
17. Advertisement signs: discrete	17. Advertisement signs: discrete
18. Tidiness: good	18. Tidiness: good

FIGURE D3 - HINTHAMERSTRAAT IN 'S-HERTOGENBOSCH

4. Shape of facades: historical

5. Material of the facades: historical

6. Material of the pavements: smooth

7. Colour of the facades: mixed

8. Colour of the pavements: mixed

16. Shop Windows: neutral

17. Advertisement signs: striking

18. Tidiness: average

APPENDIX E - MAASTRICHT

E1. SUB-CENTERS (SOURCE: LOCATUS 2012)

Sub-centres
- City centre
- Entre Deux (s)
- Mosae Forum (s)
- Noordknoop Ceramique (s)
- Wolfstraat (s)

4. Mosae Forum

3.Entre Deux

1. Maastrichter Brugstraat

2. Stokstraat

E2. FOOTFALL (SOURCE: LOCATUS 2012)

Footfall
- 10.000 <= Passant < 15.000
- 15.000 <= Passant < 20.000
- 20.000 <= Passant < 25.000
- 25.000 <= Passant < 40.000
- 40.000 <= Passant
- Inapplicable
- 5.000 <= Passant < 10.000
- 0 <= Passant < 5.000

4. Mosae Forum

3.Entre Deux

1. Maastrichter Brugstraat

2. Stokstraat

E3. SEGMENTATION (SOURCE: LOCATUS 2012)

SEGMENTATION
- A1
- A2
- B1
- B2
- C
- Inapplicable

4. Mosae Forum

3.Entre Deux

1. Maastrichter Brugstraat

2. Stokstraat

E3. BRANCHES (SOURCE: LOCATUS 2012)

BRANCHES
- 00-Vacancy
- 11-Daily
- 22-Fashion and Luxury
- 35-Leisure time
- 37-In and arround the house
- 38-Retail other
- 59-Leisure
- 65-Services
- 80-ATM
- 90-Other

1. Maastrichter Brugstraat
2. Stokstraat
3. Entre Deux
4. Mosae Forum

APPENDIX F - 'S-HERTOGENBOSCH

F1. SUB-CENTERS (SOURCE: LOCATUS 2012)

Sub-centres
- Arena (s)
- City center
- Esplanade (s)
- Lombartje (s)

3. Arena

4. Burgemeester Loeffplein

1. Hinthamerstraat

2. Kerkstraat

F2. FOOTFALL (SOURCE: LOCATUS 2012)

Footfall
- 10.000 <= Passant < 15.000
- 15.000 <= Passant < 20.000
- 20.000 <= Passant < 25.000
- 25.000 <= Passant < 40.000
- 40.000 <= Passant
- Inapplicable
- 5.000 <= Passant < 10.000
- 0 <= Passant < 5.000

3. Arena

4. Burgemeester Loeffplein

1. Hinthamerstraat

2. Kerkstraat

F3. SEGMENTATION (SOURCE: LOCATUS 2012)

Segmentation
- A1
- A2
- B1
- B2
- C
- Inapplicable

3. Arena

4. Burgemeester Loeffplein

1. Hinthamerstraat

2. Kerkstraat

F3. BRANCHES (SOURCE: LOCATUS 2012)

Branches
- 00-Vacancy
- 11-Daily
- 22-Fashion and Luxury
- 35-Leisure time
- 37-In and arround the house
- 38-Retail other
- 59-Leisure
- 65-Services
- 80-ATM
- 90-Other

1. Hinthamerstraat
2. Kerkstraat
3. Arena
4. Burgemeester Loeffplein

APPENDIX G - FREQUENCIES

1 — Accessibility

1	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	0	0%	1	2%	5	2%	7	10%	22	17%	53	45%	21	24%	109
Stokstraat	2	2%	3	0%	4	4%	23	14%	23	12%	42	40%	29	28%	126
Entre Deux	2	2%	3	3%	4	3%	10	10%	41	24%	32	38%	23	19%	115
Mosea Forum	1	0%	2	0%	1	4%	12	10%	13	24%	51	34%	44	28%	124
Maastricht Total	**5**	**1%**	**9**	**1%**	**14**	**3%**	**52**	**11%**	**99**	**19%**	**178**	**39%**	**117**	**25%**	**474**
Hinthamerstraat	0	1%	2	2%	1	4%	8	13%	25	24%	44	29%	29	28%	109
Kerkstraat	0	3%	3	0%	3	5%	7	17%	23	14%	39	48%	30	33%	105
Arena	2	2%	4	3%	6	11%	8	13%	30	30%	34	23%	31	18%	115
Burgemeester Loeffplein	0	0%	3	4%	3	3%	10	17%	26	29%	43	26%	30	21%	115
s-Hertogenbosch Total	**2**	**1%**	**12**	**2%**	**13**	**5%**	**33**	**14%**	**104**	**26%**	**160**	**30%**	**120**	**22%**	**444**
Total	**7**	**1%**	**21**	**2%**	**27**	**4%**	**85**	**13%**	**203**	**22%**	**338**	**35%**	**237**	**24%**	**918**

2 — Shops

2	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	0	0%	2	2%	2	2%	11	10%	19	17%	49	45%	26	24%	109
Stokstraat	3	2%	0	0%	5	4%	18	14%	15	12%	50	40%	35	28%	126
Entre Deux	2	2%	3	3%	4	3%	12	10%	28	24%	44	38%	22	19%	115
Mosea Forum	0	0%	0	0%	5	4%	12	10%	30	24%	42	34%	35	28%	124
Maastricht Total	**5**	**1%**	**5**	**1%**	**16**	**3%**	**53**	**11%**	**92**	**19%**	**185**	**39%**	**118**	**25%**	**474**
Hinthamerstraat	1	1%	2	2%	4	4%	14	13%	26	24%	32	29%	30	28%	109
Kerkstraat	0	3%	0	0%	1	5%	13	17%	21	14%	46	48%	24	33%	105
Arena	2	2%	3	3%	13	11%	15	13%	34	30%	27	23%	21	18%	115
Burgemeester Loeffplein	0	0%	5	4%	3	3%	20	17%	33	29%	30	26%	24	21%	115
s-Hertogenbosch Total	**3**	**1%**	**10**	**2%**	**21**	**5%**	**62**	**14%**	**114**	**26%**	**135**	**30%**	**99**	**22%**	**444**
Total	**8**	**1%**	**15**	**2%**	**37**	**4%**	**115**	**13%**	**206**	**22%**	**320**	**35%**	**217**	**24%**	**918**

3 — Restaurants/leisure

3	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	5	5%	2	2%	9	8%	11	10%	19	17%	41	38%	22	20%	109
Stokstraat	3	2%	3	2%	5	4%	27	21%	17	13%	34	27%	37	29%	126
Entre Deux	2	2%	10	9%	13	11%	21	18%	17	15%	30	26%	22	19%	115
Mosea Forum	2	2%	1	1%	17	14%	25	20%	23	19%	27	22%	29	23%	124
Maastricht Total	**12**	**3%**	**16**	**3%**	**44**	**9%**	**84**	**18%**	**76**	**16%**	**132**	**28%**	**110**	**23%**	**474**
Hinthamerstraat	1	1%	3	3%	5	5%	20	18%	19	17%	33	30%	28	26%	109
Kerkstraat	2	2%	3	3%	4	4%	14	13%	12	11%	42	40%	28	27%	105
Arena	2	2%	7	6%	10	9%	25	22%	26	23%	29	25%	16	14%	115
Burgemeester Loeffplein	5	4%	5	4%	10	9%	19	17%	19	17%	29	25%	28	24%	115
s-Hertogenbosch Total	**10**	**2%**	**18**	**4%**	**29**	**7%**	**78**	**18%**	**76**	**17%**	**133**	**30%**	**100**	**23%**	**444**
Total	**22**	**2%**	**34**	**4%**	**73**	**8%**	**162**	**18%**	**152**	**17%**	**265**	**29%**	**210**	**23%**	**918**

4 — Shape facades

4	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	1	1%	0	0%	4	4%	12	11%	19	17%	35	32%	38	35%	109
Stokstraat	0	0%	0	0%	0	0%	6	5%	9	7%	45	36%	66	52%	126
Entre Deux	0	0%	1	1%	4	3%	21	18%	29	25%	37	32%	23	20%	115
Mosea Forum	2	2%	7	6%	6	5%	22	18%	25	20%	42	34%	20	16%	124
Maastricht Total	**3**	**1%**	**8**	**2%**	**14**	**3%**	**61**	**13%**	**82**	**17%**	**159**	**34%**	**147**	**31%**	**474**
Hinthamerstraat	1	1%	1	1%	2	2%	15	14%	23	21%	38	35%	29	27%	109
Kerkstraat	1	1%	0	0%	1	1%	13	12%	23	22%	35	33%	32	30%	105
Arena	3	3%	9	8%	16	14%	26	23%	20	17%	22	19%	19	17%	115
Burgemeester Loeffplein	7	6%	9	8%	10	9%	25	22%	26	23%	23	20%	15	13%	115
s-Hertogenbosch Total	**12**	**1%**	**19**	**2%**	**29**	**3%**	**79**	**14%**	**92**	**18%**	**118**	**36%**	**95**	**33%**	**444**
Total	**15**	**2%**	**27**	**3%**	**43**	**5%**	**140**	**15%**	**174**	**19%**	**277**	**30%**	**242**	**26%**	**918**

5 — Material facades

5	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	0	0%	2	2%	4	4%	17	16%	21	19%	40	37%	25	23%	109
Stokstraat	0	0%	1	1%	1	1%	8	6%	15	12%	44	35%	57	45%	126
Entre Deux	0	0%	4	3%	5	4%	22	19%	31	27%	35	30%	18	16%	115
Mosea Forum	4	3%	4	3%	5	4%	28	23%	26	21%	42	34%	15	12%	124
Maastricht Total	**4**	**1%**	**11**	**2%**	**15**	**3%**	**75**	**16%**	**93**	**20%**	**161**	**34%**	**115**	**24%**	**474**
Hinthamerstraat	1	1%	0	0%	5	5%	21	19%	26	24%	35	32%	21	19%	109
Kerkstraat	0	0%	0	0%	2	2%	24	23%	27	26%	30	29%	22	21%	105
Arena	2	2%	5	4%	15	13%	28	24%	26	23%	25	22%	14	12%	115
Burgemeester Loeffplein	5	4%	8	7%	13	11%	26	23%	31	27%	22	19%	10	9%	115
s-Hertogenbosch Total	**8**	**2%**	**13**	**3%**	**35**	**8%**	**99**	**22%**	**110**	**25%**	**112**	**25%**	**67**	**15%**	**444**
Total	**12**	**1%**	**24**	**3%**	**50**	**5%**	**174**	**19%**	**203**	**22%**	**273**	**30%**	**182**	**20%**	**918**

6 — Material pavement

6	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	4	4%	5	5%	11	10%	22	20%	22	20%	26	24%	19	17%	109
Stokstraat	7	6%	9	7%	13	10%	21	17%	23	18%	29	23%	24	19%	126
Entre Deux	7	6%	8	7%	13	11%	20	17%	28	24%	28	24%	11	10%	115
Mosea Forum	6	5%	8	6%	9	7%	34	27%	28	23%	22	18%	17	14%	124
Maastricht Total	**24**	**5%**	**30**	**6%**	**46**	**10%**	**97**	**20%**	**101**	**21%**	**105**	**22%**	**71**	**15%**	**474**
Hinthamerstraat	1	1%	1	1%	10	9%	20	18%	35	32%	32	29%	10	9%	109
Kerkstraat	4	4%	1	1%	8	8%	21	20%	22	21%	34	32%	15	14%	105
Arena	1	1%	3	3%	10	9%	27	23%	30	26%	31	27%	13	11%	115
Burgemeester Loeffplein	4	3%	3	3%	19	17%	22	19%	30	26%	29	25%	8	7%	115
s-Hertogenbosch Total	**10**	**5%**	**8**	**7%**	**47**	**10%**	**90**	**22%**	**117**	**23%**	**126**	**24%**	**46**	**16%**	**444**
Total	**34**	**4%**	**38**	**4%**	**93**	**10%**	**187**	**20%**	**218**	**24%**	**231**	**25%**	**117**	**13%**	**918**

7 — Color facades

7	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	0	0%	2	2%	8	7%	22	20%	23	21%	32	29%	22	20%	109
Stokstraat	2	2%	1	1%	8	6%	11	9%	23	18%	44	35%	37	29%	126
Entre Deux	2	2%	4	3%	21	18%	20	17%	31	27%	26	23%	11	10%	115
Mosea Forum	8	6%	6	5%	10	8%	35	28%	31	25%	21	17%	13	10%	124
Maastricht Total	**12**	**3%**	**13**	**3%**	**47**	**10%**	**88**	**19%**	**108**	**23%**	**123**	**26%**	**83**	**18%**	**474**
Hinthamerstraat	1	1%	1	1%	11	10%	24	22%	37	34%	27	25%	8	7%	109
Kerkstraat	2	2%	2	2%	7	7%	21	20%	26	25%	28	27%	19	18%	105
Arena	2	2%	8	7%	20	17%	29	25%	23	20%	22	19%	11	10%	115
Burgemeester Loeffplein	5	4%	10	9%	18	16%	29	25%	29	25%	17	15%	7	6%	115
s-Hertogenbosch Total	**10**	**3%**	**21**	**3%**	**56**	**11%**	**103**	**20%**	**115**	**24%**	**94**	**28%**	**45**	**19%**	**444**
Total	**22**	**2%**	**34**	**4%**	**103**	**11%**	**191**	**21%**	**223**	**24%**	**217**	**24%**	**128**	**14%**	**918**

10 — Background noise

10	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	1	1%	2	2%	9	8%	25	23%	21	19%	36	33%	15	14%	109
Stokstraat	1	1%	2	2%	7	6%	28	22%	26	21%	33	26%	29	23%	126
Entre Deux	6	5%	4	3%	15	13%	36	31%	28	24%	17	15%	9	8%	115
Mosea Forum	6	5%	2	2%	4	3%	44	35%	30	24%	24	19%	14	11%	124
Maastricht Total	**14**	**3%**	**10**	**2%**	**35**	**7%**	**133**	**28%**	**105**	**22%**	**110**	**23%**	**67**	**14%**	**474**
Hinthamerstraat	0	0%	1	1%	7	6%	39	36%	28	26%	23	21%	11	10%	109
Kerkstraat	3	3%	1	1%	2	2%	25	24%	32	30%	27	26%	15	14%	105
Arena	2	2%	4	3%	8	7%	33	29%	26	23%	28	24%	14	12%	115
Burgemeester Loeffplein	6	5%	9	8%	14	12%	42	37%	26	23%	11	10%	7	6%	115
s-Hertogenbosch Total	**11**	**3%**	**15**	**2%**	**31**	**8%**	**139**	**30%**	**112**	**24%**	**89**	**25%**	**47**	**15%**	**444**
Total	**25**	**3%**	**25**	**3%**	**66**	**7%**	**272**	**30%**	**217**	**24%**	**199**	**22%**	**114**	**12%**	**918**

8 — Color pavement

8	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	4	4%	6	6%	10	9%	21	19%	30	28%	25	23%	13	12%	109
Stokstraat	4	3%	2	2%	9	7%	28	22%	20	16%	35	28%	28	22%	126
Entre Deux	2	2%	3	3%	21	18%	23	20%	30	26%	23	20%	13	11%	115
Mosea Forum	8	6%	7	6%	10	8%	36	29%	27	22%	24	19%	12	10%	124
Maastricht Total	**18**	**4%**	**18**	**4%**	**50**	**11%**	**108**	**23%**	**107**	**23%**	**107**	**23%**	**66**	**14%**	**474**
Hinthamerstraat	0	0%	3	3%	14	13%	24	22%	38	35%	26	24%	4	4%	109
Kerkstraat	2	2%	1	1%	5	5%	25	24%	28	27%	29	28%	15	14%	105
Arena	2	2%	4	3%	15	13%	26	23%	29	25%	29	25%	10	9%	115
Burgemeester Loeffplein	4	3%	5	4%	15	13%	23	20%	33	29%	23	20%	12	10%	115
s-Hertogenbosch Total	**8**	**2%**	**13**	**3%**	**49**	**11%**	**98**	**22%**	**128**	**29%**	**107**	**24%**	**41**	**9%**	**444**
Total	**26**	**3%**	**31**	**3%**	**99**	**11%**	**206**	**22%**	**235**	**26%**	**214**	**23%**	**107**	**12%**	**918**

11 — Music

11	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	7	7%	7	7%	6	6%	32	31%	16	16%	22	22%	12	12%	102
Stokstraat	8	7%	2	2%	5	5%	65	60%	15	14%	6	6%	7	6%	108
Entre Deux	6	5%	7	6%	13	12%	47	42%	20	18%	11	10%	8	7%	112
Mosea Forum	8	7%	1	1%	7	6%	67	58%	17	15%	8	7%	8	7%	116
Maastricht Total	**29**	**7%**	**17**	**4%**	**31**	**7%**	**211**	**48%**	**68**	**16%**	**47**	**11%**	**35**	**8%**	**438**
Hinthamerstraat	2	2%	5	5%	4	4%	50	49%	23	22%	12	12%	7	7%	103
Kerkstraat	4	4%	2	2%	6	6%	34	34%	20	20%	19	19%	14	14%	99
Arena	7	8%	6	7%	8	9%	41	47%	7	8%	12	14%	6	7%	87
Burgemeester Loeffplein	11	10%	4	4%	6	6%	61	56%	16	15%	6	6%	5	5%	109
s-Hertogenbosch Total	**24**	**6%**	**17**	**4%**	**24**	**6%**	**186**	**47%**	**66**	**17%**	**49**	**12%**	**32**	**8%**	**398**
Total	**53**	**6%**	**34**	**4%**	**55**	**7%**	**397**	**47%**	**134**	**16%**	**96**	**11%**	**67**	**8%**	**836**

9 — Amount of light

9	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	1	1%	0	0%	1	1%	11	10%	36	33%	37	34%	23	21%	109
Stokstraat	0	0%	5	4%	3	2%	13	10%	32	25%	39	31%	34	27%	126
Entre Deux	1	1%	0	0%	7	6%	18	16%	30	26%	32	28%	27	23%	115
Mosea Forum	2	2%	0	0%	2	2%	18	15%	20	16%	53	43%	29	23%	124
Maastricht Total	**4**	**1%**	**5**	**1%**	**13**	**3%**	**60**	**13%**	**118**	**25%**	**161**	**34%**	**113**	**24%**	**474**
Hinthamerstraat	0	0%	1	1%	3	3%	14	13%	27	25%	50	46%	14	13%	109
Kerkstraat	1	1%	0	0%	2	2%	15	14%	23	22%	38	36%	26	25%	105
Arena	0	0%	0	0%	4	3%	13	11%	17	15%	57	50%	24	21%	115
Burgemeester Loeffplein	0	0%	1	1%	5	4%	27	23%	33	29%	34	30%	15	13%	115
s-Hertogenbosch Total	**1**	**0%**	**2**	**0%**	**14**	**3%**	**69**	**16%**	**100**	**23%**	**179**	**40%**	**79**	**18%**	**444**
Total	**5**	**1%**	**7**	**1%**	**27**	**3%**	**129**	**14%**	**218**	**24%**	**340**	**37%**	**192**	**21%**	**918**

12 — Smell

12	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	1	1%	4	4%	3	3%	28	26%	28	26%	32	29%	13	12%	109
Stokstraat	8	6%	3	2%	9	7%	39	31%	21	17%	24	19%	22	17%	126
Entre Deux	3	3%	7	6%	15	13%	38	33%	23	20%	22	19%	7	6%	115
Mosea Forum	2	2%	7	6%	3	2%	37	30%	29	23%	29	23%	17	14%	124
Maastricht Total	**14**	**3%**	**21**	**4%**	**30**	**6%**	**142**	**30%**	**101**	**21%**	**107**	**23%**	**59**	**12%**	**474**
Hinthamerstraat	1	1%	3	3%	9	8%	38	35%	24	22%	26	24%	8	7%	109
Kerkstraat	1	1%	1	1%	4	4%	44	42%	20	19%	25	24%	10	10%	105
Arena	3	3%	3	3%	10	9%	51	44%	19	17%	21	18%	8	7%	115
Burgemeester Loeffplein	3	3%	2	2%	16	14%	52	45%	21	18%	16	14%	5	4%	115
s-Hertogenbosch Total	**8**	**2%**	**9**	**2%**	**39**	**9%**	**185**	**42%**	**84**	**19%**	**88**	**20%**	**31**	**7%**	**444**
Total	**22**	**2%**	**30**	**3%**	**69**	**8%**	**327**	**36%**	**185**	**20%**	**195**	**21%**	**90**	**10%**	**918**

13

	Indoor/outdoor														Total
	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		
Maastrichter Brugstraat	4	4%	3	3%	3	3%	28	26%	18	17%	32	29%	21	19%	109
Stokstraat	3	2%	4	3%	1	1%	24	19%	14	11%	32	25%	48	38%	126
Entre Deux	3	3%	1	1%	7	6%	41	36%	30	26%	17	15%	16	14%	115
Mosea Forum	1	1%	4	3%	6	5%	29	23%	22	18%	41	33%	21	17%	124
Maastricht Total	**11**	**2%**	**12**	**3%**	**17**	**4%**	**122**	**26%**	**84**	**18%**	**122**	**26%**	**106**	**22%**	**474**
Hinthamerstraat	1	1%	2	2%	8	7%	28	26%	26	24%	31	28%	13	12%	109
Kerkstraat	2	2%	3	3%	7	7%	29	28%	20	19%	31	30%	13	12%	105
Arena	0	0%	2	2%	6	5%	34	30%	27	23%	27	23%	19	17%	115
Burgemeester Loeffplein	3	3%	4	3%	10	9%	43	37%	22	19%	26	23%	7	6%	115
s-Hertogenbosch Total	**6**	**1%**	**11**	**2%**	**31**	**7%**	**134**	**30%**	**95**	**21%**	**115**	**26%**	**52**	**12%**	**444**
Total	**17**	**2%**	**23**	**3%**	**48**	**5%**	**256**	**28%**	**179**	**19%**	**237**	**26%**	**158**	**17%**	**918**

16

	Shop windows														Total
	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		
Maastrichter Brugstraat	0	0%	2	2%	4	4%	22	20%	28	26%	45	41%	8	7%	109
Stokstraat	0	0%	2	2%	5	4%	16	13%	21	17%	42	33%	40	32%	126
Entre Deux	1	1%	1	1%	8	7%	16	14%	48	42%	29	25%	12	10%	115
Mosea Forum	1	1%	1	1%	3	2%	14	11%	43	35%	44	35%	18	15%	124
Maastricht Total	**2**	**0%**	**6**	**1%**	**20**	**4%**	**68**	**14%**	**140**	**30%**	**160**	**34%**	**78**	**16%**	**474**
Hinthamerstraat	4	4%	3	3%	14	13%	23	21%	37	34%	21	19%	7	6%	109
Kerkstraat	0	0%	1	1%	4	4%	23	22%	31	30%	33	31%	13	12%	105
Arena	2	2%	1	1%	11	10%	26	23%	32	28%	33	29%	10	9%	115
Burgemeester Loeffplein	1	1%	2	2%	9	8%	30	26%	39	34%	27	23%	7	6%	115
s-Hertogenbosch Total	**7**	**0%**	**7**	**1%**	**38**	**5%**	**102**	**15%**	**139**	**32%**	**114**	**36%**	**37**	**18%**	**444**
Total	**9**	**1%**	**13**	**1%**	**58**	**6%**	**170**	**19%**	**279**	**30%**	**274**	**30%**	**115**	**13%**	**918**

14

	Greenery														Total
	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		
Maastrichter Brugstraat	5	5%	10	9%	12	11%	22	20%	27	25%	24	22%	9	8%	109
Stokstraat	7	6%	12	10%	15	12%	39	31%	23	18%	17	13%	13	10%	126
Entre Deux	22	19%	16	14%	24	21%	29	25%	15	13%	6	5%	3	3%	115
Mosea Forum	28	23%	24	19%	28	23%	30	24%	5	4%	4	3%	5	4%	124
Maastricht Total	**62**	**13%**	**62**	**13%**	**79**	**17%**	**120**	**25%**	**70**	**15%**	**51**	**11%**	**30**	**6%**	**474**
Hinthamerstraat	18	17%	27	25%	26	24%	18	17%	11	10%	7	6%	2	2%	109
Kerkstraat	12	11%	17	16%	15	14%	33	31%	17	16%	8	8%	3	3%	105
Arena	14	12%	23	20%	21	18%	24	21%	19	17%	9	8%	5	4%	115
Burgemeester Loeffplein	17	15%	17	15%	31	27%	22	19%	14	12%	12	10%	2	2%	115
s-Hertogenbosch Total	**61**	**14%**	**84**	**19%**	**93**	**21%**	**97**	**22%**	**61**	**14%**	**36**	**8%**	**12**	**3%**	**444**
Total	**123**	**13%**	**146**	**16%**	**172**	**19%**	**217**	**24%**	**131**	**14%**	**87**	**9%**	**42**	**5%**	**918**

17

	Advertisement														Total
	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		
Maastrichter Brugstraat	0	0%	6	6%	6	6%	38	35%	25	23%	28	26%	6	6%	109
Stokstraat	1	1%	3	2%	7	6%	41	33%	24	19%	26	21%	24	19%	126
Entre Deux	3	3%	7	6%	10	9%	41	36%	30	26%	19	17%	5	4%	115
Mosea Forum	2	2%	4	3%	4	3%	41	33%	38	31%	25	20%	10	8%	124
Maastricht Total	**6**	**1%**	**20**	**4%**	**27**	**6%**	**161**	**34%**	**117**	**25%**	**98**	**21%**	**45**	**9%**	**474**
Hinthamerstraat	4	4%	5	5%	14	13%	39	36%	28	26%	12	11%	7	6%	109
Kerkstraat	1	1%	4	4%	4	4%	36	34%	33	31%	17	16%	10	10%	105
Arena	4	3%	8	7%	11	10%	33	29%	28	24%	22	19%	9	8%	115
Burgemeester Loeffplein	0	0%	5	4%	14	12%	51	44%	31	27%	11	10%	3	3%	115
s-Hertogenbosch Total	**9**	**2%**	**22**	**5%**	**43**	**10%**	**159**	**36%**	**120**	**27%**	**62**	**14%**	**29**	**7%**	**444**
Total	**15**	**2%**	**42**	**5%**	**70**	**8%**	**320**	**35%**	**237**	**26%**	**160**	**17%**	**74**	**8%**	**918**

15

	Furniture														Total
	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		
Maastrichter Brugstraat	4	4%	15	14%	24	22%	29	27%	12	11%	20	18%	5	5%	109
Stokstraat	10	8%	14	11%	21	17%	49	39%	9	7%	15	12%	8	6%	126
Entre Deux	18	16%	20	17%	24	21%	33	29%	13	11%	5	4%	2	2%	115
Mosea Forum	18	15%	14	11%	25	20%	42	34%	13	10%	5	4%	7	6%	124
Maastricht Total	**50**	**11%**	**63**	**13%**	**94**	**20%**	**153**	**32%**	**47**	**10%**	**45**	**9%**	**22**	**5%**	**474**
Hinthamerstraat	12	11%	22	20%	32	29%	19	17%	13	12%	9	8%	2	2%	109
Kerkstraat	6	6%	11	10%	15	14%	37	35%	23	22%	9	9%	4	4%	105
Arena	4	3%	6	5%	14	12%	28	24%	29	25%	25	22%	9	8%	115
Burgemeester Loeffplein	12	10%	17	15%	30	26%	24	21%	24	21%	5	4%	3	3%	115
s-Hertogenbosch Total	**34**	**8%**	**56**	**13%**	**91**	**20%**	**108**	**24%**	**89**	**20%**	**48**	**11%**	**18**	**4%**	**444**
Total	**84**	**9%**	**119**	**13%**	**185**	**20%**	**261**	**28%**	**136**	**15%**	**93**	**10%**	**40**	**4%**	**918**

18

	Tidiness														Total
	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		
Maastrichter Brugstraat	0	0%	3	3%	5	5%	14	13%	31	28%	40	37%	16	15%	109
Stokstraat	1	1%	3	2%	1	1%	11	9%	19	15%	48	38%	43	34%	126
Entre Deux	0	0%	0	0%	4	3%	11	10%	32	28%	52	45%	16	14%	115
Mosea Forum	0	0%	2	2%	1	1%	21	17%	29	23%	48	39%	23	19%	124
Maastricht Total	**1**	**0%**	**8**	**2%**	**11**	**2%**	**57**	**12%**	**111**	**23%**	**188**	**40%**	**98**	**21%**	**474**
Hinthamerstraat	0	0%	1	1%	6	6%	22	20%	30	28%	40	37%	10	9%	109
Kerkstraat	0	0%	0	0%	6	6%	12	11%	34	32%	34	32%	19	18%	105
Arena	0	0%	1	1%	5	4%	16	14%	32	28%	43	37%	18	16%	115
Burgemeester Loeffplein	1	1%	6	5%	6	5%	25	22%	36	31%	29	25%	12	10%	115
s-Hertogenbosch Total	**1**	**0%**	**8**	**2%**	**23**	**5%**	**75**	**17%**	**132**	**30%**	**146**	**33%**	**59**	**13%**	**444**
Total	**2**	**0%**	**16**	**2%**	**34**	**4%**	**132**	**14%**	**243**	**26%**	**334**	**36%**	**157**	**17%**	**918**

Width street — 19

19	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	0	0%	0	0%	1	1%	13	12%	25	23%	50	46%	20	18%	109
Stokstraat	0	0%	2	2%	8	6%	21	17%	21	17%	39	31%	35	28%	126
Entre Deux	0	0%	0	0%	2	2%	9	8%	31	27%	57	50%	16	14%	115
Mosea Forum	0	0%	2	2%	4	3%	18	15%	22	18%	47	38%	31	25%	124
Maastricht Total	**0**	**0%**	**4**	**1%**	**15**	**3%**	**61**	**13%**	**99**	**21%**	**193**	**41%**	**102**	**22%**	**474**
Hinthamerstraat	1	1%	1	1%	2	2%	12	11%	29	27%	43	39%	21	19%	109
Kerkstraat	0	0%	0	0%	0	0%	8	8%	32	30%	41	39%	24	23%	105
Arena	1	1%	1	1%	2	2%	13	11%	28	24%	43	37%	27	23%	115
Burgemeester Loeffplein	0	0%	0	0%	7	6%	12	10%	33	29%	37	32%	26	23%	115
s-Hertogenbosch Total	**2**	**0%**	**2**	**0%**	**11**	**2%**	**45**	**10%**	**122**	**27%**	**164**	**37%**	**98**	**22%**	**444**
Total	**2**	**0%**	**6**	**1%**	**26**	**3%**	**106**	**12%**	**221**	**24%**	**357**	**39%**	**200**	**22%**	**918**

Height buildings — 20

20	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	0	0%	0	0%	1	1%	19	17%	18	17%	49	45%	22	20%	109
Stokstraat	0	0%	2	2%	4	3%	21	17%	15	12%	40	32%	44	35%	126
Entre Deux	0	0%	0	0%	4	3%	18	16%	25	22%	54	47%	14	12%	115
Mosea Forum	2	2%	1	1%	2	2%	26	21%	24	19%	49	40%	20	16%	124
Maastricht Total	**2**	**0%**	**3**	**1%**	**11**	**2%**	**84**	**18%**	**82**	**17%**	**192**	**41%**	**100**	**21%**	**474**
Hinthamerstraat	0	0%	1	1%	2	2%	16	15%	38	35%	36	33%	16	15%	109
Kerkstraat	0	0%	0	0%	4	4%	14	13%	32	30%	38	36%	17	16%	105
Arena	1	1%	1	1%	6	5%	27	23%	29	25%	31	27%	20	17%	115
Burgemeester Loeffplein	0	0%	2	2%	4	3%	29	25%	39	34%	32	28%	9	8%	115
s-Hertogenbosch Total	**1**	**0%**	**4**	**1%**	**16**	**4%**	**86**	**19%**	**138**	**31%**	**137**	**31%**	**62**	**14%**	**444**
Total	**3**	**0%**	**7**	**1%**	**27**	**3%**	**170**	**19%**	**220**	**24%**	**329**	**36%**	**162**	**18%**	**918**

Width-height ratio — 21

21	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	0	0%	1	1%	3	3%	15	14%	24	22%	48	44%	18	17%	109
Stokstraat	2	2%	1	1%	4	3%	22	17%	16	13%	39	31%	42	33%	126
Entre Deux	0	0%	0	0%	0	0%	19	17%	35	30%	44	38%	17	15%	115
Mosea Forum	2	2%	2	2%	7	6%	28	23%	24	19%	38	31%	23	19%	124
Maastricht Total	**4**	**1%**	**4**	**1%**	**14**	**3%**	**84**	**18%**	**99**	**21%**	**169**	**36%**	**100**	**21%**	**474**
Hinthamerstraat	0	0%	1	1%	6	6%	17	16%	35	32%	35	32%	15	14%	109
Kerkstraat	0	0%	1	1%	3	3%	18	17%	27	26%	41	39%	15	14%	105
Arena	1	1%	1	1%	9	8%	27	23%	29	25%	28	24%	20	17%	115
Burgemeester Loeffplein	0	0%	1	1%	5	4%	24	21%	40	35%	33	29%	12	10%	115
s-Hertogenbosch Total	**1**	**0%**	**4**	**1%**	**23**	**5%**	**86**	**19%**	**131**	**30%**	**137**	**31%**	**62**	**14%**	**444**
Total	**5**	**1%**	**8**	**1%**	**37**	**4%**	**170**	**19%**	**230**	**25%**	**306**	**33%**	**162**	**18%**	**918**

Crowdedness — 22

22	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	0	0%	1	1%	6	6%	19	17%	25	23%	46	42%	12	11%	109
Stokstraat	0	0%	2	2%	2	2%	23	18%	26	21%	37	29%	36	29%	126
Entre Deux	1	1%	3	3%	3	3%	30	26%	31	27%	36	31%	11	10%	115
Mosea Forum	1	1%	3	2%	4	3%	27	22%	34	27%	38	31%	17	14%	124
Maastricht Total	**2**	**0%**	**9**	**2%**	**15**	**3%**	**99**	**21%**	**116**	**24%**	**157**	**33%**	**76**	**16%**	**474**
Hinthamerstraat	0	0%	5	5%	3	3%	25	23%	32	29%	39	36%	5	5%	109
Kerkstraat	0	0%	2	2%	2	2%	22	21%	29	28%	40	38%	10	10%	105
Arena	0	0%	3	3%	5	4%	26	23%	31	27%	36	31%	14	12%	115
Burgemeester Loeffplein	0	0%	0	0%	7	6%	33	29%	38	33%	27	23%	10	9%	115
s-Hertogenbosch Total	**0**	**0%**	**10**	**2%**	**17**	**4%**	**106**	**24%**	**130**	**29%**	**142**	**32%**	**39**	**9%**	**444**
Total	**2**	**0%**	**19**	**2%**	**32**	**3%**	**205**	**22%**	**246**	**27%**	**299**	**33%**	**115**	**13%**	**918**

Other visitors — 23

23	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	1	1%	0	0%	3	3%	32	29%	28	26%	38	35%	7	6%	109
Stokstraat	3	2%	1	1%	3	2%	36	29%	26	21%	32	25%	25	20%	126
Entre Deux	1	1%	1	1%	1	1%	37	32%	29	25%	35	30%	11	10%	115
Mosea Forum	1	1%	2	2%	5	4%	40	32%	32	26%	28	23%	16	13%	124
Maastricht Total	**6**	**1%**	**4**	**1%**	**12**	**3%**	**145**	**31%**	**115**	**24%**	**133**	**28%**	**59**	**12%**	**474**
Hinthamerstraat	2	2%	4	4%	5	5%	28	26%	29	27%	33	30%	8	7%	109
Kerkstraat	0	0%	1	1%	1	1%	29	28%	31	30%	31	30%	12	11%	105
Arena	2	2%	3	3%	7	6%	36	31%	23	20%	32	28%	12	10%	115
Burgemeester Loeffplein	0	0%	3	3%	12	10%	36	31%	28	24%	28	24%	8	7%	115
s-Hertogenbosch Total	**4**	**1%**	**11**	**2%**	**25**	**6%**	**129**	**29%**	**111**	**25%**	**124**	**28%**	**40**	**9%**	**444**
Total	**10**	**1%**	**15**	**2%**	**37**	**4%**	**274**	**30%**	**226**	**25%**	**257**	**28%**	**99**	**11%**	**918**

Color of light — 24

24	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		Total
Maastrichter Brugstraat	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Stokstraat	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Entre Deux	3	3%	2	2%	5	5%	23	25%	23	25%	27	29%	10	11%	93
Mosea Forum	0	0%	0	0%	4	4%	31	32%	23	24%	26	27%	13	13%	97
Maastricht Total	**3**	**2%**	**2**	**1%**	**9**	**5%**	**54**	**28%**	**46**	**24%**	**53**	**28%**	**23**	**12%**	**190**
Hinthamerstraat	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Kerkstraat	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Arena	2	0%	3	3%	7	6%	18	16%	27	25%	33	30%	20	18%	110
Burgemeester Loeffplein	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
s-Hertogenbosch Total	**2**	**2%**	**3**	**3%**	**7**	**6%**	**18**	**16%**	**27**	**25%**	**33**	**30%**	**20**	**18%**	**110**
Total	**5**	**2%**	**5**	**2%**	**16**	**5%**	**72**	**24%**	**73**	**24%**	**86**	**29%**	**43**	**14%**	**300**

25	Elevations														Total
	Very negative		Negative		Fairly negative		Neutral		Fairly positive		Positive		Very positive		
Maastrichter Brugstraat	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Stokstraat	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Entre Deux	3	3%	1	1%	5	5%	23	25%	21	23%	29	31%	11	12%	93
Mosea Forum	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Maastricht Total	**3**	**3%**	**1**	**1%**	**5**	**5%**	**23**	**25%**	**21**	**23%**	**29**	**31%**	**11**	**12%**	**93**
Hinthamerstraat	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Kerkstraat	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Arena	2	2%	5	5%	3	3%	20	18%	25	23%	37	34%	18	16%	110
Burgemeester Loeffplein	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
s-Hertogenbosch Total	**2**	**2%**	**5**	**5%**	**3**	**3%**	**20**	**18%**	**25**	**23%**	**37**	**34%**	**18**	**16%**	**110**
Total	**5**	**2%**	**6**	**3%**	**8**	**4%**	**43**	**21%**	**46**	**23%**	**66**	**33%**	**29**	**14%**	**203**

APPENDIX H - OUTPUT FACTOR ANALYSIS

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.874
Bartlett's Test of Sphericity	Approx. Chi-Square	6220.300
	df	171
	Sig.	.000

Total Variance Explained

Factor	Initial Eigenvalues Total	Initial Eigenvalues % of Variance	Initial Eigenvalues Cumulative %	Extraction Sums of Squared Loadings Total	Extraction Sums of Squared Loadings % of Variance	Extraction Sums of Squared Loadings Cumulative %	Rotation Sums of Squared Loadings Total	Rotation Sums of Squared Loadings % of Variance	Rotation Sums of Squared Loadings Cumulative %
1	6.306	33.189	33.189	5.790	30.475	30.475	2.940	15.474	15.474
2	1.601	8.425	41.614	1.122	5.905	36.380	2.703	14.228	29.703
3	1.358	7.148	48.762	.956	5.030	41.410	2.224	11.708	41.410
4	1.331	7.006	55.768						
5	1.076	5.663	61.431						
6	.992	5.220	66.651						
7	.827	4.354	71.005						
8	.814	4.286	75.291						
9	.646	3.399	78.691						
10	.599	3.154	81.845						
11	.534	2.813	84.658						
12	.528	2.777	87.435						
13	.470	2.476	89.911						
14	.415	2.185	92.096						
15	.380	2.002	94.098						
16	.368	1.936	96.034						
17	.356	1.875	97.910						
18	.217	1.140	99.050						
19	.181	.950	100.000						

Extraction Method: Principal Axis Factoring.

Rotated Factor Matrix[a]

	Factor 1	Factor 2	Factor 3
Accessibility			
Shops			
Restaurants/leisure			
Shape facades		.816	
Material facades		.861	
Material pavement			
Color facades		.604	
Amount of light			
Background noise			
Music			
Indoor/outdoor			
Greenery			.680
Furniture			.724
Shop windows			
Advertisement			
Width street	.708		
Height buildings	.744		
Width-height ratio	.805		
Crowdedness	.578		

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Factor Transformation Matrix

Factor	1	2	3
1	.627	.600	.496
2	-.704	.166	.690
3	.332	-.782	.527

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser

Normalization.

APPENDIX I - DUMMY VARIABLES

Physical characteristics	Abbreviations		dummies	meaning													
Crowdedness	Crowded	→	Crowd1	quiet	(	1	)	=	1	;	average	(	2	)	=	0
		→	Crowd2	crowded	(	3	)	=	1	;	average	(	2	)	=	0
Weather	Weather	→	Weather1	sunny	(	4	)	=	1	;	partly cloudy	(	3	)	=	0
		→	Weather2	cloudy	(	2	)	=	1	;	partly cloudy	(	3	)	=	0
Distance parking	Acc1	→	Acc1	<150				=	1	;	>150				=	0
Distance public transport stop	Acc2	→	Acc2	<150				=	1	;	>150				=	0
Fashion and luxury shops	Sh1	→	Sh1	>15				=	1	;	<15				=	0
Daily shopping	Sh2	→	Sh2	>15				=	1	;	<15				=	0
Other shops	Sh3	→	Sh3	>15				=	1	;	<15				=	0
Restaurants/leisure outlets	Rest	→	Rest	>6				=	1	;	<6				=	0
Shape of facades	Shfac	→	Shfac	Historical	(	1	)	=	1	;	Clean and Uniform	(	2	)	=	0
Material of facades	MATfac	→	MATfac	Historical	(	1	)	=	1	;	Contemporary	(	2	)	=	0
Material of pavements	MATpav	→	MATpav	Rough	(	1	)	=	1	;	smooth	(	2	)	=	0
Color of facades	COLfac	→	COLfacD	Bright	(	3	)	=	1	;	mixed	(	2	)	=	0
		→	COLfacB	Dark	(	1	)	=	1	;	mixed	(	2	)	=	0
Amount of light	Light	→	LightH	High	(	3	)	=	1	;	average	(	2	)	=	0
		→	LightL	Low	(	1	)	=	1	;	average	(	2	)	=	0
Background Noise	Bgnoise	→	BgnoiseH	High	(	3	)	=	1	;	average	(	2	)	=	0
		→	BgnoiseL	Low	(	1	)	=	1	;	average	(	2	)	=	0
Music	Music	→	Music	yes	(	2	)	=	1	;	no	(	1	)	=	0
Indoor	Indoor	→	Indoor	Indoor	(	2	)	=	1	;	outdoor	(	1	)	=	0
Greenery (amount)	Greenery	→	Greenery	yes				=	1	;	no				=	0
Furniture	Furn	→	Furn	yes				=	1	;	no				=	0
Shop windows	Shwind	→	Shwind1	discrete	(	1	)	=	1	;	neutral	(	2	)	=	0
		→	Shwind2	striking	(	3	)	=	1	;	neutral	(	2	)	=	0
Advertisement Signs	Adsigns	→	Adsigns1	discrete	(	1	)	=	1	;	neutral	(	2	)	=	0
			Adsigns2	striking	(	3	)	=	1	;	neutral	(	2	)	=	0
Width of the street	WIDTHs	→	WIDTHs	>6,5				=	1	;	<6,5				=	0
Height of the buildings	HEIGHTb	→	HEIGHTb	High (level 4,5)				=	1	;	Average (level 2,3)				=	0
Width to height ratio	Whratio	→	Whratio	>4,5				=	1	;	<4,5				=	0
Color of the light	COLlight		COLltC	cool	(	1	)	=	1	;	average	(	2	)	=	0
		→	COLltW	warm	(	3	)	=	1	;	average	(	2	)	=	0

*based on results tree analysis

APPENDIX J - CORRELATION MATRIX

Correlations

	Crowd1	Crowd2	Weather1	Weahter2	Acc1	Acc2	Sh1	Sh2	Sh3	Rest	SHfac	MATfac	MATpav	COLfacD	COLfacB	LightH	LightL	BgnoiseH	BgnoiseL	Music	Indoor	Greenery	Furn	ShwindD	ShwindS	AdsignsD	AdsignsS	WIDTHs	HEIGHTb	Whratio	COLlitC	COLlitW
Crowd1	x												0,569	0,574																0,756		
Crowd2		x																														
Weather1			x																													
Weahter2				x	0,504			0,586	0,568						0,538															0,731		
Acc1					x	0,785									0,732			0,747							1,000							
Acc2						x			0,563						0,575			0,586							0,785					0,760		
Sh1							x				0,775	0,775								0,584												
Sh2								x																					0,667			
Sh3									x								0,666										0,646			0,741		
Rest										x	0,563	0,563								0,748						0,666						
SHfac											x	1,000	0,538			0,761				0,753												
MATfac												x	0,538			0,761				0,753												
MATpav													x									0,680		0,746	0,680							
COLfacD														x																0,753	0,665	0,640
COLfacB															x		0,653							0,732						0,756		
LightH																x			0,573													
LightL																	x	0,640			0,655											
BgnoiseH																		x						0,747						0,665		
BgnoiseL																			x			0,507		1,000								
Music																				x												
Indoor																					x											0,655
Greenery																						x			0,507							
Furn																							x									
ShwindD																								x								
ShwindS																									x							
AdsignsD																										x						
AdsignsS																											x					
WIDTHs																												x				
HEIGHTb																													x		0,505	
Whratio																														x		
COLlitC																															x	
COLlitW																																x

APPENDIX K - PROBABILITY FIRST CHOICE

TABLE - PROBABILITY FIRST CHOICE FAVOURITE LOCATION IN MAASTRICHT

CHOICE	SURVEY LOCATION	MNL MODEL	SURVEY
UTILITARIAN MOTIVATED			
First choice	Maastrichter Brugstraat	35.9%	37.4%
Second choice	Entre Deux	25.3%	26.3%
Third choice	Stokstraat	23.2%	23.2%
Fourth choice	Mosea Forum	15.6%	13.1%
HEDONIC MOTIVATED			
First choice	Maastrichter Brugstraat	39.3%	40.2%
Second choice	Stokstraat	25.5%	27.6%
Third choice	Entre Deux	21.8%	16.1%
Fourth choice	Mosea Forum	13.4%	16.1%
BOTH MOTIVATED			
First choice	Maastrichter Brugstraat	32.3%	21.1%
Second choice	Entre Deux	29.0%	30.3%
Third choice	Stokstraat	20.9%	29.7%
Fourth choice	Mosea Forum	17.8%	18.9%

TABLE - PROBABILITY FIRST CHOICE FAVOURITE LOCATION IN 'S-HERTOGENBOSCH

CHOICE	SURVEY LOCATION	MNL MODEL	SURVEY
UTILITARIAN MOTIVATED			
First choice	Hinthamerstraat	40.6%	45.7%
Second choice	Kerkstraat	24.9%	20.0%
Third choice	Arena	21.0%	28.6%
Fourth choice	Burgemeester Loeffplein	13.6%	5.7%
HEDONIC MOTIVATED			
First choice	Hinthamerstraat	43.8%	55.2%
Second choice	Kerkstraat	26.9%	28.7%
Third choice	Arena	17.8%	29.9%
Fourth choice	Burgemeester Loeffplein	11.5%	9.2%
BOTH MOTIVATED			
First choice	Hinthamerstraat	37.1%	33.8%
Second choice	Arena	24.4%	29.1%
Third choice	Kerkstraat	22.8%	27.2%
Fourth choice	Burgemeester Loeffplein	15.8%	9.9%