THE IMAGE OF A TOWN CENTRE:

A RETAIL PERSPECTIVE

by

Grazyna Barbara Stachow

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CERTIFICATE OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this thesis, that the original work is my own except as specified in acknowledgments or in footnotes, and that neither the thesis nor the original work contained therein has been submitted to this or any other institution for a degree.

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Abstract
Retail image has received considerable attention in the academic literature in recent years, its influence on consumer behaviour demonstrated extensively in contexts such as stores, brands, shopping malls and tourist destinations. It is therefore surprising that the study of retail image in a town centre has been neglected. Town centres, since time immemorial existing as markets facilitating the exchange of goods, have throughout history been of significant importance to local and national economies. Yet academic interest in consumers' choice of town centres, and particularly their image perceptions of these locations, has only been stimulated in response to competition from the development of purpose-built shopping malls. Research into town centres as distinct locations has been extremely limited.

The research reported in this thesis has studied town centre image as a specific retail location. In doing so, the research has also addressed a further limitation in the retail image literature. Researchers have pointed to the limited theoretical development in retail image studies, and particularly to the discrepancy between image conceptualisation and its operationalisation. Image is conceptualised as having both tangible qualities and "an aura of psychological attributes" (Martineau, 1958), but its measurement has focussed almost exclusively on its physical properties, ignoring the less tangible elements which it is hypothesised to contain.

As a consequence of adopting a theoretical approach to town centre image, this research has for the first time developed a model of town centre image which addresses both its tangible and intangible qualities, and which comprises three dimensions: functional, experiential and symbolic. The model was tested using Structural Equation Modelling based on a survey of 816 consumers in three town centres. Analysis of the results suggests that consumers perceive town centre image as a higher order construct consisting of these three dimensions, and that their image perceptions focus on top-level salient aspects of the retail provision, together with feelings, emotions, and subjective attitudes towards the town centre. It is suggested that this conceptualisation provides a more accurate measure of consumer perceptions of town centre image for future academic researchers and for practitioners, particularly as town centres are currently the focus of government policy to support their continuing preservation as important local and national economic drivers.

Key words
Retail Image, Town Centre, High Street, Consumer Behaviour, Functional, Experiential, Symbolic

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NB. All quotes at the start of each chapter are from The Image of the City by K. Lynch (1960).

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Chapter One: Introduction

> "*Every citizen has had long associations with some part of the city, and his image is soaked in memories and meanings" (Lynch, 1960, p. 1)*

1.1 Background to image research

The image of a retail location has been the subject of sustained interest for retail and marketing scholars for over 50 years. Research originated in Martineau (1958)'s proposition that the "personality" of a store, or its image, was the key influence in consumers' decisions regarding where to shop. Describing store image as "a force operative in the determination of a store's customer body besides the obvious functional factors of location, price ranges, and merchandise", Martineau argued that store image is "the way in which the store is defined in the shopper's mind" (p. 47). In addition to the functional or tangible factors, store image contains an "aura of psychological attributes" which accounts for its appeal to shoppers and represents the symbolic meaning of the store (Martineau, 1958, p. 47). Martineau therefore established that, in addition to physical qualities, the psychological attributes in the shape of consumers' individual and subjective perceptions of its image play an important role in their choice of store.

Subsequently, numerous studies have been carried out in the area of retail image in contexts such as stores, shopping malls and brands. This research has confirmed the importance of image factors in influencing consumer behaviour, including shopping frequency, amount of spend, willingness to travel larger distances to shop, and loyalty (Steenkamp and Wedel, 1991). Understanding what constitutes retail image from the consumer's perspective is crucial since a favourable image is expected to result in increased consumer patronage (Baker, Grewal and Parasuraman, 1994; Darden and Babin, 1994; Nevin and Houston, 1980). Image benefits customers in guiding shopping destination and purchase choices (Dobni and Zinkhan, 1990; Dolich, 1969). In a world where there is increasing tendency for "relatively homogenous products often involving high product complexity and confusing messages" (Meenaghan, 1995, p. 23), image offers uniqueness and differentiation, knowledge and product awareness, and the

reduction of risk and search costs (Hankinson, 2004; Jobber, 2001; McGoldrick, 2002). Image gives confidence in the choice decision, reassurance and pride in purchase, and enhances the experience of owning a product (Bloemer and de Ruyter, 1998; Hankinson, 2004; Jobber, 2001; McGoldrick, 2002). Image simplifies the decision making process for consumers (Kavaratzis and Ashworth, 2005; Mitchell, 2001) since "image power springs from the human need to simplify buying decisions by creating symbolic representations to represent a network of salient meanings" (Stern, Zinkhan and Jaju, 2001, p. 201). Hence retail image is important to both retailers and academic researchers because it is believed to influence consumers' spatial behaviour in attracting them to a shopping location.

For retailers, a favourable image is believed to result in greater consumer patronage through increased frequency of shopping visits, greater willingness to purchase, longer time spent shopping and higher sales turnover (Dennis, Newman and Marsland, 2005; Finn and Louviere, 1996; Hunter, 2006; Oppewal and Timmermans, 1997). The value to retailers of understanding consumers' image perceptions includes more effective marketing, ability to charge higher prices and to develop more successful brand extensions (McGoldrick, 2002). In terms of a shopping location such as a town centre, a strong image that is both recognisable and consistent provides an identity which differentiates a place from its competitors, and hence brings competitive advantage in attracting and retaining customers (Davies and Bennison, 1978; Runyan and Huddleston, 2006).

In contrast to the extensive research in the areas of store, shopping mall and brand image, academic research into the image of a town centre remains a neglected area. This neglect is surprising given that town centre retailing has been, since earliest times, of vital importance in contributing to the local and national economy, and continues to represent the highest proportion of retail sales in the UK (Genecon, 2011). The lack of research in town centre image is an even more significant omission in the current economic climate, when town centres are threatened by inflation and economic uncertainty, falling consumer confidence, consequent falls in sales, empty shops and contractions in service provision (BRC, 2009).

1.2 The social and economic importance of town centres

Researching the image of a town centre is of major importance, due to the role of town centres (also referred to as downtowns and High Streets) as key players in the health of local and national economies. They are at the highest level of the retail hierarchy, include the primary shopping area in the urban location and function as important service centres, providing a range of facilities and services for their catchment areas (PPS4, 2009). Town centres account for the highest proportion of retail sales in the UK (at £124bn representing 42.2% of total UK retail sales in 2009) (Genecon, 2011). For some consumers who cannot or choose not to use a car for their shopping trips, the town centre often represents the only available choice of shopping destination (Burt and Sparks, 2003; Teller, 2008; Reimers and Clulow, 2004; Williams and Hubbard, 2001).

The consumption of retail services in town centres, both large and small, pervades the lives of entire populations worldwide. Since earliest historical times, when settlements grew up around trading routes and markets to facilitate trade, economies have thrived on the exchange of goods in urban centres (van den Berg and Braun, 1999). Town centres developed in order to concentrate in one location the ability to satisfy the wants and needs of the early consumer (Teller, Reutterer and Schnedlitz, 2008). Adam Smith writing in *The Wealth of Nations* in 1776 pointed to the social and economic importance of the urban centre when he wrote "[t]he great commerce of every civilized society is that carried on between the inhabitants of the town and those of the country … The greater the number and revenue of the inhabitants of the town, the more extensive is the market which it affords to those of the country; and the more extensive the market, it is always the more advantageous to a great number" (Smith, 1986, p. 480). Shopping has now become an even more pervasive activity, to the extent that Burt and Sparks (2003) can claim that "all of us shop and many have weekly if not daily contact with some form of retailing" (p. 5), a large proportion of which occurs in a town centre.

Town centres perform roles that extend beyond those as shopping centres. Indeed, their social functions complement the retail focus, both activities underpinning retail vitality, creating a sense of place and integrating community

cohesion (Carley, Kirk and McIntosh, 2001; Padilla and Eastlick, 2009). Town centre retailing therefore contributes considerably to the quality of life of both residents and shoppers (Warnaby, Bennison, Davies and Hughes, 2003). The retailing activity of town centres plays a key role in supporting its other functions, maintaining the "vitality and viability" of town centres (Ravenscroft, 2000; Warnaby and Davies, 1997). Town centre redevelopments provide opportunities to enhance the design of urban spaces, reduce crime, promote alternative transport and increase employment (Carley, Kirk and McIntosh, 2001). Increasingly, shopping is regarded as a leisure activity, and hence town centre retailers attract tourists, thereby bringing further financial benefits to the local economy (Foresight, 2000).

Yet town centres are under threat and facing competition at an unprecedented level, not only from out of town shopping centres but also from neighbouring town centres (Warnaby, Bennison and Davies, 2005). Risk averse local authority policies have supported well-known multiple chain stores at the expense of small, independent traders (Genecon, 2011; Portas, 2011). Town centres risk losing their local character, with "the places that we live and shop … turning into clone towns" (NEF, 2004, p.1). Despite government policy to promote town centres, spatial pressures on town centre land use and the growth of technologies encourage alternative retail channels to flourish (Burt and Sparks, 2003; Dawson, 2002; Hughes, Hallsworth and Clarke, 2009; Schiller, 1994; Thomas and Bromley, 2000; Williams, Hubbard, Clark and Berkeley, 2001). Retailers are drawn away from the town centre and are attracted to out of town sites due to lower rental costs, favourable tenant mix and improved facilities (BCSC, 2006; Datamonitor, 2008). While UK town centres have seen store numbers fall by 15,000 over the last decade or so, numbers of out of town stores have increased by around 2,000 (Genecon, 2011). As a result, retail floor space in town centres has fallen by 14% over a similar period, while at the same time out of town floor space has risen by 30% (Portas, 2011). Internet shopping also competes with the town centre for consumers (Weltevreden and van Rietbergen, 2007), and has increased faster in popularity than more traditional channels, due to convenience of use and perceived greater value (Datamonitor, 2008). UK sales made through internet sites have risen to account for 9.6 % of retail sales in 2011, during a time when the recession is impacting significantly on the town centre (ONS Statistical Bulletin,

2011). Most recently, the recession has resulted in town centre retailers and consumers alike experiencing inflation and rising commodity costs, at the same time as falling incomes reduce consumer spend (BRC, 2009; KPMG/Synovate, 2011). Perhaps the most visible impact of the economic downturn are vacancy rates which average at 14.5% nationally, but approach 40% in some town centres in the North and Midlands (Local Data Company, 2011). This has the effect of discouraging shoppers and risking further deterioration of these centres (BRC, 2009).

Similar threats to town centres have been observed not just in the UK but also elsewhere in the developed world. Downtowns in North America have been in decline ever since the Second World War, when retailers and businesses followed the move by residents to the suburbs, and abandoned the central business district for cheaper and more accessible locations (Gorter, Nijkamp and Klamer, 2003; Maronick and Stiff, 1985; Padilla and Eastlick, 2009; Robertson, 1999). Canadian downtowns suffered a decline of 15.7% in retail during the 1990s, losing business to out-of-town shopping centres, a situation from which they have since struggled to recover (Hernandez and Jones, 2005). These trends have occurred in Western Europe and other developed countries, albeit to a lesser extent (Borchert, 1998; Dawson, 2002; Gorter, Nijkamp and Klamer, 2003; Marjanen, 1995; Teller and Reutterer, 2008).

To counter the threats to the town centre and to preserve its traditional functions, successive governments, retailers, investors, and planners have demonstrated a strong desire to support and promote town centres (Hughes, Hallsworth and Clarke, 2009). Central and local governments have been committed to redeveloping and revitalising the town centre as the commercial and social hub of the city through strategies designed to maintain the town centre as the primary commercial centre (e.g. PPS4, 2009; PPS6, 2005). The UK Government's policy over the last 20 years has been to promote town centres as the preferred location for new retail development, and to support diversity through a range of uses, including a strong retail mix and markets, complemented by leisure and entertainment venues promoting the night time economy, tourism and local services, while at the same time preserving their heritage, sense of place and civic

amenity for the community (PPS4, 2009). The most recent initiative has been the commissioning by the Department of Business, Innovation and Skills of retail marketing consultant, Mary Portas, to carry out an independent review to reverse High Street decline and to develop recommendations to create sustainable town centres for the future (Portas, 2011).

It is argued in this thesis that a key strategy to understanding how to support the town centre in maintaining and enhancing its economic performance is to understand what makes consumers choose to shop there. As highlighted by Hauser and Koppelman (1979), "from the perspective of retailers, shopping centre managers and community planners, the sensitivity of destination choice behaviour to the image or attractiveness of the shopping location provides an important opportunity to develop strategies to attract shoppers" (p. 497). Given the importance of retail image in consumers' patronage decisions, investigating how consumers create and view the image of a town centre could enable stakeholders such as central and local governments, planners, investors, town centre managers and retailers to focus more successfully on initiatives to encourage consumers' support and patronage of these locations, and counter the threats of town centre decline. Researching how the image of a town centre as a retail destination is perceived by consumers could help stakeholders to attract not only shoppers but also employers, employees and consumers of the broader urban provision such as public services and entertainment, to retain and build on the competitiveness of their town centre (Ravenscroft, 2000; Warnaby, Bennison, Davies and Hughes, 2003).

1.3 Town centre image perceptions

Research into town centre image is therefore of crucial importance if the relevant stakeholders are to support and promote the performance of town centres. Unfortunately, research into the image of a town centre remains limited, and it remains to be established whether and how consumers view town centres in terms of image perceptions. In *The Image of the City,* Lynch (1960) described the image of an urban location as:

> *"the generalized mental picture of the exterior physical world that is held by an individual. This image is the product both of immediate sensation and of the memory of past experience, and it is used to interpret information and to guide action. The need to recognize and pattern our surroundings is so crucial, and has such long roots in the past, that this image has wide practical and emotional importance to the individual" (p. 4).*

Lynch's work, although from a geographer's perspective, was based on empirical observations of how residents' images are formed from their interactions with the urban environment. Lynch established several fundamental concepts which are relevant to research into the town centre as a retail destination. Firstly, image is a mental picture of a place based on experiences within a physical location. However, it is not formed simply and temporally through each individual interaction with the location, but is also constructed from and integrated with past memories. Secondly, image is interpreted individually and subjectively, and involves psychological attributes such as evaluations, judgements and emotions. Thirdly, image influences action, so that in terms of the urban location, image determines consumers' behaviour before, during and after experiencing it.

Crucially for town centre image research, Lynch demonstrated that an urban location has an image which exists in the mind of the perceiver. Lynch's research in the urban environment therefore echoes Martineau (1958)'s store image study in similarly ascribing behaviour patterns to the image concept, which is based on perceptions of both physical and psychological evaluations. Both these image studies, one from the larger urban area and one at the individual store level, imply that consumers are likely to perceive the town centre, as an intermediate shopping location between the two, as similarly having an image. Subsequent extensive research into store image, shopping mall image and other retail locations such as tourist destinations (to be discussed in more depth in Chapter Two) suggests that consumers have no difficulty in perceiving these disparate locations as having distinct images in their own right, supporting the likelihood that consumers also perceive the town centre in terms of image perceptions.

1.4 Limitations of existing town centre image research

Despite the importance of the image of a retail location in determining consumers' patronage behaviour, its application to town centres has been sparse. Very few studies have been identified which research town centre image perceptions (see Chapter Two). Moreover, only two of these (Hart, Farrell, Stachow, Reed and Cadogan, 2007; Wee, 1986) research the town centre as a specific and distinct location in its own right. A small number of other studies include the town centre as one of a set of shopping centres, without specifically distinguishing between them. Terms such as shopping centre are used interchangeably when referring to downtowns or High Streets which have evolved historically over time, and purpose built shopping malls which are developed in a cohesive, integrated manner and whose image can be more closely controlled (Andreu, Bigne, Chumpitaz and Swaen, 2006; Hunter 2006; Houston and Nevin 1981; Feinberg, Sheffler, Meoli and Rummel, 1989). Despite its importance as a key factor in local economies, the town centre as a distinct focus of image research has been ignored.

As a result, there has been little development in research aimed specifically at the town centre. In particular, research into town centre image lacks a concise definition and a sound theoretical foundation, hampering efforts to develop a full understanding of this concept (Bell, 1999; Hackett, Foxall and van Raaij, 1993). It appears that researchers have overlooked efforts to develop any meaningful conceptualisation of town centre image. Instead, studies which include town centre image have concentrated on measurement of attributes assembled as representing the image dimensions. Furthermore, the attributes used in such studies are typically drawn directly or adapted from the store or shopping mall image literature, without consideration of the distinct character of the town centre (for example Bell, 1999; Hunter, 2006; Nevin and Houston, 1980). This is true even of the town centre specific studies by Hart, Farrell, Stachow, Reed and Cadogan (2007) and Wee (1986) which have similarly adapted measures from other contexts. In the absence of research developed specifically to investigate town centre image as a distinct concept in its own right, it is unclear if existing studies actually measure what consumers perceive as the image of a town centre, as opposed to another retail location. The implication of this for town centre image

research is that current measures to determine patronage in a town centre cannot be depended on to give reliable results.

1.5 Research objectives

Due to the sparseness of previous empirical work, this study contributes to town centre image research by investigating, for the first time, consumers' perceptions of the image of a town centre as a specific and distinct construct. It is argued in this thesis that the lack of a definition and a theoretical foundation for consumers' perceptions of town centre image has hampered the development of research in this key area. Therefore, in order carry out research into town centre image, a definition of image in the town centre is proposed in this thesis, based on reviewing definitions of retail image from the wider marketing literature. A conceptual framework is developed, drawing on theoretical discussions in the retail image literature (e.g. Mazursky and Jacoby, 1986; Oxenfeldt, 1974) and empirical work in the tourist destination literature (e.g. Baloglu and McCleary, 1999; Beerli and Martin, 2004; Gartner, 1993). The framework is based on hypothetical arguments that image is composed of cognitive and affective dimensions as suggested by Mazursky and Jacoby (1986), Oxenfeldt (1974) and others, echoing Martineau (1958)'s proposition of image as made up of physical and psychological elements.

The framework is extended to reflect the conceptualisation of retail image proposed in the original study by Martineau (1958) of image as having symbolic meaning. The brand image concept theory developed by Park, Jaworski and MacInnis (1986) in the brand image literature proposes that brand image is composed of three dimensions, functional, experiential and symbolic. It is hypothesised in this thesis that, while the functional and experiential dimensions parallel the cognitive and affective dimensions proposed by Mazursky and Jacoby (1986) and Oxenfeldt (1974), the addition of the symbolic dimension more closely reflects the definition of retail image as developed by Martineau (1958). A model of town centre image is developed based on the three functional, experiential and symbolic dimensions identified in the brand image concept model (Chapter Three).

Each of these dimensions is represented in the model by constructs hypothesised to reflect consumers' perceptions of image specifically within a town centre.

In order to test the validity of the model developed to represent consumers' perceptions of town centre image, hypotheses are generated to assess the relationships between the constructs in the model. Scales to measure each construct are adapted from extant literature in the wider retail image area as appropriate to the town centre context, and are tested in a large-scale questionnaire survey of over 800 consumers in three UK town centre locations. Data analysis using Structural Equation Modelling is performed to test and validate the model and hypotheses.

In summary, the objectives of this research are:

1. to define the concept of town centre image as perceived by consumers, as a distinct construct in its own right
2. to develop a conceptual framework and a model of the town centre image construct based on the three-dimensional brand image concept theory by Park, Jaworski and MacInnis (1986), and to create constructs reflecting each of the dimensions as appropriate to the town centre context
3. to develop hypotheses demonstrating the relationships between the constructs in the model
4. to generate suitable measures of each of the constructs in the conceptual model
5. to empirically test the hypotheses and measures through a large-scale survey of shoppers in UK town centres,
6. using Structural Equation Modelling to analyse the data and validate the conceptual model of town centre image.

1.6 Structure of the thesis

Consequently, in order to achieve these objectives, the remainder of this thesis is structured as follows:

Chapter Two reviews the current literature in the retail and marketing image research domain. Initially the review draws on and synthesises previous image definitions to create a definition to underpin the investigation of town centre image. Secondly the literature in the contexts of store, brand, shopping mall and tourist destination image is briefly examined for theoretical explanations of the structure of image formation and measures most commonly used in these contexts. Thirdly the current town centre image literature is reviewed in light of the issues identified from the above contexts, and limitations are identified, leading to the specifying of the research gap and the research objectives.

Chapter Three proposes a conceptual framework for addressing the limitations in the current town centre literature and the wider retail and marketing image literature in general. Two alternative theoretical frameworks are discussed. Attitude theory has been used successfully in empirical studies to test image as a cognitive and affective construct in tourist destination image. However, the Attitude theory is extended by the adoption of Brand Concept theory, which addresses the symbolic quality of town centre image. The chapter includes the presentation of the conceptual model which represents the structure of the town centre image construct.

Chapter Four presents the methodology adopted in this thesis. The underlying epistemological approach and the rationale for the research design are discussed. An exploratory qualitative approach was initially adopted to understand the phenomena under investigation in the application of the brand concept theory to the town centre environment and to inform the questionnaire design. Following this, a cross-sectional survey was designed to collect data to test the research hypotheses. The survey data collection method, questionnaire administration and sampling procedures, both for respondents and for the choice of the three

locations where the study was situated, are discussed. Development of the scales adopted to measure the town centre image construct is also discussed.

Chapter Five presents the strategy and procedures undertaken in preparing and analysing the survey data. Descriptive statistics are presented which provide a description of the general characteristics of the respondents in relation to the three locations where the survey took place. A rationale for adopting Structural Equation Modelling as an appropriate technique for analysing the questionnaire data is given, and a description of the processes of confirmatory factor analysis and assessment of the structural model is provided. Assessment of model fit, reliability and validity issues are discussed.

Chapter Six presents the results of the data analysis to test the validity of the town centre image model and its related hypotheses. Details of the purification of the scales developed to measure town centre image using confirmatory factor analysis, model modification, and testing the goodness of fit, reliability and validity of the model are given. The resulting final structural model of town centre image is subjected to validation using multi-group invariance testing. An analysis of the image profiles of the three survey locations is provided, demonstrating that the town centre image model and measurement instrument can usefully discriminate between different town centre locations in assessing their image.

Chapter Seven discusses the implications of the results for the theoretical relationships between the variables in the model. The hypothesis that the brand image concept model can be applied to the town centre is investigated, as is the three-dimensional image structure. The validity of the model is tested through its association with patronage intentions, as demonstrated through word of mouth recommendation. The key findings relating to the constructs included in the town centre model are discussed, which suggest that consumers perceive image in terms of salient cues from the environment which are perceived at a higher level than those previously adopted from the wider retail image literature, underlining the need for measures which are specific to the town centre.

Chapter Eight summarises the implications of this research for academic theory. Opportunities for the practical application of the research findings, and particularly the measurement instrument developed in this study, are recommended for practitioners in the field of Town Centre Management and stakeholders in related local and national government, planning and place marketing activities. Limitations of the study are highlighted and directions for future research are suggested in further testing the model in wider retail and marketing contexts, and applying the findings of the image research developed in this thesis to relevant areas of the wider marketing domain, such as town centre equity, customer experience and place branding.

Chapter Two: Literature Review

> "*imageability: That quality in a physical object which gives it a high probability of evoking a strong image in any given observer. It is that shape, color, or arrangement which facilitates the making of vividly identified, powerfully structured, highly useful mental images of the environment" (Lynch, 1960, p. 9)*

In comparison with town centre image research, retail image has been researched far more extensively in the wider retail and marketing area. This chapter draws initially on the wider image literature where it has relevance to the objectives of this study into town centre image. The chapter firstly introduces the rationale for researching image and briefly reviews definitions of image in the wider retail and marketing literature, in order to propose a definition which can be adopted for the town centre research. Following this, image research in store, brand, shopping mall and tourist destination image studies is discussed and areas which assist in meeting the objectives of this town centre image study are highlighted. The final section of this chapter reviews in depth the existing town centre image literature and identifies the limitations of this research. Finally, a set of research objectives are outlined which will address the limitations identified, and enable the development of research into the image of a town centre, for the first time, as a specific retail location in its own right.

2.1 Introduction

Since its inception in Martineau (1958)'s original study, image continues to be an important yet elusive concept in retail and marketing research (Bloemer, de Ruyter and Peeters, 1998; Stern, Zinkhan and Jaju, 2001). Its importance is highlighted by the recommendation that "managing the retail [location] well is managing its image effectively", thereby increasing the likelihood of retail success (Samli, 1998, p. 211). Image provides retail managers with an advantage by distinguishing a retail location from its competitors (Davies and Bennison, 1978; Finn and Louviere, 1996; Kunkel and Berry, 1969; Runyan and Huddleston, 2006; Samli, 1998; Wakefield and Baker, 1998). Research has shown that consumers' image

perceptions can be used to predict choice of store and location (Dobni and Zinkhan, 1990; Baker, Parasuraman, Grewal and Voss, 2002; Hansen and Deutscher, 1977-8; Martineau, 1958; Osman, 1993). A positive image has been linked to satisfaction with the purchase decision (Bloemer and de Ruyter, 1998; Doyle and Fenwick, 1974; Hankinson, 2004; McGoldrick, 2002; Stanley and Sewall, 1976) and has been demonstrated as a predictor of loyalty, shopping frequency, amount of spend, and willingness to travel larger distances to shop (Bellenger, Steinberg and Stanton, 1976; Dennis, Newman and Marsland, 2005; Finn and Louviere, 1996; Hunter, 2006; Kirkup and Rafiq, 1994; Oppewal and Timmermans, 1997; Sirgy, 1985; Steenkamp and Wedel, 1991).

The importance of image to researchers therefore lies in the assumption that image drives consumer behaviour. Researchers agree that the decision to shop involves not only knowledge and information, but also social and psychological processes such as feelings, ideas and attitudes (Gardner and Levy, 1955; Verhoef et al., 2009). Consumer behaviour "is not guided solely nor mainly by principles of economic man, but is rather the result of a subjective decision-making process on the basis of personal and environmental constraints as well as imperfect and incomplete knowledge of the retailing system" (Timmermans, van der Heijden and Westerveld, 1982, p. 2). Consumers perform behaviours which represent meaning for them beyond economic utility, in other words because of image perceptions (Boulding, 1956; Lindquist, 1974). Image is therefore "the embodiment of the abstract reality that people buy products or brands for something other than their physical attributes and functions" (Dobni and Zinkhan, 1990, p. 110).

2.2 Image definition

Due to its importance to both retailers and consumers alike, image has been exhaustively researched over more than 50 years and has formed the basis of prolific streams of research particularly in stores, brands, shopping malls and tourist destinations, although less so in town centres. Yet despite much research effort, image remains an elusive concept and researchers have not yet succeeded in producing a consistent set of definitions, theoretical explanations or measures

(Burt, Johansson and Thelander, 2007; Dobni and Zinkhan, 1990; Keaveney and Hunt, 1992; Stern, Zinkhan and Jaju, 2001).

Although definitions vary, there is general agreement with Martineau (1958)'s original proposition that the image aspects, which are commonly referred to as attributes or dimensions, consist of tangible and intangible qualities. Tangible aspects refer to functional qualities which are physically experienced when visiting a store and include merchandise, price, and location which can be objectively perceived and evaluated (Martineau, 1958). Psychological aspects include "a sense of belonging, the feeling of warmth or friendliness, or possibly a feeling of excitement or interest" (Lindquist, 1974, p. 30). Although it is assumed that consumers form images from both tangible and psychological aspects simultaneously, little is known theoretically about the structure and content of image, and the image construct remains abstract and elusive (Bloemer, de Ruyter and Peeters, 1998; Dobni and Zinkhan, 1990; Stern and Krakover, 1993; Stern, Zinkhan and Jaju, 2001; Tasci, Gartner and Cavusgil, 2007).

As a result, definitions of image in the retail and marketing literature exhibit considerable variation from "very elaborate evaluations of products, brands, stores or companies" to "holistic, general impressions" (Poiesz, 1989, p. 463). Many studies consider image as an elaborate concept consisting of a range of attributes or components which combine to form a smaller number of dimensions (Hansen and Deutscher, 1977). For example, Hirschman, Greenberg and Robertson (1978) define image as a multi-dimensional construct, consisting of "a number of dimensions, usually called components, which collectively make up … image" (p. 3). Further elaborative definitions include "the consumer's evaluation of all salient aspects of the store as individually perceived and weighted" (Doyle and Fenwick, 1974, p. 40). Nevin and Houston (1980)'s definition of a shopping centre as "a composite of dimensions that consumers perceive as the shopping area" echoes the notion of image as multi-dimensional and composed of information representing the range of attributes and dimensions in the physical environment (p. 84). These dimensions are situated in "the external world of physical entities" and are transmitted to the consumer in the shape of stimuli (Stern, Zinkhan and Jaju, 2001, p. 218), which are processed objectively and cognitively (Downs, 1970;

Kasulis and Lusch, 1981). Existing in the external environment of the retail location, the attributes and dimensions from this perspective are tangible elements representing the physical reality of the location.

Conversely, Amirani and Gates (1993) define store image as a holistic general impression, or "consumers' overall impressions of retail stores" (p. 31), and Berry (1969) considers image is formed "on the basis of the totality of [all] experiences when shopping there" (p. 5). In this view, image "describes not individual traits or qualities, but the total impression an entity makes on the minds of others" (Dichter, 1985, p. 75). This overall or total impression is also frequently referred to as a holistic image (Keaveney and Hunt, 1992; Zimmer and Golden, 1988). A holistic image encompasses the whole environment because it "is not anchored in just objective data and details. It is the configuration of the whole field of the object" (Dichter, 1985, p. 75). A holistic image has been considered by some researchers as the sum of all attributes (Birtwistle, Clarke and Freathy, 1999; Wong and Yu, 2003). In this view a holistic image of a town centre will be perceived as the entirety of the retailing provision, plus the totality of the other place elements from the wider non-retail environment (Warnaby, Bennison and Davies, 2005). In addition, a holistic image includes psychological elements such as attitudes, emotions and behaviours formed from the evaluation of the tangible elements (Blawatt, 1995; Keaveney and Hunt, 1992). Therefore a holistic image contains both tangible attributes and dimensions representing the whole environment, but also incorporates the consumer's subjective and personal perspective (Oxenfeldt, 1974). However, as yet, the literature is unclear as to the full nature of these subjective and personal perceptions, or indeed, the measurement of the holistic image construct.

The subjective and personal perceptions, in the case of a store, are "a complex of meanings and relationships serving to characterize the store for people" (Arons, 1961, in Lindquist, 1974, p. 30). This complexity is likely to be even greater in the image of a town centre since town centres are complex environments, which contain both retail and non-retail elements within the wider urban environment (Ravenscroft, 2000; Warnaby, Bennison, Davies and Hughes, 2002). However, instead of representing the sum of all attributes, as image is sometimes defined

(Birtwistle, Clarke and Freathy, 1999; Wong and Yu, 2003), some researchers suggest that the value of image to consumers is in simplifying complex information (Kavaratzis and Ashworth, 2005; Keaveney and Hunt, 1992; Mitchell, 2001; Poiesz, 1989; Stern, Zinkhan and Jaju, 2001), since the power of image "springs from the human need to simplify buying decisions by creating symbolic representations to represent a network of salient meanings" (Stern, Zinkhan and Jaju, 2001, p. 201). In terms of the image of a location such as a town centre, image is "a simplification of a large number of associations and pieces of information connected with the place. [It is] a product of the mind trying to process and 'essentialise' huge amounts of data about a place" (Kotler, Haider and Rein, 1993, p. 141).

The complexity of information is summarised into a symbolic representation of reality (Lindquist, 1974). As Boulding (1956) describes, because "the human imagination can only bear a certain degree of complexity ... [w]hen the complexity becomes intolerable, it retreats into symbolic images" (p. 111). Rather than perceiving image in terms of its full complexity, consumers attempt to manage the complexity by interpreting and reducing the set of attributes and dimensions into a simplified impression which has value and meaning for them (Kasulis and Lusch, 1981; Oxenfeldt, 1974). Consumers "rely heavily on cues rather than upon direct observation" (Oxenfeldt, 1974, p. 9). However, as yet, researchers are not clear as to defining the symbolic concept of image, beyond agreement that a symbolic image is not a direct and literal representation of objective reality (Kasulis and Lusch, 1981; Keaveney and Hunt, 1992; Oxenfeldt, 1974). Image is "more than a factual description of its many characteristics …. it is less like a photograph than like a highly interpretive portrait" (Oxenfeldt, 1974, p. 9). It is believed to consist of information which is interpreted subjectively (Kasulis and Lusch, 1981; Oxenfeldt, 1974), containing "biases, inaccuracies, opinions, and feelings" (Keaveney and Hunt, 1992, p. 167).

There is therefore little consensus in the retail and marketing literature as to a consistent definition of image. However, researchers agree that image consists of tangible attributes and dimensions, which are selected on the basis of their salience or relevance to the perceiver, and intangible, psychological elements

such as values, attitudes and feelings. Image is also frequently referred to as holistic, or a "total impression" which draws on the totality of the environment, and which influences overall image perceptions. In addition, image has a symbolic role which represents a simplified version of objective reality. Taking this combination of definitions from the literature, a definition of image for the purposes of studying town centre image is proposed as:

> *A symbolic representation of reality which consists of salient factual cues from the total environment, and psychological elements such as attitudes, feelings and values.*

2.3 Image in the wider retail and marketing area

2.3.1 Store image

The key purpose of image research is to understand how managing the various aspects of image can be used to predict and influence consumer behaviour and ultimately commercial performance (Hartman and Spiro, 2005; Stanley and Sewall, 1976). Therefore, the importance to retailers of monitoring the image of a store has resulted in a stream of research, which has taken both conceptual and empirical approaches, and which has lasted over 50 years (McGoldrick, 2002). The empirical approaches to its measurement are more common in the literature and will be considered in the next section, followed by a review of theoretical developments in the area of store image.

Image research originated in Martineau (1958)'s analysis of the "personality of the store", or "the way in which the store is defined in the shopper's mind, partly by its functional qualities and partly by an aura of psychological attributes" (p. 47). Martineau defined store image as "a force operative in the determination of a store's customer body besides the obvious functional factors of location, price ranges and merchandise offerings" (p. 47), proposing that tangible and intangible store image elements combine in influencing consumers' choice of shopping destination. The tangible elements are functional physical aspects such as merchandise, layout, architecture and facilities. Intangible elements are experienced and judged subjectively, and include psychological elements such as

an atmosphere of comfort, friendliness, honesty, dependability, unselfishness, and pleasurable experiences of warmth, colour, acceptance, friendliness, attractiveness, a sense of belonging, an attitude that “this is my store” (Martineau, 1958, p. 48). Image has a symbolic aspect in that it “becomes a symbol to which [a consumer] can form deep attachments or dislikes” (Martineau, 1958, p. 54).

In combining tangible factual information and intangible feelings and attitudes, store image is commonly researched as a multi-faceted concept (Lindquist, 1974). The assumption is that “consumers perceive stores on a number of dimensions, usually called components, which collectively make up store image” (Hirschman, Greenberg and Robertson, 1978, p. 3). As image research developed, so did variations in the terms used to describe measures of interest. Hansen and Deutscher (1977) proposed a categorisation of image terminology, based on dimensions, components and attributes. In this categorisation, dimensions refer to the broadest level of measure aggregation, while attributes are the detailed and specific elements within a dimension. Components exist between these two levels, so that a certain dimension will contain components which are themselves made up of various attributes. However, since components are somewhat vaguely defined, they are less specific in determining levels of image perceptions.

Researchers have subsequently further studied the image concept to determine the key aspects of store image and to develop measures to assess these. As a result of the proliferation of research, some consistency in store image measures has been achieved but also considerable variation. For example, Berry (1969) identified twelve attributes in relation to department store image: location, sales personnel, fashionability, price, quality and assortment of merchandise, convenience, services, sales promotions, advertising, atmosphere and reputation. Hawkins, Albaum and Best (1975-6) used ten attributes they considered the most frequent measures of store image: selection, quality, price, service, helpful employees, location, as well as less tangible aspects of pleasant, honest, friendly and dependable. Lindquist (1974)’s meta-analysis of store image literature to date categorised the most common store image attributes used by researchers into nine groups: merchandise, service, clientele, physical facilities, convenience, promotion, atmosphere, institutional factors and post-transaction satisfaction. More

recently, McGoldrick (2002) summarised all measures used in extant store image studies into 90 specific attributes, grouped into eighteen dimensions, illustrating the variation in the attributes and dimensions which researchers have used to represent store image. However, four key dimensions appear consistently: location, merchandise, service and atmosphere (Ailawadi and Keller, 2004; Mazursky and Jacoby, 1986).

The various combinations of dimensions and attributes used in store image studies demonstrate that research into the store image construct is diffuse and lacking in clarity, resulting in the view that image is "a complex construct open to various interpretations" (Burt, Johansson and Thelander, 2007, p. 448). The lack of consensus as to the content of store image prompted researchers to question the multi-faceted approach and to argue for a more theoretical approach to researching image (Burt, Johansson and Thelander, 2007; Mazursky and Jacoby, 1986; Zimmer and Golden, 1988). In particular, it is claimed that attribute measures currently adopted capture only the tangible physical reality of image and fail to capture image as defined as a symbolic representation. Image is believed to be a richer construct than attribute-based perceptions, containing personal information, subjective perceptions and global impressions (Zimmer and Golden, 1988), and is "more than the sum of its parts" (Oxenfeldt, 1974). Authors have proposed that image is not a "mirror image of objective reality" (Keaveney and Hunt, 1992, p. 167). According to Dichter (1985), "image is not anchored in just objective data and details. It is the configuration of the whole field of the object … and, most important, the customer's disposition and the attitudinal screen through which he observes" (p. 75). Following this reasoning, researchers have argued that the limited theoretical development to explain image formation has hampered the ability of researchers to adopt consistent measurement and methodological procedures (Keaveney and Hunt, 1992; Stern, Zinkhan and Jaju, 2001; Zimmer and Golden, 1988).

Consistent with recommendations that "a key factor in understanding store image involves understanding the processes which underlie its formation" (Mazursky and Jacoby, 1986, p. 145), a parallel stream of research emerged, aiming to understand how image is formed from the consumer perspective, and in particular

exploring the intangible, psychological elements of image formation. In doing so, researchers have developed a variety of theoretical explanations as to consumers' image formation. One of the earliest explanations is by Kunkel and Berry (1969) who adopted behavioural learning theory to explain image formation. Kunkel and Berry (1969) describe store image as "the result of differential reinforcement in the context of a given stimulus or set of stimuli" (p. 4), and propose that image changes dynamically as consumers are actively involved in creating images from the environmental stimuli they encounter in the store. Image is created by repeated exposure to a store. A consumer creates an image of the store based on experience of that store, which is modified or reinforced each time the store is re-visited. Hence image is formed as a direct result of experiencing a store, and the resulting image varies according to whether each repeated visit matches or differs from the expectations the consumer develops over time.

MacInnis and Price (1987) use information processing theory to further develop the process of image formation, which they call imagery. They echo the dynamic nature of learning theory in proposing that image is "(1) a process (not a structure) by which (2) sensory information is represented in working memory" (p. 473). They extend behavioural learning theory by suggesting that images are formed on a continuum of processes ranging from "simple retrieval or evocation of a cognitive concept to processes involving multiple concepts and constructions (e.g. problem solving, creative thinking, and daydreaming)" (p. 474). They state that images contain "concrete sensory representations of ideas, feelings, and memories, and … direct recovery of past experiences" in cues that are integrated in working memory to form a gestalt version of image (p. 474). In addition, imagery evokes sensory experiences which may include smell, taste, sight and touch (MacInnis and Price, 1987).

Under information processing, the consumer is "a logical thinker who acquires, processes, and integrates information to solve problems to make purchase decisions" (Poiesz, 1989, p. 458). Imagery is activated during the decision making process when the consumer makes a purchase decision. Consumers make choices according to how they think about cues they encounter in the environment (Tybout, Calder and Sternthal, 1981). Imagery appears to be a distinct way of

processing information in the form of pictorial representation (MacInnis and Price, 1987). Although imagery may evoke sensations, the cues are largely concrete and factual components which are processed and stored "more or less faithfully" (Tybout, Calder and Sternthal, 1981, p. 74). Hence, information processing of imagery is closely aligned with cognitive processing of elements in the physical environment (Downs, 1970).

However, when considering image as originally proposed by Martineau (1958), as consisting of tangible and intangible dimensions, image is also defined as including subjective and personal responses. The information processing view, in describing image formation as needing highly conscious deliberation of physical cues, ignores the more subjective components of image (Poiesz, 1989). In addition, information processing contradicts the view that image simplifies external information. Consumers are believed to use images to make decisions not due to cognitive reasoning and deliberation but based on a limited number of items of information (Jacoby, Szybillo and Busato-Schach, 1977; Mitchell, 2001; Woodside and Trappey, 1992).

Contrasted with the cognitive reasoning necessary for information processing, Keaveney and Hunt (1992) argue for an alternative theory of image formation which they call "category-based processing". They propose that studying image as a cognitive construct in terms of its dimensions and attributes only captures "objective reality", while neglecting image as conceptualised as abstract and subjective, or a gestalt (Keaveney and Hunt, 1992, p. 167). Adopting schema theory, Keaveney and Hunt (1992) suggest that processing image cognitively as multiple attributes is similar to piecemeal based processing, where consumers' impressions are formed by objectively evaluating each attribute in turn, combining all attributes into an overall judgement. However, evaluating attributes piecemeal involves effort. Consumers have limited cognitive capacity (hence the need to simplify information to form images) and instead use category based processing. Category based processing means that consumers simplify this effort by initially comparing an environment to one with which they are already familiar. In visiting a store for the first time, if they are experienced shoppers, the consumer will consider whether the store is a typical department store, or a typical discount

store, for example, and will form an image based on matching the new store with their experience of existing stores. Only when faced with a new environment which differs significantly from previous experience will consumers process incoming information in detail, and will note any attributes which diverge from previously-composed images. Therefore, if the environment is unfamiliar, its image is more likely to be perceived in terms of its component parts. Where consumers are more familiar with an environment, rather than view it as "an inventory of … attributes" they will draw on memory and view it as an "abstract", "gestalt" or "holistic" entity (Keaveney and Hunt, 1992, p. 168).

A gestalt or holistic image contains information about salient tangible attributes but also psychological components of "affect, overall impressions, examples of prototypes, and context (situations, events, sequences of actions, and networks of causal relationships)" (Keaveney and Hunt, 1992, p. 170). A gestalt image allows consumers to make comparisons with known locations, consists of a small number of cues which enable them to fill in missing information by making inferences so that in fact errors may be made, and the gestalt image becomes "not a mirror image of objective reality, but contains biases, inaccuracies, opinions, and feelings" (p. 167). Hence the image construct as proposed by Keaveney and Hunt (1992) more closely resembles the image definition as proposed earlier, as a simplification and as a symbolic concept. Keaveney and Hunt (1992)'s conceptualisation of image as formed from category-based processing, in challenging existing approaches to image measurement, signifies an important direction for image research. However, their conceptualisation gives researchers little guidance as to what image as a gestalt contains and how it can be measured.

Some proposals as to the content of image as a gestalt have been offered by researchers in store image. In particular, suggestions have been made regarding the affective image component, or the "biases, inaccuracies, opinions, and feelings" suggested by Keaveney and Hunt (1992, p. 167). Oxenfeldt considers that image not only consists of factually based opinions but "has some emotional content – i.e. it includes an element of being drawn toward or repelled" (Oxenfeldt, 1974, p. 9). The customer's reaction to a store's characteristics includes feelings such as emotional and sensory responses, which according to Oxenfeldt more

closely represent image than tangible physical attributes. Emotional responses are multi-sensory and can be physiological reactions involving smell, taste, sight and tactile sensations, but they can also consist of ideas, feelings and memories. They may be favourable or unfavourable, and the level of favourable evaluations indicates how positive the resulting image will be. Consumers are likely to focus on images which have high positive affective content and which make them feel good, increasing the likelihood of purchase or patronage (MacInnis and Price, 1987; Oxenfeldt, 1974).

Mazursky and Jacoby (1986) combine both cognitive and affective elements in explaining store image formation as the processing of various beliefs, perceptions, emotions and factors existing in memory. More specifically, they state that store image is "a cognition and or/affect (or a set of these), which are inferred from acquisition of knowledge, or learning, from perceptions or memory, and which represent meaning to an individual" (p. 147). In Mazursky and Jacoby (1986)'s definition, cognitive and affective responses to information cues in an environment blend together and are subsequently reinforced through experience. The consumer selects those cues which are most salient, and which trigger the strongest feelings and attitudes (Mazursky and Jacoby, 1986). A cognitive image contains factual information based on beliefs and opinions (e.g. "it is an old-fashioned store"), while an affective image contains feelings and attitudes related to the pleasantness of the store (e.g. "I like it") (p. 148). Therefore Mazursky and Jacoby (1986)'s image conceptualisation approaches a conceptualisation of image as subjective and interpretive.

Zimmer and Golden (1988) further explore the gestalt approach to store image. Adopting a customer-focussed perspective, they combine both multi-faceted and interpretive approaches in suggesting that a gestalt image is "comprised of distinct dimensions and is also greater than the sum of its parts" (p. 265-6). Zimmer and Golden (1988) elicited customers' unprompted responses regarding their overall impressions of a store, finding that the responses generated followed several types. Using a qualitative research study, they report that consumers perceive retail store image using both a piecemeal approach based on attributes, and in terms of global or overall impressions. Although a large majority of categories

(two-thirds) related to store attributes, one-third of responses included “global impressions, store-type labels, prototypes and exemplars, products and their own behaviour” (p. 283). Many of the respondents reported global impressions containing an affective, or evaluative element (for example, pleasant/unpleasant customers, a nice place to shop), confirming that affect is an integral part of image. They also noted that many responses comprised “a couple of ideas rather than an array of individual, specifically focussed attributes” (p. 287), suggesting that respondents integrate or abstract information in the form of specific cues to reduce and simplify image to a gestalt or symbolic perception. By eliciting respondents’ own spontaneous impressions, Zimmer and Golden (1988) discovered a broader conception of image than hitherto realised. Their study highlights the view that the multi-faceted piecemeal approach to image research does not provide a complete picture, and ignores consumers’ tendency to make interpretations based on the evaluation of a few specific cues and subjective inferences to form a gestalt image.

Samli (1998) further extends the conceptualisation of store image to incorporate a symbolic element, in proposing that it is the interrelationship between the tangible (or cognitive) elements and the intangible (or psychological) elements which forms the symbolic image. Samli (1998) suggests that the process of simplifying the detail of the full set of attributes and dimensions reduces the complex reality of the retail environment into a small number of pieces of information which have specific meaning for each individual consumer, and which symbolise reality into a symbolic image.

However valuable these studies are for providing a theoretical basis for the formation of image, they are less successful in providing directions as to the measurement of image as symbolic, holistic or gestalt. The conceptualised image approaches outlined above remain to be operationalised empirically. In particular, the affective dimension of store image remains under-researched, and there are no indications as to how category-based processing may be measured. Moreover, the notion of image as a global impression or a gestalt, holistic entity, as currently adopted may be too vague to provide practical guidelines as to its measurement (McGoldrick and Thompson, 1992). Therefore, the literature is relatively lacking in

measures of store image as it is defined as a symbolic representation of reality (Keaveney and Hunt, 1992).

2.3.2 Brand Image

Store image and brand image are closely interlinked (Ailawadi and Keller, 2004; Grewal, Krishnan, Baker and Borin (1998). Jacoby and Mazursky (1984) found that store image can be improved by associations with a favourably evaluated brand image, and will be damaged by links with brands with less positive images. Conversely, particularly in terms of store own brands, Collins-Dodd and Lindley (2003) found that store image positively influenced consumers' evaluations of the image of certain brands, suggesting that brand image and the image of a retail location can be interlinked in the creation of consumers' image perceptions.

However, in contrast to store image literature, where much attention is focussed on identifying and measuring tangible store attributes using a multi-faceted approach, brand image literature is more concerned with the psychological elements of image (Park and Srinivasan, 1994; Stern, Zinkhan and Jaju, 2001). Keller (1993) defined brand image as "perceptions about a brand as reflected by the brand associations held in consumer memory" (p. 3). According to Park, Jaworski and MacInnis (1986) "brand image is not simply a perceptual phenomenon affected by the firm's communication activities alone. It is the understanding consumers derive from the total set of brand-related activities engaged in by the firm" (p. 135). Brands are made distinctive by elements which are "of this non-functional type; that is, they go beyond the perceived quality of the brand on functional product and service criteria and deal instead with 'intangible' properties of the brand" (Batra and Homer, 2004, p. 318).

Brand image is therefore a combination of the tangible and objective elements related to the physical nature of the product, but with greater emphasis on the abstract nature of image as exemplified by psychological and subjective responses (Friedmann, 1986; Levy, 1978). Consumers participate in the creation of brand image during their interaction with the product, by "decoding, extracting and interpreting the brand signals" (Faircloth, Capella and Alford, 2001, p. 64).

These signals are transmitted through a variety of cues, including physical properties such as product attributes, physical logos and symbols, elements of the marketing mix, and the context in which the product is consumed. However, they also include intangible elements such as the consumer's personal values and past experiences, and perceptions of the types of people associated with the use of the brand (Dobni and Zinkhan, 1990). Brand image therefore represents the personal meanings that consumers associate with the brand, which comprises all the cognitive and affective brand-related information (Iversen and Hem, 2008; Lee, Lee and Wu, 2011).

Park, Jaworski and MacInnis (1986) suggest that consumers form brand image in response to three basic needs. These needs are functional (solving consumption-related problems), experiential (needs for sensory, pleasure, variety, cognitive stimulation), or symbolic (needs for self-enhancement, group alignment). When a product's brand image coincides with consumers' recognition of these needs, consumers are more likely to have a positive image (Roth, 1995; Meenaghan, 1995). The brand image literature has further developed theories of image formation. Keller (1993) proposes that brand image represents the meaning of the brand for consumers, and is formed from associations stored in consumer memory. Associations, or mental pathways, are activated by recognition of stimuli, or cues, which are linked to stored memories of past experiences. Some of these associations relate to the symbolic or experiential consumer needs identified by Park, Jaworski and MacInnis (1986). Others are associated with functional needs related to the purchase experience, whether product related (physical characteristics) or non-product related (e.g. price, packaging or appearance, user or usage imagery). A third category of associations consists of brand attitudes, or consumers' overall evaluations of the brand. Keller (1993) argues that these overall evaluations form the basis for consumer choice decisions.

However, not all brand image associations are equally relevant to consumers. For example, associations differ according to how favourably they are evaluated, but they may not be considered at all if they are not important to the consumer. The strength of associations also depends on how they enter memory and how they are retained. If a consumer thinks about or elaborates on an association, stronger

associations are held in memory. The higher the number and the greater the strength of associations, the more salience they hold for consumers: such salient associations represent the cues which consumers use to form image (Keller, 1993).

Brand image literature is predominantly associated with product and retailer brands. However, brand image is also relevant to image in locations. For example, Dennis, Murphy, Marsland, Cockett and Patel (2002) showed that brand image can be applied to shopping malls. Other locations have also been considered in terms of place branding, such as towns and cities (Hankinson, 2004; Kavaratzis and Ashworth, 2005; Kotler, Haider and Ryan, 1993; Runyan and Huddleston, 2006) and even nations (Fan, 2006). It is argued that place image, similar to product brand image, is a psychological construct, whereby “encounters with the city take place through perceptions and images” (Kavaratzis, 2004, p. 62). However, branding a location is complicated by the fact that place marketers have less control over the product. Unlike products, places such as towns and cities have many functions and multiple stakeholders (Hankinson, 2004), and hence place brand image is perceived in differing ways according to the perspectives of the various consumer groups (Ashworth and Voogt, 1994). In contrast to product brand image, the image of a location may be influenced by the image of the wider environment, suggesting that place branding communicates an image which is holistic (Ashworth and Voogt, 1994; Hankinson, 2004).

However, place branding is a relatively new area of research, and reliable measures of place brands remain to be developed (Kavaratzis and Ashworth, 2005). Hence, while the brand image literature, particularly the work of Park, Jaworski and MacInnis (1986) and Keller (1993) offers some theoretical development into image as a symbolic construct, the directions offered by brand image theory need further exploration if they are to be used in a town centre context.

2.3.3 Shopping mall image

Few retail outlets exist in isolation, and researchers have sought to establish shopping mall image in relation to store and brand image (El Hedhli and Chebat, 2009; Finn and Louviere, 1996; Howell and Rogers, 1980; Nevin and Houston, 1980). Although they occupy a number of location types and fulfil a range of purposes, shopping malls are coherent, planned and controlled purpose-built shopping centres, managed as a single concern (Howard, 1997; Ruiz, 1999; McGoldrick, 2002). Considered essentially as a collection of stores, malls and the image of the stores they contain are interdependent and act in synergy to create an overall mall image (Howell and Rogers, 1980; Kirkup and Rafiq, 1994; Ruiz, 1999). Thus store image measures have been highly influential in mall image research.

Interest in shopping mall research developed in response to the emergence of these shopping centres as a new phenomenon in the retail hierarchy. Since the Second World War, retailers and businesses have increasingly followed the move by residents to the suburbs, and abandoned the town centre to build shopping malls in cheaper and more accessible locations out of town. The construction of shopping centres in locations other than traditional town centres or downtowns raised a need for planners, developers and managers to investigate the spatial issues of location and transport, together with the non-spatial factors, which encourage shoppers travel to a centre (Gautschi, 1981; McGoldrick and Thompson, 1992; Ruiz, 1999; Mejia and Benjamin, 2002). Mall managers were concerned to establish and manage the elements of mall image which influence shoppers to travel to these out of town locations, since developing a unique and distinct image for a shopping mall increases the likelihood of its success (Finn and Louviere, 1996; Mejia and Benjamin, 2002).

Similar to store image, researchers have therefore investigated the image of shopping malls primarily to establish key image dimensions. The assortment of stores, or tenant mix, has been identified as the most important factor in customer's image of a centre, creating the first impressions that customers receive (Kirkup and Rafiq, 1994; Finn and Louviere, 1996). A more extensive store assortment is likely to satisfy shoppers' needs better, by offering more choice and

creating a more positive mall image (Chebat, Sirgy and Grzeskowiak, 2010; Ghosh, 1986). Thus, managers can control the image of malls by selecting stores whose image is congruent with the intended image of the centre (Brown, 1992). Particular attention has been given to the role of large department stores, or anchor stores, in shopping mall image. Not only have anchor stores been found to significantly influence customers' image of the mall in which they are located (Burns, 1992; Finn and Louviere, 1996; Meoli, Feinberg and Westgate, 1991), their image also influences the image of other stores in the mall (Mejia and Benjamin, 2002; Chebat, Sirgy and St-James, 2006). In addition, Nevin and Houston (1980) found that the image of a special store in a shopping mall was key to explaining consumers' patronage intentions. Thus researchers conclude that mall image is primarily formed from the synergy created by the store assortment.

However, similar to town centres, shopping malls contain more than just stores. Even relatively small shopping malls offer services and facilities such as "fast-food courts, art exhibits, restaurants, video arcades, movie theatres, hair salons, and dental offices" (Bloch, Ridgway and Dawson, 1994, p. 24). Various combinations of elements of shopping malls have therefore also been studied by researchers. Kirkup and Rafiq (1999) highlight "a satisfying and safe shopping and leisure experience … access, mix environment, safety and leisure" as key features (p. 121). More specifically, the ease of movement within the mall, or the way that layout is designed, has been investigated as part of mall image (Brito, 2009; Chebat, Gelinas-Chebat and Therrien, 2005). Due to the ability of mall management to incorporate atmospheric features in mall design, these have also been included in mall image studies. The social and atmospheric aspects of a shopping mall extend the tenant mix by including food services, leisure and entertainment provision, which also form part of consumers' image of the mall (Sit, Merrilees and Birch, 2003; Wakefield and Baker, 1998). Atmospherics have been researched in terms of ambient odour, music and colours (Michon, Chebat and Turley, 2005; Chebat and Michon, 2003; Chebat and Morrin, 2007; Teller, 2008) and found to influence shopping behaviour in a mall, while social aspects have been investigated from the perspective of interactions with other shoppers and self-image congruence (Bloch, Ridgway and Dawson, 1994; Chebat, Sirgy and St-James, 2006; Feinberg, Sheffler, Meoli and Rummel, 1989). Wakefield and Baker

(1998) suggest that shopping malls generate affective responses similarly to stores, in that consumers seek excitement from the mall visit. Thus the overall mall image can be manipulated by management by ensuring the coherence of the tenant mix and leisure and entertainment, and optimising layout, design and atmospherics, while attracting the desirable customer typologies, to increase the level of attractiveness of the mall for shoppers (Kirkup and Rafiq, 1999; Ruiz, 1999).

Much of the shopping mall literature takes a practitioner perspective to provide useful directions for mall managers. McGoldrick and Thompson (1992) note the arbitrary nature of some of the measures used in mall image studies, with the emphasis on what is important for managers to measure and manage (Brito, 2009; Finn and Louviere, 1996). In taking a practitioner perspective to provide recommendations for managers to manage shopping mall image, researchers have addressed the conceptual basis of mall image to only a limited extent. Similar to much of store image research, there is a lack of attention paid by researchers to conceptualisation from the consumer's perspective.

An exception is the study by Blawatt (1995), who considered shopping mall image to be a more complex concept which includes attitudes, emotions, behaviours and symbolic content. Blawatt (1995) argues that conventional measures of shopping mall image, based on cognitive beliefs about the physical elements contained within the mall, are not sufficient to capture to explain the psychological dimensions of image. The addition of affective and conative dimensions extends the conceptualisation of image. The affective dimension involves an evaluative aspect where the attributes are perceived, judged and selected for saliency, and contains feelings and sensory information. The conative dimension reflects behaviour, or the repeated experiences through which images are built up through memory, as well as intentions towards future behaviour. While Blawatt argues that image measurement is improved by the addition of these two dimensions, he also states that "beyond a multi-[dimensional] construct there is in fact a total construct that summarises the beliefs (or attitudes) about an object's attributes" (p. 85), which he describes as the schema or holistic view of image. The image schema integrates all salient information into a holistic image, which contains the meaning

or symbolic dimension of shopping mall image. However, similar to the conceptualisations developed in store image studies, Blawatt offers little information to guide researchers as to the operationalisation of the additional affective, conative and symbolic dimensions.

With the exception of Blawatt (1995)'s study, mall image research has therefore focussed overwhelmingly on the factual image aspects related to tenant mix and layout, with some consideration of atmospheric elements. Given that a mall is a collection of stores, mall image researchers have largely neglected the insights from store image literature as to theoretical approaches to the formation of mall image. In particular the intangible and subjective psychological aspects relating to affect and symbolism have received scant attention in mall image studies. As Stoltman, Gentry and Anglin (1991) argue, shopping malls have "clearly defined images due to their relative newness, their amenities, the promotional programs (including both sales and image development strategies) and because they occupy a definable physical space" (p. 438). Yet mall image research remains "predicated on the research involving store image" in being based on tangible measures (Chebat, Sirgy and Grzeskowiak, 2010, p. 735). In possessing clearly defined and specific images in their own right, it may be that shopping malls have image structures which vary from those in store image. However, in drawing on store image research in particular, shopping mall researchers have yet to establish the specific attributes and dimensions which determine shopping mall image as distinct from store image.

2.3.4 Tourist destination image

Although mainly concerned with leisure travel, tourist destination image and retail image are related concepts. Retail image is important to a tourist destination because shopping has been identified, with accommodation, as one of the two highest expenditures for tourists in visiting an area (Jansen-Verbeke, 1986; Turner and Reisinger, 2001). While not a primary reason for travel, shopping is "perhaps the most universal of tourist activities and of great economic importance to local merchants" (Turner and Reisinger, 2001, p. 15-16).

Image is even more important to tourist destination managers because tourists frequently make a decision to visit a destination based on its image, without previous experience (Ahmed, 1991; Jenkins, 1999; Um and Crompton, 1990; Gartner, 1993). In tourist destination image research, image is not necessarily considered as created from direct experience of a location. Instead, tourist images are frequently formed from a variety of information sources before the visit. Information is acquired from promotion and marketing activities by travel agents, managers of tourist destinations and other travel industry commercial sources (Beerli and Martin, 2004; Baloglu and McClearly, 1999; Gartner, 1993). Other information is sourced "organically" from non-tourist industry information (for example television programmes, news media, books, school lessons and word of mouth reports). Tasci and Gartner (2007) note that whereas induced sources are under the control of destination marketers, organic images stem from non-commercial sources, and marketers have little or no ability to influence these. Comparisons between destination images before and after a visit have been examined (Echtner and Ritchie, 1991; Coshall, 2000). The actual visit confirms or disconfirms the image created, which may vary as a result of the visit (Beerli and Martin, 2004), with post-visit images being more realistic, complex and differentiated (Jenkins, 1999; Tasci and Gartner, 2007). The concept that images can be formed organically suggests that images are not always formed from experience, but can be received passively (Stern, Zinkhan and Jaju, 2001). As in the behavioural learning theory introduced in store image research (Kunkel and Berry, 1969; MacInnis and Price, 1987), tourist destination image is however, also modified and validated through reinforcement from repeated experience.

As in other retail and marketing contexts, tourist destination image is typically researched as a multi-faceted concept, or the "sum of beliefs, ideas and impressions that people have of a place or destination" (Baloglu and Brinberg, 1997, p. 11). Researchers develop lists of attributes, aggregating items from previously published studies, trade literature, and interviews with consumers (Echtner and Ritchie, 1991; Jansen-Verbeke, 1986). Most tourist destination studies focus on lists of attributes "to measure some of the more functional components of destination image, such as scenery, climate, facilities and attractions (Walmsley and Young, 1998, p. 65). The majority of these studies focus

on empirically assessing the attributes and dimensions making up its structure using statistical analysis. As in the wider retail image literature, these attributes are believed to be both tangible and intangible (Echtner and Ritchie, 1993) and can be expressed in terms of physical and psychological characteristics.

Nevertheless, these attributes and dimensions are belied to combine into a simplification of the image of the destination (Echtner and Ritchie, 1991). Because the real world is too big and complex to be known completely, tourists "are thought to come to terms with this complexity by formulating simplified images of the areas with which they interact" (Walmsley and Jenkins, 1992, p. 269). Simplified tourist images are thought to be created by the evaluation of impressions, and affective attitudes are developed as a result of evaluations of the cues, or cognitive dimensions, resulting in a holistic, gestalt image (Echtner and Ritchie, 1993; Hanyu, 1993; Um and Crompton, 1990). Hence, as in retail image, individuals simplify information to reduce the effort of cognitively processing the detail of actual environments, subjectively evaluate factual information, and tourist destination image becomes a symbolic representation.

With its emphasis on the multi-faceted approach, the majority of empirical research into the structures underlying the formation of tourist destination image is largely atheoretical (Baloglu and McCleary; Gallarza, Saura and Garcia, 2002; Tasci and Gartner, 2007). However, due to the importance of image in destination choices, a small number of researchers have progressed work on the theory of image formation further than in other marketing literature. Most notably, Gartner (1993) proposes a theory of image formation as it influences tourist destination choices, arguing that image is formed from three distinct but hierarchically interrelated components. These three components, based on attitude theory, represent cognitive, affective and conative/behavioural dimensions. The interrelationship between these three elements is hypothesised as determining how a destination is perceived, in other words, how its image is formed.

Baloglu and McCleary (1999) developed Gartner (1993)'s theory further and researched the interrelationship between perceptual/cognitive and affective dimensions, and overall image. They define the cognitive dimension as the beliefs

about a destination's attributes formed from physical stimuli projected by the location. Thus the cognitive dimension represents knowledge about the location's objective attributes, gained from external information sources (Baloglu and McCleary, 1999; San Martin and Rodriquez del Bosque, 2008). Affective dimensions are formed as a result of evaluations of the cognitive dimensions and refer to emotions and feelings towards the destination. The overall image is considered to be the global impression of the destination (Baloglu and McCleary, 1999; Beerli and Martin, 2004). Baloglu and McClearly (1999) found that cognitive perceptions of a location influence overall image both directly and indirectly through affective perceptions, but affective perceptions directly influence overall image more strongly than cognitive perceptions. Beerli and Martin (2004) extended Baloglu and McCleary (1999)'s model by adding the conative or behavioural element in examining image resulting from actual visits, to investigate the effect of experience of a destination in influencing the image formed. They found a stronger relationship between the level of experience and the cognitive dimension among visitors who had no previous experience of a destination, whereas the relationship between the level of experience and the affective dimension was stronger among those who had previously visited the destination. Moreover, Lin, Morais, Kerstetter and Hou (2007) confirmed the influence of both cognitive and affective dimensions on destination preference through overall image, across a variety of types of natural (uncontrolled) and developed (managed) destinations. These studies suggest that greater experience with a destination reinforces the psychological aspects of image, whereas the cognitive aspects are more important to consumers with less experience who are dependent on information obtained from outside sources.

Although tourist destinations are less controllable environments than stores or shopping malls, the extensive research in this area demonstrates that perceptions of these locations result in definite and measureable images. This has implications for town centre image research in suggesting that, similarly to a tourist destination, town centre image may also be conceptualised and measured as a discrete entity. In addition, the developments in image theory proposed in this area, in considering the affective image dimension, provide some direction as to the measurement of the subjective and personal dimensions of town centre image.

2.4 Town centre image literature

2.4.1 Introduction to town centre research

In comparison with the contexts outlined above, research into the image of a town centre remains sparse. Relatively few academic studies are dedicated to researching the image of a town centre as a distinct retail location. Table 2.1 shows the studies identified in the literature which have included town centre image perceptions. Out of all studies in the table, only two of these (Hart, Farrell, Stachow, Reed and Cadogan, 2007; Wee, 1986) specifically focus on town centre image as a distinct area. The majority of studies in Table 2.1 investigate the town centre as one of a set of neighbouring and/or competing shopping centres, which may be suburban out-of-town malls or located in or on the edge of the town centre.

The sparse nature of research into town centre image is a significant concern, given the importance of town centres. The town centre is the historic retail core of a town or city and is distinguished from other shopping centres by its central location within the urban setting; its traditional historic function remains relevant to this day (Guy, 1998; Robertson, 1999). Town centres operate at the highest level of the retail hierarchy and play an important role in defining the urban image as a whole (Hernandez and Jones, 2005). In most of the developed world, the town centre remains the economic, social and cultural hub of its region, the principal place where government and administrative offices, services and shopping are brought together, alongside employment and commercial developments (Schiller, 1994; Thomas and Bromley, 2000). The fundamental characteristic distinguishing the town centre from other shopping centres is its diverse, unplanned nature (Davies and Bennison, 1978; Hackett and Foxall, 1994; Hernandez and Jones, 2005). Town centres “have typically grown in a haphazard manner, often through gradual conversion from other land uses. [They are] likely to have a multiplicity of property owners, and to consist of many separate buildings which are varied in physical appearance” (Guy, 1998, pp. 258-9). They are situated where the city originated and contain the oldest buildings, embodying the heritage of a community (Robertson, 1999, p. 270). As town centres have evolved over time, they represent a conglomeration or agglomeration of disparate areas (Teller and Elms, 2010).

Table 2.1 Studies which include Town Centre image perceptions

	Location type	Comparative	Dimensions	Analysis	Outcome variables
Downs 1970	Shopping mall on edge of town centre, neighbourhood shopping areas		(1) Service quality, (2) price, (3) structure & design, (4) hours, (5) internal pedestrian movement, (6) shop range & quality, (7) visual appearance, (8) traffic conditions, *(9) atmosphere*	Factor analysis	
Gentry and Burns 1978	1 Downtown, 2 suburban malls	Yes	(1) Price, variety, product quality / stores, (2) parking, traffic, (3) buildings, customers, (4) hours, advertising	Factor analysis	Frequency
Hauser and Koppelman 1979	1 Downtown, 6 suburban malls		(1) Variety, (2) quality & satisfaction, (3) value, (4) parking.	Factor analysis	Frequency, preference
Nevin and Houston 1980	1 Downtown, 4 suburban malls	Yes	(1) Assortment, (2) facilities, (3) market posture	Factor analysis	Affect, behavioural intentions, frequency
Howell and Rogers 1980	1 Downtown, 2 suburban malls	Yes	(1) Atmosphere, (2) personnel, (3) fashion shopping, (4) advertising, (5) convenience	SEM	Purchases, frequency, spend, time since last purchase
Gautschi 1981	2 Downtown, 2 suburban malls		(1) Transport, (2) assortment, (3) design, (4) prices, (5) hours, (6) crowds, (7) dress	Factor analysis	Frequency
Timmermans et al. 1982	1 town centre, 12 suburban malls		(1) Size of assortment, (2) accessibility, (3) atmosphere, (4) physical layout, (5) non-retailing functions	Repertory grids	
van Raaij 1983	2 Downtown, 5 suburban malls	Yes	(1) General evaluation, (2) environment, (3) efficiency, (4) accessibility, (5) social	Factor analysis	Frequency
Wee 1986	1 Downtown		(1) Assortment, (2) facilitative, (3) maintenance, (4) operational	Factor analysis	Frequency, spend

	Location type	Comparative	Dimensions	Analysis	Outcome variables
Feinberg et al. 1989	1 Downtown, 1 suburban mall	Yes	(1) Sales people, (2) merchandise, (3) reputation, (4) atmosphere, (5) social experience	Descriptive statistics	
Hackett and Foxall 1994	1 town centre, 1 suburban mall	Yes	(1) Service quality, (2) access / facilities, (3) social, (4) choice & variety	Factor analysis	
Bell 1999	1 Downtown, 4 suburban malls		(1) Product & store range & quality, (2) customer service, (3) visual appearance, *(4) convenience, (5) price*	SEM	Affect, willingness to buy
Oppewal and Timmermans 1999	Unspecified shopping centres		(1) Attractiveness/maintenance, (2) layout, (3) activities, (4) refreshments	Conjoint analysis	
Leo and Philippe 2002	3 city centres, 3 suburban malls	Yes	(1) Retail mix, (2) environment, (3) accessibility, (4) price	Regression	Satisfaction
Hunter 2006	Unspecified shopping centres		From Nevin and Houston (1980)	SEM	Emotion, desire, intention to shop
Andreu et al. 2006	Traditional shopping areas and shopping malls	Yes	(1) Atmosphere, (2) accessibility	SEM	Emotion, satisfaction, behavioural intentions
Hart et al. 2007	1 town centre		(1) Accessibility, (2) atmosphere, (3) environment, (4) personnel	SEM	Enjoyment, repatronage
Teller and Elms 2010	1 town centre, 1 strip edge of town, 1 suburban mall	Yes	(1) Retail tenant mix ,(2) product range, (3) atmosphere, (4) orientation, (5) infrastructure	SEM	Satisfaction, patronage intention, retention

2.4.2 Early research

Early research into the reasons why consumers travelled to shop in town centres was based on spatial considerations. Researchers developed spatial models which sought to explain the attraction of town centres for shoppers through objective measures based on size and distance. Consumers' attraction to town centres was thought to be due to a trade-off between the size of a place (and the range of goods and services it provides), and the distances people were prepared to travel to it. Christaller (1933)'s Central Place Theory describes a model of the retail hierarchy which explains how the distances between different locations are related to the size of population and nature of the retail provision they support (Brown, 1991; Downs, 1970; Dennis, Marsland and Cockett, 2002). In this model, larger places are spaced further apart, interspersed by increasingly smaller locations with correspondingly-sized retail provision. Similarly, Reilly (1931)'s law of retail gravitation proposed that shoppers are willing to travel further to a centre which offers a greater range of goods and services. A shopper's tendency to patronise a particular shopping area is proportional to the size of the area and the distance or travel time to the shopping area. The advantages of wider retail provision and product assortment that a larger centre provides outweigh the disadvantages for shoppers of greater distances travelled (Huff, 1964; Teller and Reutterer, 2008; Timmermans, van der Heijden and Westerveldt, 1982).

However, such size/distance models were criticised as being too simplistic in assuming that shopping areas vary only in their size and the distance that consumers are willing to travel (Bell, 1999; Gautschi, 1981; Hackett and Foxall, 1994; Nevin and Houston, 1980). Spatial models are inadequate if consumers perceive differences between centres on dimensions other than size and distance (Houston and Nevin, 1981; Timmermans, van der Heijden and Westerveldt, 1982). In addition, the patronage decision is a function of a broad range of influences (Bell, 1999; Gardner and Levy, 1955). Individual consumers vary in their attitudes towards shopping less because of economic factors and more because of their socioeconomic variables, life styles, personal values and hence their image perceptions (Bucklin, 1967; Downs,

1970; Holbrook and Hirschman, 1982; Howell and Rogers, 1980; Verhoef et al., 2009).

Researchers have instead proposed that, with greater travel opportunities, the distance dimension reduces in importance and shoppers make their decisions on non-spatial factors (Gentry and Burns, 1978; Huff, 1964; Mejia and Benjamin, 2002). The non-spatial factors responsible for consumers' attraction to the shopping location therefore comprise the location's image (Bucklin, 1967). Hence perceptions of shopping locations, in other words their image, became important subjects of academic research in their own right, with the consumer as individual decision maker as the unit of analysis (Bucklin, 1967; Downs, 1970; Nevin and Houston, 1980). Following Gautschi (1981)'s recommendation that "the omission of important [image] variables may render patronage models useless" (p. 163), researchers have explored the additional criteria that influence the distances that consumers are prepared to travel to patronise shopping centres, concluding that consumers are attracted to a shopping location due to distance and the size of the retail offer in terms of the range of stores, goods and services it offers, but also more subjective perceptions of factors encountered during the shopping trip (Dennis, Marsland and Cockett, 2002; Gautschi, 1981; Nevin and Houston, 1980; Teller and Reutterer, 2008).

2.4.3 Town centre image studies

Interest in town centre image originated in studies investigating the relative attractiveness of shopping locations in the face of competition from alternative shopping destinations, notably purpose-built alternative shopping destinations. Researchers became interested in the criteria which would enable shopping centres, both evolved town centres and purpose-built shopping malls, to better withstand the challenges of competing centres (Gautschi, 1981; Houston and Nevin, 1981; Teller and Elms, 2010). Building on theory that non-spatial factors influence consumers' behaviour, researchers began to investigate consumers' subjective perceptions of the image factors which are believed to impact on their choice of shopping destinations. However, the emphasis of the majority of these studies is not on the town centre

itself. Instead, the focus is predominantly on shopping malls as competing with town centres and other malls, to enable developers and planners to assess their success relative to longer-established town centres (Teller and Elms, 2010).

One of the earliest studies was by Downs (1970) who identified that in order to research the influence of image on consumer behaviour, it is first necessary to determine the existence and nature of the image concept. Downs defined image in a shopping centre as "the product of the process of collecting, coding and evaluating information about the spatial environment" (p. 15), proposing that image is a cognitive representation organised in a series of dimensions which shoppers consider as meaningful in the town centre. Using data from interviews and a survey of shoppers, Downs examined perceptions of a large purpose-built shopping centre set within the town centre, which he termed "the image of a downtown shopping center", using perceptions of this centre as a proxy for the image of the town centre itself and comparing this image with that of local neighbourhood shopping centres (p. 36). Using factor analysis, Downs (1970) found that town centre image consisted of eight dimensions: shop range and quality, price, service quality, shopping hours, traffic conditions, structure and design, internal pedestrian movement, and visual appearance. Downs also included an atmospheric dimension which was excluded from the final analysis due to inconsistent factor loadings. Downs' study concluded that "the image of a downtown shopping center" exists, and is perceived as a "generalized, areally based concept about which the respondent had no difficulty generalizing and evaluating" (p. 24). Downs' approach to researching town centre image as cognitively processed and multi-faceted has been followed implicitly by subsequent researchers in town centre image.

Consequently, research continued to focus on establishing the factors making up image, and investigating the relationship between relevant image dimensions and patronage behaviour, aiming to determine those image factors which improved the predictive ability of patronage models. Researchers further developed sets of image measures (see Table 2.1). For example, Hauser and Koppelman (1979) included

sixteen items relating to store quality, variety and layout, merchandise, pricing, parking and atmosphere to test shoppers' preferences for a range of centres, including one downtown and six suburban centres, finding that store variety and quality, price and parking were the most significant dimensions in predicting preference. Howell and Rogers (1980) created five dimensions using factor analysis, of atmosphere, personnel, fashion shopping, advertising and convenience. Gautschi (1981) added transportation modes to a set of shopping centre items, which included assortment, centre design, price, hours, crowding and the ability to dress informally, to assess their relative impact on shopping frequency. Nevin and Houston (1980) adopted a more systematic approach, in adapting Lindquist (1974)'s meta-analysis of store image items to measure shopping centre image in four shopping centres and one downtown. They analysed sixteen items to develop three underlying dimensions, which they named assortment, facilities and market posture. Assortment consisted of six items: quality of stores, variety of stores, merchandise quality, product selection, special sales/promotion, and a great place to spend a few hours. These items related to the benefits offered by the shopping centre. Facilities consisted of parking facilities, availability of lunch/refreshments, comfort areas, easy to take children, layout of area, and special events/exhibits. These items referred to features helping to ease the effort of the shopping trip. The third dimension, market posture, contained four items: general price level, atmosphere, personnel and conservative, and were associated with the positioning of the area as an integrated complex of stores.

The variation in attributes and dimensions in these studies led Gautschi (1981) to point to "the inability of researchers to identify a generally accepted set of constructs" (p. 163). Gentry and Burns (1978) argued that the disparity in image dimensions may be due to the fact that not all image attributes are equally important to all customers. They state that "it is possible to place too much emphasis on differences in … shopping area images if the criteria being evaluated themselves are not of great importance to shoppers" (p. 81). Gentry and Burns (1978) aimed to identify which attributes are salient by incorporating consumers' assessments of the importance of the attributes specified, which again were drawn from Lindquist (1974)'s study, finding

that respondents reported that price, value and range of products were the most important criteria in choosing a shopping centre. However, Gentry and Burns (1978) found in subsequent analysis that distance was in fact the most important predictor of frequency of shopping at a particular location, despite the apparent lack of recognition of this construct in the minds of respondents. These somewhat contradictory conclusions raise concerns about the difficulty of consumers themselves in recognising which attributes are salient, particularly if they are presented with measures which are not designed specifically for the context being researched. Their findings led some researchers to conclude that basing shopping centre measures on store image items may not give accurate predictions of consumers' patronage behaviour in the town centre in particular (Gautschi, 1981; Wee, 1986).

The focus of the above studies was mainly on North American shopping malls and downtowns, stimulated in part by concerns that alternative shopping centre developments were having a detrimental effect on the sustainability of downtowns. Following this relatively intensive interest in shopping centre image, town centre image research followed on a less sustained and more sporadic basis. Researchers continued to take the multi-faceted approach and to assess the relative importance of the various attributes and dimensions through statistical analysis. Van Raaij (1983) proposed that five dimensions: general evaluation (including assortment, layout and safety), environment, efficiency of movement, accessibility, and a social dimension (atmosphere and friendliness), explained shoppers' attitudes towards patronage in five shopping centres and one town centre. Hackett and Foxall (1994) found four dimensions: service quality, access and facilities, choice and variety, and social, accounted for consumers' perceptions of a town centre. However, Bell (1999) demonstrated that whereas store range, visual appearance and customer service were all significant in predicting respondents' emotional attachment towards, and willingness to buy in, four shopping centres and the town centre, convenience of access and price were not related to patronage. Leo and Philippe (2002) investigated a similar set of dimensions, finding that retail mix, environment, accessibility and pricing were all related to shoppers' satisfaction with out of town shopping centres,

while only retail mix, environment and accessibility were significant in town centres. Hunter (2006) links shopping centre image (based on Nevin and Houston (1980)'s attributes) with variables such as emotion, desire and intentions to shop, finding that image is positively related to frequency of patronage through these intervening variables, highlighting the importance of affective emotions to the image construct. In these studies, affect, satisfaction or emotional responses are included as outcomes of the image process, rather than as an integral part of shopping centre image as speculated in store image studies (Mazursky and Jacoby, 1986; Oxenfeldt, 1974).

More recently, the work of Teller and colleagues (e.g. Teller, 2008; Teller and Reutterer, 2008; Teller and Elms, 2010) has extended the range of measures to include not only assortment (which they refer to as retail tenant mix), price (merchandise value), product range, personnel, accessibility, parking, atmosphere, and orientation (internal movement), but also non-retail tenant mix, and infrastructure. These last two dimensions are less commonly found in studies of shopping centres and town centres. Non-retail tenant mix refers to facilities supporting the shopping trip in the town centre, including bars, restaurants and services, while infrastructure consists of washrooms, cash dispensers and recreational areas. These measures appear to be a more comprehensive set of attributes representing a wider range of provision encountered in a town centre, and extend the measures commonly used and adapted from store image studies.

The above town centre image studies have aimed to determine the relative importance of a broad set of image dimensions capturing the entirety of provision encountered in a shopping centre. A further set of studies have taken different approaches, and focussed on more specific aspects of shopping centre provision. For example, Feinberg, Sheffler, Meoli and Rummel (1986) claimed that part of the attraction of a shopping centre was the opportunity for social interaction with other shoppers, in terms of shopping in groups or making conversation with sales personnel. Contrasting social behaviour of shoppers in a shopping mall with that in a town centre, they found that the image of a shopping mall had a more positive social

dimension than the image of a town centre. Oppewal and Timmermans (1999) assessed perceptions of public space elements in town centres (layout, availability of indoor areas, levels of street maintenance, crowding and public facilities), finding that maintenance and attractiveness of store fronts were most important for shoppers. Andreu, Bigne, Chumpitaz and Swaen (2006) similarly investigated the relationships between image perceptions of shopping centres and traditional high streets, and emotional responses, satisfaction and behaviour. The focus on their study was more specific in investigating the influence of atmospheric aspects of the shopping centre, particularly lighting, temperature and decor, together with parking and accessibility.

It can therefore be seen that there is little agreement in the studies which include town centres in the set of shopping centres as to the factors which consumers themselves consider as making up their individual and subjective image perceptions. Timmermans, van der Heijden and Westerveldt (1982) proposed a solution to the lack of consistency in shopping centre attributes and dimensions by adopting an approach which asked consumers themselves to report how they perceived the image of a set of shopping centres. Arguing that researcher-led "prespecification of the relevant attributes" of the shopping centre results in inaccurately captured consumer perceptions, Timmermans and colleagues instead used an exploratory approach to elicit consumers' own subjective image perceptions (p. 3). Basing their study on repertory grid technique to determine consumers' perceptions of thirteen shopping centres, including the main city centre shopping area, Timmermans, van der Heijden and Westerveldt (1982) derived 43 items representing how shoppers perceive these centres. Performing factor analysis on these, they found the main dimensions were size of assortment, atmosphere, and layout, together with a distance element. They also identified that consumers include non-retail provision in their perceptions, thus generating a more complete set of elements in town centre provision than those based on the retail mix alone. Since they are elicited from consumers' own unprompted responses, these dimensions provide the researcher with more accurate directions as to which shopping centre aspects consumers themselves identify as salient to their image perceptions.

2.4.4 Town centre specific research

The studies discussed above focus primarily on the image of shopping centres, or malls, with the inclusion of the downtown or town centre either as a comparison to these more controllable locations, or without distinguishing between them. Only two studies have been identified which focus on town centre image alone. Of these, both are concerned with identifying the impact of image dimensions on behaviour in a town centre. The study by Wee (1986), performing factor analysis on a similar set of attributes to Nevin and Houston (1980)'s, and based on Lindquist (1974)'s store image items, generated four dimensions, of assortment, facilities, maintenance, and operational. The first two dimensions are similar to Nevin and Houston (1980)'s assortment and facilities. Assortment contained items relating to product range and fashion, choice of stores, places to eat and drink, and an interesting place to shop. Facilities contained items relating to accessibility, parking, safety, prices and general facilities. Maintenance contained items describing visual attractiveness such as layout and planning, cleanliness and lighting, and directional signage which are arguably more relevant in a town centre than in a store. Operational items included hours, personnel and convenience.

Wee (1986) found that two of these dimensions, operational and facilities, were significant in explaining patronage behaviour in the downtown. Assortment and maintenance were not significant in influencing behaviour. Wee (1986) argues that these may be dimensions which shoppers expect in a town centre, where they take for granted that a large selection of goods and stores will be available. Similarly, they may expect that the town centre will be attractive and well maintained and hence these attributes may not be significantly involved in their image perceptions. Alternatively, the shoppers surveyed by Wee (1986) could be indicating that they patronise the town centre due to the more pragmatic, convenience factors associated with the operational and facilities dimensions. Wee (1986)'s study also suggests that the maintenance and operational dimensions are more closely associated with town

centre image rather than store image implying that the image structure varies between store image and town centre image.

Hart, Farrell, Stachow, Reed and Cadogan (2007) linked image dimensions to enjoyment in a town centre, investigating the influence of these constructs on repatronage intentions. Drawing on prior research focussed predominantly on shopping malls (Oppewal and Timmermans, 1999; Sit, Merrilees and Birch, 2003; Wakefield and Baker, 1998), four dimensions, of accessibility, atmosphere, environment and service, were proposed as representing town centre image. Accessibility included convenience, parking and internal accessibility or layout; atmosphere was represented by visual attractiveness, entertainment, store variety and overall atmosphere; environment was created from items related to safety, shopping hours and maintenance; while service contained items relating to helpfulness of personnel. Although this study did not investigate the relative impact of the various image dimensions, the combined image measure was demonstrated as successfully predicting behavioural outcomes of enjoyment and repatronage, showing that positive image perceptions which are viewed more favourably lead to intentions to shop more frequently in the future.

In line with the research reviewed above, the two studies which exclusively focus on the town centre demonstrate a lack of consistency as to the content of town centre image. Across all the studies in Table 2.1, despite variations in their attributes and dimensions, the most regularly cited image dimension is assortment (e.g. Downs, 1970; Gentry and Burns, 1977; Nevin and Houston, 1980). This finding is supported by Teller (2008), who points out that “tenant mix can be considered as the key source of [shopping centre] attractiveness since it is the main prerequisite to fulfil the consumer task” (p. 386). However, as well as measuring the size of centre in terms of quantity of stores, the assortment dimension additionally incorporates more evaluative aspects such as the quality and appeal of stores and merchandise. The second most commonly adopted attribute in these studies is accessibility, whether expressed in terms of convenience, transport, traffic or parking. Also frequently

measured in these studies are layout, atmosphere, price and personnel, while attributes relating to visual appearance, shopping hours, social aspects and facilities are also included. Hence the variation in attributes and dimensions adopted in these studies shows considerable variation and researchers have yet to reach agreement as to which dimensions are most salient to consumers in the town centre.

2.4.5 Comparative studies

As stated earlier, the majority of the town centre studies reviewed include both shopping malls and town centres within the same study. In some studies, the term "shopping centre" is used interchangeably for town centres, which have evolved historically over time, and purpose built shopping malls, whose image can be more closely controlled, so that it is unclear which type of centre is referred to in the research (Andreu, Bigne, Chumpitaz and Swaen, 2006; Feinberg, Sheffler, Meoli and Rummel, 1989; Hunter, 2006). Some researchers do not distinguish between the two shopping formats (e.g. Bell, 1999; Gentry and Burns, 1978; Hunter, 2006; Timmermans, van der Heijden and Westerveldt, 1982). Other studies contrast the image perceptions of a town centre with neighbouring shopping malls (e.g. Feinberg, Sheffler, Meoli and Rummel, 1989; Hackett and Foxall 1994; Howell and Rogers, 1980; Leo and Philippe 2002; Nevin and Houston, 1980; Teller and Elms 2010; Van Raaij, 1983).

Yet shopping malls and town centres differ in certain important respects. Most importantly, a shopping mall is centrally owned, planned and controlled, so that retail tenant mix, layout, accessibility, parking and atmosphere are designed and managed with the target market in mind. In contrast, a town centre has evolved over time, ownership is in different hands and the tenant mix is less coherent; aspects such as accessibility and parking are dependent on situational factors beyond the control of retailers; and atmospheric stimuli cannot be generated or designed to the same extent as in a shopping mall (Teller, 2008). Hence consumers' image perceptions are likely to vary between these two different locations.

Including both these types of locations in the same study without distinguishing between them may give questionable results if the focus of research is on the town centre (Howell and Rogers, 1980). A small number of studies which compare town centres and shopping malls have shown that the structure of image dimensions differs between these two shopping formats. For example, when comparing the influence of image dimensions on patronage between shopping malls and the downtown, Nevin and Houston (1980) found significant differences between the image structure of each location. Whereas the assortment and facilities dimensions were associated with patronage for both shopping malls and downtown, the third dimension, market posture (comprising price, personnel and conservative), was only significant in the shopping mall context. Nevin and Houston (1980)'s results suggest that price, personnel and market posture may not be relevant in a town centre.

Leo and Philippe (2002) found four factors related to shopping centre satisfaction: retail mix, price, accessibility and environment, of which only retail mix, accessibility and environment were significant in the town centre. Again, price was not significant in the town centre in Leo and Philippe (2002)'s study. Hackett and Foxall (1994) similarly derived different factors between a shopping mall and a town centre. For the shopping mall, the factor structure consisted of store variety, comfort and convenience, and general facilities, suggesting these are aspects which management have designed into the mall development. The town centre demonstrated four factors of store choice and variety, service quality, access and facilities, and a social factor. Conversely, Feinberg, Sheffler, Meoli and Rummel (1989), in comparing a shopping mall and downtown, found that the mall had a more social emphasis for consumers than did the downtown. It may be that these conflicting results for a social dimension are influenced by varying levels of leisure and entertainment provision, which may differ between town centres and shopping malls according to specific circumstances.

Andreu, Bigne, Chumpitaz and Swaen (2006) similarly found significant evidence for the influence of atmospheric aspects (lighting, temperature and décor) together with parking and accessibility in a shopping centre, whereas the atmospheric dimension

was less significant in traditional high streets. This suggests that the atmosphere within a shopping mall, in terms of lighting, temperature and decor, may be more closely and coherently designed and controlled than in more disparate town centres. However, the effects of emotional responses on patronage were higher in the traditional high street context than in shopping centres, suggesting that town centres may generate stronger feelings due to an organically-evolved long-standing attachment than the more artificial environment in a shopping centre.

Teller and colleagues also carried out comparative studies of retail formats including traditional town centres, shopping malls and neighbourhood shopping centres, finding that perceptions of these centres differ according to format. Teller and Elms (2010) showed that whereas retail tenant mix (or assortment), product range and atmosphere were the most important dimensions influencing patronage in all three formats, personnel and merchandise value (or price) were only significant in shopping malls and neighbourhood centres. Orientation (layout) and infrastructure (facilities) were more strongly associated with patronage in the town centre, while non-retail tenant mix was more important in the shopping mall. Accessibility and parking did not have an effect on patronage in any of the three centre formats.

Because shopping malls and town centres have different origins and purposes, consumers therefore appear to identify them as having distinct images (Howell and Rogers, 1980; Wee, 1986). The findings of the studies which have compared shopping malls and town centres indicate that consumers' image perceptions of these two distinct shopping locations vary according to context. Most significantly, price has been found in three studies (Leo and Philippe, 2002; Nevin and Houston, 1980; Teller and Elms, 2010) not to be associated with perceptions of a town centre, although it is commonly included in town centre image studies. Personnel was similarly not found to be significant in the town centre in two of these studies (Nevin and Houston, 1980; Teller and Elms, 2010), although Hackett and Foxall (1994) and Hart, Farrell, Stachow, Reed and Cadogan (2007) did find service quality/ personnel to be a factor in their town centre analyses. It would seem that measures of price and personnel

could be more specifically related to individual stores than the overall town centre, where variations between types of stores and the consequent variation in pricing and staffing policies may result in inconsistent image perceptions on these attributes. Non-retail tenant mix (Teller and Elms, 2010) and atmosphere (Andreu, Bigne, Chumpitaz and Swaen, 2006), also contrary to expectations, were not found to be linked with perceptions of town centres, although emotional attitudes were stronger in the town centre as compared to the shopping mall (Andreu, Bigne, Chumpitaz and Swaen, 2006).

The findings of the studies which directly compare images of these two distinct retail locations suggest that town centres are a distinct and unique type of retail location. If perceptions of town centres and shopping malls demonstrate significant differences, care must be exercised in interpreting findings of studies measuring both shopping malls and town centres, when considering the results for the town centre alone.

2.5 Summary of town centre literature and its limitations

From the above review of the literature on town centre image perceptions, it is clear that the town centre has been neglected as a subject of research, with only two studies (Hart, Farrell, Stachow, Reed and Cadogan, 2007; Wee, 1986) identified as exclusively researching this type of shopping destination as a distinct location. The majority of studies which have included town centres have applied measures which do not distinguish between these two differing shopping locations. Yet the findings of the comparative studies referred to in Section 2.4.5 above demonstrate that consumers' image structures vary between shopping malls and town centres. Thus there is a need to research town centre image as a specific shopping location in its own right.

The development of research specific to the town centre is a necessary step in understanding what influences consumers' choices to shop there. To date the literature which includes town centre image suggests neither agreement as to how

consumers perceive this location, nor any consistent “taxonomy” of dimensions or attributes with which to measure it (Bell, 1999, p. 68; Gautschi, 1981). Several researchers (e.g. Blawatt, 1995; Gautschi, 1981; Timmermans, van der Heijden and Westerveldt, 1982) have pointed to the inconsistencies in image measurement, suggesting they may be due to the inclusion of researcher-led measures which are not relevant to how consumers perceive these locations. Gautschi (1981) argues that the “inability of researchers to identify a generally accepted set of constructs ... may stem from an improperly specified [attribute] choice set” (p. 163). This argument is echoed by Gentry and Burns (1978) who argue that the disparity in image dimensions may be due to the fact that respondents are presented by researchers with pre-specified image attributes, not all of which are equally important to all customers. Timmermans, van der Heijden and Westerveldt (1982) also claim that attributes based on researchers’ assumptions of what is being measured “might not be factors on the basis of which consumers discriminate cognitively between shopping centres” (p. 3). Instead, they recommend an approach which is focussed on how consumers themselves perceive images of each shopping centre as a specific context.

As noted earlier, in the absence of measures specifically developed for the town centre, several studies have adapted store image attributes (e.g. Bell, 1999; Gentry and Burns, 1978; Hunter, 2006; Nevin and Houston, 1980). Yet other studies are unclear as to the origin of image measures (e.g. Andreu, Bigne, Chumpitaz and Swaen, 2006; Hackett and Foxall, 1994; Leo and Philippe, 2002; Teller and Elms, 2010; van Raaij, 1983). In the case of the two studies which investigate the town centre specifically, both of these draw on measures from other contexts. Wee (1986) used items from Lindquist (1974)’s study into store image. Hart, Farrell, Stachow, Reed and Cadogan (2007) drew on items from the shopping mall literature, notably Sit, Merrilees and Birch (2003) and Wakefield and Baker (1998). Measures specific to the town centre as a distinct shopping location have not yet been developed by researchers.

Because store, brand and shopping mall images are interrelated, many insights from research into these image contexts can also be usefully applied to the town centre context (Samli, Kelly and Hunt, 1998). However, a notable concern related to town centre image research is that researchers have identified attributes contained in store image studies which appear not to be relevant to town centres. Leo and Philippe (2002), Nevin and Houston (1980) and Teller and Elms (2010) all discovered attributes that are not significant in town centre image perceptions to the same extent as they are in shopping malls, notably price, merchandise value, service and personnel. These findings suggest that these attributes, while frequently included in studies which include town centres, may not be perceived by consumers in town centres as salient to their image perceptions in this context. On the other hand, the studies which compare town centre and shopping mall image suggest some commonality as to the constructs which consumers perceive as relevant to the town centre. These appear to be related to store assortment and related merchandise; physical infrastructure involving access to the town centre including roads, car parks and other travel elements; design and layout of the buildings and other structural components; and atmosphere (e.g. Timmermans, van der Heijden and Westerveldt, 1982; Teller and Elms, 2010; Wee, 1986).

Studies in town centre image research often omit to capture important information by ignoring the characteristics of the non-retailing functions in the wider public environment surrounding the town centre (Oppewal and Timmermans, 1999; Wee, 1986). Researchers have argued that town centre image includes a wider domain of attributes originating in the urban environment than captured in existing studies, so that current measures of town centre image may be incomplete (Gautschi, 1981; Wee, 1986). As noted by Wee (1986), “the image of a shopping area [i.e. a town centre] may be more complex than that of a single store, since a shopping area is a conglomerate of different kinds of stores that offer a wide variety of products and services” (p. 49). Timmermans, van der Heijden and Westerveldt (1982) identified that consumers perceive the non-retailing functions in addition to retail mix, in their study which elicited these aspects from consumers’ own responses. Warnaby,

Bennison, Davies and Hughes (2002) suggest that perceptions of the entire urban area are responsible for establishing the identity of the town centre and thus creating its image. Town centres are complex environments with extensive retail and non-retail functions including housing, education, health, employment, leisure and entertainment, and public services (Ravenscroft, 2000; Warnaby, Bennison, Davies and Hughes, 2002). Town centres provide a more diverse and interesting shopping experience due to unique features such as historical buildings and related themed areas (Arentze, Oppewal and Timmermans, 2005; Padilla and Eastlick, 2009; Robertson, 1997; Runyan and Huddleston, 2006). Andreu, Bigne, Chumpitaz and Swaen (2006) speculate that consumers' emotional responses to a town centre may arise from "other (unobserved) elements in the shopping experience [which] might be more significant in the traditional retailing environment" (p. 573), raising the possibility that these elements may represent the wider urban location. Consumers also report a sense of connectedness with the community which the town centre represents to its residents and visitors (Bennison, Warnaby and Pal, 2010; Coca-Stefaniak, Parker and Rees, 2010; Runyan and Huddleston, 2006), so that town centres are likely to hold more personal meaning to consumers through habituation and familiarity than simply as a shopping destination (Relph, 1976).

Therefore, current measures of town centre image, frequently based on attributes from other retail contexts, may not sufficiently capture the attributes and dimensions which are salient to consumers in the total impression the town centre makes on consumers' image perceptions (Dichter 1985). Similar to the inclusion of variables which have been demonstrated through research as not significant in the town centre (Leo and Philippe, 2002; Nevin and Houston, 1980; Teller and Elms, 2010), the omission of salient variables means that measures to capture town centre image may not perform adequately in analysis (Gautschi, 1981). Accordingly, it is argued that town centre image includes a domain of dimensions which differ in certain important aspects from those used in studies based on store or shopping mall image measures. The lack of image research aimed specifically at town centres has resulted in a need to establish the domain of town centre image as a distinct concept in its own right. In

order to investigate town centre image, the constructs through which consumers perceive this context will need to be established as distinct from the measures currently used which are adapted from other, more limited, retail contexts.

A more fundamental limitation exists in the town centre image literature reviewed above, in the lack of a theoretical approach applied to the study of town centre image (Bell, 1999). It must be clarified that not all of the studies included in the review of town centre literature research image as a defined construct. Several of the town centre studies included in the literature review (for example, Hackett and Foxall, 1994; Leo and Philippe, 2002; Teller and Elms, 2010; van Raaij, 1983), research consumers' perceptions which are not explicitly delineated as image. These studies have been included because they shed light on the characteristics through which researchers have studied town centres. Of the studies which include town centres and which explicitly study image, there is a distinct lack of focus on how image is conceptualised. Although Downs (1970) explained image as "the product of the process of collecting, coding and evaluating information about the spatial environment" (p. 15), Downs defines image purely as a cognitive structure. Studies predominantly focus on its factual attributes and dimensions, and there is limited attention given to the intangible psychological elements such as consumers' psychological beliefs and attitudes which have been identified in other retail image contexts. Whereas Bell (1999) and Hunter (2006) relate shopping centre image to emotional constructs, these are treated as outcomes of the image process, rather than forming part of the image structure. In the remaining studies, authors have taken a multi-dimensional approach, largely operationalising image as a "composite of dimensions" (Nevin and Houston, 1980, p. 84) without considering the guiding theoretical frameworks as to its formation (Bell, 1999). As a result, the "attribute-based approach to operationalization fails to capture the richness of the … image construct as conceptualised" (Keaveney and Hunt, 1992, p. 165). As discussed earlier in this chapter in Section 2.2, the definition of town centre image adopted in this thesis is based on a review of definitions in the broader retail image literature. In this definition, town centre image is defined as:

> *A symbolic representation of reality which consists of salient factual cues from the total environment, and psychological elements such as attitudes, feelings and values.*

Hence, retail image contains not only the functional qualities represented by its physical attributes and dimensions, but also attitudes, feelings and values, or "an aura of psychological attributes" (Martineau, 1958, p. 47). Within the store image literature, image has been postulated as composed of cognitive and affective dimensions (Mazursky and Jacoby, 1986; Oxenfeldt, 1974). Tourist destination image research has empirically examined image structure as composed of these two dimensions, finding that both cognitive and affective dimensions influence overall image, with the affective dimension demonstrating a stronger influence than the cognitive dimension (Baloglu and McCleary, 1999; Beerli and Martin, 2004). However, the town centre image literature neglects to capture such psychological and intangible elements which are conceptualised to make up image. Hence, the inclusion of a dimension capturing psychological elements of town centre image should capture more closely how consumers perceive the image of a town centre as defined. However, to date, it has not yet been established how consumers perceive the psychological image elements in the town centre area.

Furthermore, although the cognitive and affective dimensions have been hypothesised to represent store image and tourist destination image, these do not appear to capture the symbolic nature of town centre image. Earlier in this chapter, image was defined as a symbolic representation of reality, simplifying a complex environment into what is most relevant to each individual (Lindquist, 1974; Mitchell, 2001). This symbolic representation conveys the meaning of the location to consumers and how it reflects their lifestyles (Martineau, 1958). However, the symbolic image dimension has not yet been researched in the town centre literature, nor indeed in any other retail and marketing context. How the symbolic image dimension is defined and conceptualised, what it consists of and therefore how

consumers' perceptions of this dimension can be captured, remain issues in need of investigation if the town centre image concept is to be accurately and reliably researched.

Therefore in addition to the need to establish the domain of town centre image as a distinct concept in its own right, and to investigate the constructs through which consumers perceive this vitally important area, there is a need to develop a conceptual model linking the dimensions which have been identified as potentially representing image. In addition to the attributes representing the physical tangible reality of the town centre, the psychological elements and its symbolic nature which consumers are hypothesised to include in their image perceptions of a town centre need to be established in order that town centre image can be modelled and measured. In the absence of a theoretical approach to researching town centre image, the research presented in this thesis aims to remedy this limitation and address the research gaps identified.

Having defined the town centre image construct at the start of this chapter, the objectives of this research are to examine the validity of this definition by developing a conceptual framework and model which reflects the theoretical dimensions which are hypothesised to make up town centre image. Constructs to operationalize the dimensions in the model will be identified, and measures to empirically test the relationships between these constructs will be created and tested. These aspects of the town centre image research will be addressed in the following two chapters of this thesis.

Chapter Three: Conceptual Framework

> *"Our purpose is simply to consider the need for identity and structure in our perceptual world, and to illustrate the special relevance of this quality to the particular case of the complex, shifting urban environment" (Lynch, 1960, p. 10)*

3.1 Introduction

As noted above by Lynch (1960), images are the structures through which the perceptual world is viewed. In this chapter, a conceptual framework for researching the structure of the image of a town centre is developed. The definition of town centre image adopted in this research is of image as a symbolic representation of reality which consists of salient cues from the tangible domain, and psychological elements such as attitudes, feelings and values. To date, the town centre image literature, lacking as it is in a theoretical foundation, has not considered image from this perspective.

In the absence of an image conceptualisation in the town centre literature, the development of the conceptual framework in this chapter draws on wider marketing literature. Two theoretical explanations for the formation and structure of the image construct are discussed. Attitude theory has been used in the literature to model tourist destination image as a cognitive, affective and conative construct. However, it is argued that the attitude model does not account for the symbolic nature of the image construct. Therefore based on a three dimensional brand concept model originating in the brand image literature, an alternative model for the town centre image is proposed which more closely explains town centre image as defined. The first two dimensions in the brand concept model, functional and experiential, parallel the cognitive and affective dimensions present in attitude theory. A third dimension, which is labelled symbolic, is added from brand concept theory to form the town centre image model. It is argued that the addition of the symbolic dimension more closely models the town centre image construct as defined in Chapter Two. Constructs relevant to operationalising the three theoretical dimensions, specifically

developed for the town centre are identified. Hypotheses are generated to assess the relationships linking the constructs representing each of the three dimensions in the model, and overall town centre image.

3.2 Attitude theory

Attitude theory has been suggested by some researchers as a basis for retail image formation, due to parallels between the image and attitude concepts. Some researchers have considered retail image as an attitude (e.g. Doyle and Fenwick, 1974; James, Durand and Dreves, 1976), with Steenkamp and Wedel (1991) describing image as "the overall attitude toward the store based upon the perceptions of relevant store attributes" (p. 301). Gartner (1993) proposed attitude theory as an explanation for image formation in the context of a tourist destination. Similar to image, attitudes are believed to be important predictors of consumer behaviour (Korgaonkar, Lund and Price, 1985).

Classical attitude theory has been established for many years and proposes that the formation of a consumer's attitude operates through three distinct but inter-related processes: cognitive, affective and conative (Bagozzi and Burnkrant, 1980; Hirschman and Holbrook, 1982; Petty, Fabrigar and Wegener, 2003). The cognitive component refers to the beliefs a consumer holds about an attitude object; affect represents the way a consumer feels about the object; while the conative component represents behaviour towards the object (Solomon, 2002). According to Gartner (1993) these three components are responsible for the formation of tourist destination image. However, the same theory could equally apply to a town centre shopping destination. Retail tourism is an important reason for consumer choice of tourist destination (Turner and Reisinger, 2001), and a town centre can be considered a specific case of destination image.

3.2.1 Cognitive component of attitude

Within image research, the cognitive attitude component is defined as "the sum of beliefs and attitudes of an object leading to some internally accepted picture of its

attributes" (Gartner, 1993, p. 193). Attitude theory indicates that attitudes are formed as a result of distinct thought processes through consideration of tangible objects as stimuli which transmit information to the consumer (Ajzen and Fishbein, 2000; Cohen and Reed, 2006). Consumers base their cognitive deliberations around attributes belonging to the object which are experienced either directly through personal experience or indirectly, for example, through the imagination, as in the selection of a shopping destination not previously experienced (Tasci and Gartner, 2007).

This information is perceived as factual content which consumers critically analyse for credibility and relevance, in the process of which relevant stimuli from the attitude object are selected, and cognitive responses or beliefs are formed (Cohen and Reed, 2006; Holbrook, 1978; Wright, 1973). Beliefs relating to each attribute are weighted according to their strength and salience, depending on the importance or utility of each attribute for the consumer (Cohen and Reed, 2006; Holbrook, 1978; Mitchell and Olson, 1981). The resulting belief-based or cognitive component of attitude is formed as an aggregation of these salient beliefs (Ajzen and Fishbein, 1980; Cohen and Reed, 2006).

In the case of an attitude object such as a tourist or shopping destination, the cognitive component is formed from the intellectual consideration of the physical and factual attributes of the location (Gartner, 1993). Cognitive elements are the perceptions, beliefs and knowledge a consumer has of the environment, which is external to the perceiver (Baloglu and MacCleary, 1999; Beerli and Martin, 2004; Stern, Zinkhan and Jaju, 2001). Hence the cognitive dimension relates to a conscious understanding of the factual elements of the environment.

3.2.2 Affective component of attitude

The affective attitude component is related to positive or negative feelings and emotions which are associated with the attitude object (Petty, Fabrigar and Wegener, 2003). Affect represents an internal subjective component created by the perceiver of the attitude object. According to attitude theory, affective elements are formed during

the consumer's evaluation of the cognitive attributes, in the process of which the consumer activates an emotional response to each of the stimuli (Gartner, 1993; Um and Crompton, 1990). A consumer responds to the attributes, processes them cognitively and makes judgements about them, during which their emotional responses become activated (Anand, Holbrook and Stephens, 1988; Dobni and Zinkhan, 1990). Salient attributes are selected by the consumer on the basis of the strongest affective responses to stimuli (Cohen, 1982). Evaluative judgements involve favourability (positive or negative preferences) and are believed to arise spontaneously and without conscious effort, as a result of the consideration of cognitive beliefs (Ajzen, 2001).

Two distinct affective processes have been identified in attitude research: evaluation and emotion (Petty, Fabrigar and Wegener, 2003). Earlier conceptualisations of attitude considered that affect was based solely on evaluation of the individual attributes (Bagozzi and Burnkrant, 1980; Eagly and Chaiken, 1993). From this perspective, evaluation is a simple response along the lines of "I like/ dislike it". Subsequent research has suggested that attitude formation is additionally influenced by emotion, which is believed to operate independently of the evaluative function (Ajzen and Fishbein, 2000). Emotion-related affective attitude has been proposed as generalised moods, emotions and sensations (for example happiness, sadness, anger, fear and pride) which are experienced during the consideration of the attributes of the attitude object (Ajzen and Fishbein, 2000; Dube, Cervellon and Jingyuan, 2003).

There is some debate as to the relative importance of cognitive and affective components in the formation of attitude and resulting behaviours (Ajzen, 2001). Some studies (Bagozzi and Burnkrant, 1980; Batra and Ray, 1985) have suggested that cognition has more influence than affect on the behavioural component of attitude. Other researchers believe that the affective attitude component has a stronger influence on behaviour than does the cognitive component (Lavine, Thomsen, Zanna and Borgida, 1998). Again in the area of tourist destination research, Baloglu and

McCleary (1999) demonstrated that the affective component of destination image was more influential on overall image perceptions, and hence behaviour, than the cognitive component. Other studies (Janiszewski, 1988; Zajonc, 1980) have argued that cognition and affect involve separate processes, so that affect is not triggered during cognitive processing of factual stimuli, but occurs spontaneously and independently. However, Anand, Holbrook and Stephens (1988) support the interrelationship between cognitive and affective components in attitude formation. Ultimately both are important components in attitude formation (Ajzen and Fishbein, 2000).

3.2.3 Conative component of attitude

The third element in the cognitive-affective-conative attitude model is behaviour. Similar to image, the major focus of attitude research is the prediction of behaviour (Ajzen, 2001; Solomon, 2002), attitudes being described as “residues of past experience that guide future behaviour” (Ajzen and Fishbein, 2000, p. 2). Attitude theory suggests that attitudes in which both cognitive and affective components are positive are likely to result in more favourable tendencies to perform desired behaviours (Petty, Fabrigar and Wegener, 2003). Therefore, shoppers who perceive or experience the physical elements in the environment and develop positive emotions towards these elements within the overall town centre are likely to prefer it to other town centres and will demonstrate greater levels of patronage.

A number of studies focus on the impact of attitudes on behavioural intentions rather than the behaviour itself (Ajzen and Fishbein, 1980; 2000). Where an attitude is more favourable, it is expected that a consumer’s intention to perform a certain behaviour will be stronger; subsequently if opportunity arises, that behaviour is more likely to be performed (Ajzen and Fishbein, 2000). In addition, actual behaviour may be predicted where attitudes are measured with respect to highly specific behavioural contexts (Cohen and Reed, 2006). For example, Korgaonkar, Lund and Price (1985) found strong support for a relationship between attitude and patronage behaviour in a retail store setting. Behaviour is also more likely to be predicted from attitude if the three

attitude components are consistent, in that favourable evaluations and strong positive emotional responses towards specific cognitive stimuli are in turn congruent with positive behavioural intentions (Ajzen and Fishbein, 2000).

3.2.4 Attitude theory and image

Similarities are therefore apparent between both attitude and the image construct in terms of predicting behaviour. Specifically, the cognitive attitude component parallels the tangible image dimension, while the affective attitude component represents in part the psychological image attributes. Attitudes and image are comparable in that they both simplify the choice process, thereby assisting consumers' decision making. Images are used by shoppers to reduce the complexity of information available (Kotler, Haider and Rein, 1993; Mitchell, 2001). Similarly, a function of attitude is "to specify relatively parsimonious representations of attitude structure by restricting the number of beliefs" that consumers need to include in their determinations (Holbrook, 1978, p. 547). Therefore both constructs act similarly as heuristics which allow consumers to make use of limited information in the most efficient manner to facilitate the decision making process (Holbrook, 1978).

Nevertheless attitude theory has limitations in explaining the formation of image. Keller (1993) suggests that attitude is only one part of image, representing only one of several levels of abstraction contained within the image construct. Important differences between the conceptualisations of image and attitudes may also be observed (Zinkhan and Hirschheim, 1992). One difference is in the stability of the two constructs. Image, once formed, is considered to be relatively slow to change and hence remains stable and consistent (Keaveney and Hunt, 1992; Oxenfeldt, 1974). In contrast, attitudes are prone to variation according to context (Ajzen and Fishbein, 2000), mood (Petty, Fabrigar and Wegener, 2003) and life-cycle (Ajzen, 2001), and therefore are less consistent over time (Cohen and Reed, 2006). A further, and more significant, limitation of attitude theory for image research is that attitudes are grounded in the cognitive domain of beliefs, based on factual attributes of the attitude

object (Dobni and Zinkhan, 1990; Keller, 1993). Conceptualising image as attitude restricts its study to a set of physical characteristics (Dobni and Zinkhan, 1990).

Furthermore, although attitudes incorporate the subjective nature of image processing through the affective component, attitude theory neglects the role of the symbolic nature of image. As noted by Hackett, Foxall and van Raaij (1993) “simply identify[ing] the retail environment as possessing physical and psychological attributes is insufficient” to understand consumers’ image perceptions of an environment (p. 393). While corresponding with existing retail image research based on cognitive and affective components (e.g. Baloglu and McCleary, 1999; Mazursky and Jacoby, 1986), the attitude model therefore does not fully explain image as a symbolic representation of reality. There is thus a need to explore further theory in the wider marketing literature to develop a conceptual framework of image as defined in this thesis.

3.3 Brand Image Concept model and hypothesis development

An alternative image model which does include a symbolic dimension has been developed in brand image research. Park, Jaworski and MacInnis (1986) propose a brand image framework based on brand concept theory. The brand concept has its foundation in the satisfaction of consumers’ needs from the purchase experience. Within this framework, brand image is proposed as having functional, experiential and symbolic dimensions. Whereas the functional dimension exhibits similarities with the cognitive attitude component, and the experiential dimension corresponds with the affective attitude component, the symbolic dimension provides a basis for explaining image as a symbolic representation of reality which has individual and subjective meaning for the consumer.

The functional component of image is related to fulfilling externally-generated consumption needs, and which have physical characteristics (Keller, 1993; Park, Jaworski and MacInnis, 1986). The experiential dimension relates to consumer

experiences which provide sensory pleasure and stimulation (Park, Jaworski and MacInnis, 1986), or "what it feels like to use the product or service" (Keller, 1993, p. 4). The symbolic dimension fulfils internally-generated needs for meaning and value from the consumption experience through identification with a desired group, represented by consumer self-concept (Park, Jaworski and MacInnis, 1986; Keller, 1993). The brand concept based on satisfying a consumer's needs from the consumption experience "reflects a general meaning associated with the brand" (Park, Jaworski and MacInnis, 1986, p. 136), thus it reflects the image concept as defined as a symbolic representation of reality. The brand concept framework based on functional, experiential and symbolic dimensions will therefore be adopted as a model of the image concept, to investigate image in this study as applied to the town centre context.

Whereas brand image has been developed primarily in association with consumer products, research has suggested that a town centre, similar to a shopping centre, can also have a brand image (Dennis, Murphy, Marsland, Cockett and Patel, 2002; Kavaratzis, 2005). The functional, experiential and symbolic image dimensions have also been applied to tourist destinations (Hankinson, 2005; Naylor, Kleiser, Baker and Yorkston, 2008). Hankinson (2005) proposed that similar to product brands, a place brand may also consist of the three functional, experiential and symbolic dimensions identified by Park, Jaworski and MacInnis (1986). In an exploratory study of UK cities, Hankinson (2005) found evidence supporting the existence of functional and experiential dimensions, although support for a symbolic dimension, which nevertheless represented an evaluation of the overall appeal of a location, was less strong. However Hankinson's study, based on the interpretation of interview data, is not specific as to the theoretical and empirical content of each of the three dimensions, particularly the experiential and symbolic dimensions. Naylor, Kleiser, Baker and Yorkston (2008), investigating the effectiveness of advertising to potential tourist destination visitors using a similar functional/ experiential/ symbolic framework, found that the experiential and symbolic elements of the advertising images were more influential in communicating the message. Despite the similarity of a town

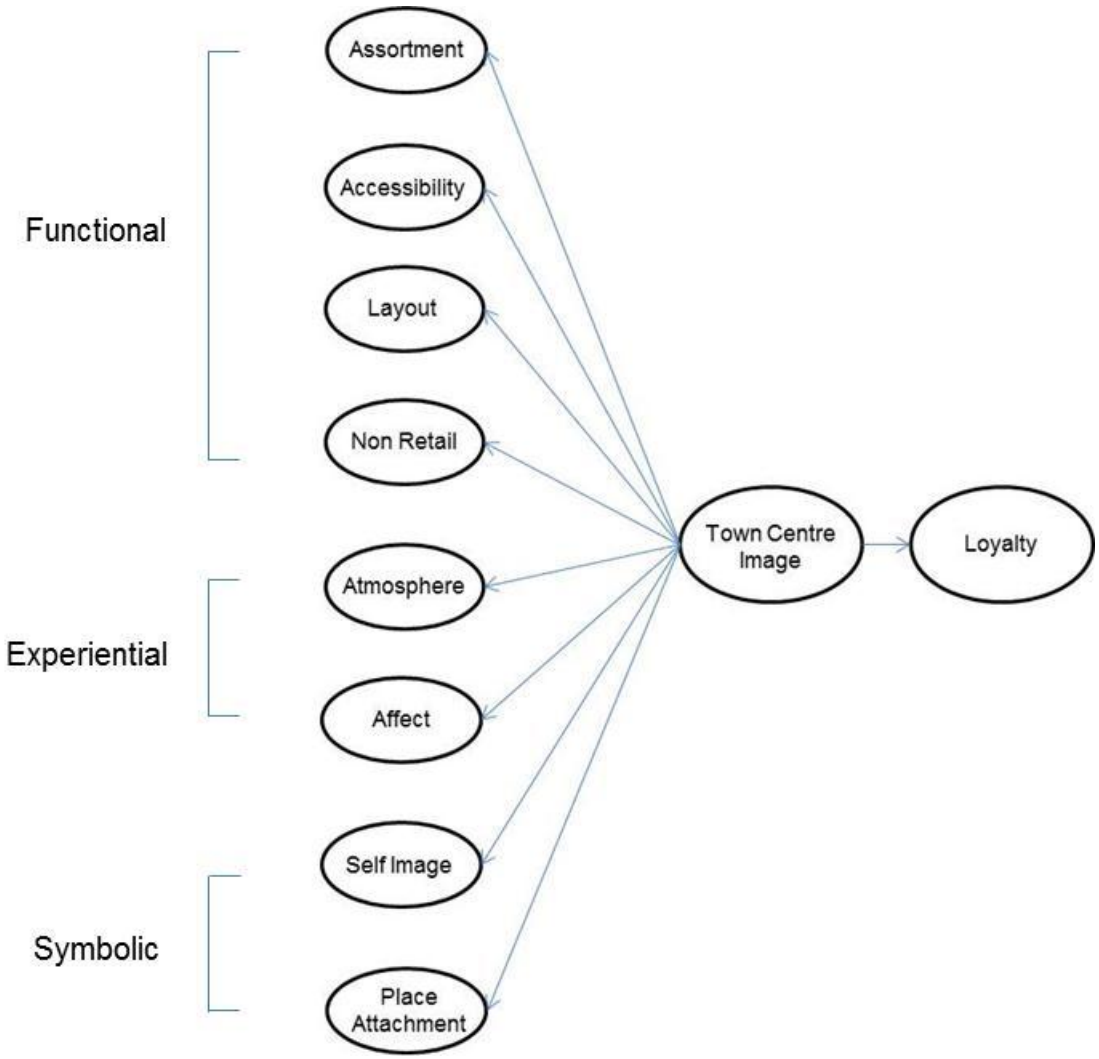
centre to a tourist destination, to date the applicability of this framework to retail destinations such as town centres has not been tested empirically.

Based on the brand image concept where image is the integration of the functional, experiential and symbolic dimensions, it is proposed that the town centre image construct is similarly represented by the three functional, experiential and symbolic dimensions. Therefore Hypothesis 1 states:

H1.: Overall town centre image is a three dimensional construct represented by functional, experiential and symbolic dimensions.

Having hypothesised that town centre image is represented by these three dimensions, the next stage of the conceptualisation is to determine the constructs which reflect each of the dimensions. Drawing on the literature review, eight constructs are proposed as comprising consumers' perceptions of town centre image. According to brand image concept theory, the Functional dimension represents the functions within the town centre which fulfil shoppers' functional needs. The Functional dimension is hypothesised as consisting of four constructs, Assortment, Accessibility, Layout and Non Retail, consistent with the literature on shopping centre image. The Experiential dimension is defined as those elements of the town centre which provide shoppers' with sensory pleasure and stimulation. Following attitude theory the Experiential dimension is hypothesised as consisting of two constructs, Atmosphere and Affect. The Symbolic dimension fulfils shoppers' needs for meaning and identification with a desired group. The Symbolic dimension contains two constructs, Self-Image Congruence and Place Attachment, following the image concept theory. Each of the constructs appearing in the model will be discussed in the following sections of this chapter. Figure 3.1 presents the model of Town Centre Image, demonstrating the three dimensions and the constructs reflecting each of the dimensions.

Figure 3.1 Model of Town Centre Image



3.3.1 Functional dimension

According to Park, Jaworski and MacInnis (1986)'s brand concept theory, the functional image dimension is related to solving consumers' externally-generated consumption needs, and consists of elements which have physical characteristics (Keller 1993; Park, Jaworski and MacInnis, 1986). In the town centre, the physical characteristics are the goods or services which fulfil functional, instrumental or utilitarian needs, performing necessary purposes, satisfying physical needs and

allowing the solution of externally-imposed problems (Batra and Ahtola, 1991; Fournier, 1991; Keller, 1993; Park, Jaworski and MacInnis, 1986). The functional dimension is composed of the tangible attributes which are processed cognitively in image processing (Downs 1970; Gartner 1993; Stern and Krakover 1993; Stern, Zinkhan and Jaju, 2001). They are located in the external sphere and hence they are perceived objectively (Fournier, 1991).

The functional image dimension echoes the cognitive component of the attitude model. Similar to attitudes, retail and marketing researchers have explained how consumers form images from cognitive processing. MacInnis and Price (1987) propose that shoppers form mental images in response to stimuli that activate knowledge structures, which are then processed cognitively. In the context of a town centre, the cognitive image component is the "*product* of the process of collecting, coding, and evaluating information about the spatial environment" (Downs, 1970, p. 15) or in other words the processing of the factual information a consumer encounters in the physical environment.

Within a town centre, the functional dimension of the image concept is related to consumers experiencing the physical aspects of the town centre, and therefore represents the fulfilment of externally-generated consumption needs. The function of a town centre as the High Street, downtown or "the historic retail core of a town" (Guy, 1998, p. 262) is to satisfy these needs by providing consumer goods, as well as recreational, social and business amenities (Padilla and Eastlick, 2009). Bell (1999) defines such an area as "a *discrete*, free-standing collection of retail stores and both the privately owned (e.g. merchandise, buildings, signs) and publicly owned elements of the surrounding environment (e.g. roads, car parks, amenities)" (p. 68). Following the findings in the review of the town centre literature (e.g. Timmermans, van der Heijden and Westerveldt, 1982; Teller and Elms, 2010; Wee, 1986), the functional ingredients of the town centre are proposed as store assortment and related merchandise; physical infrastructure involving access to the town centre including roads, car parks and other travel elements; design and layout of the buildings and

other structural components. In addition, it is anticipated that the services or amenities provided by the town centre in support of, but distinct from, the retail provision are valued by consumers as additional incentives to visit a town centre.

3.3.1.1 Retail assortment

Retail assortment refers to the range and quality of goods and stores available in the town centre. For shoppers, the most important aspect of the functional dimension involves the retail elements of the town centre. Although consumers shop for a variety of motives (Tauber, 1972; Dawson, Bloch and Ridgway, 1990), the primary purpose of most trips to the town centre involves the purchase of goods, in which the selection of stores plays an important role (Bell, 1999; Darden and Reynolds, 1971; Dennis, Marsland and Cockett, 2002; Teller and Reutterer, 2008). According to Teller (2008), the "tenant mix can be considered as the key source of [town centre] attractiveness since it is the main prerequisite to fulfil the consumer task" (p. 386). Bucklin (1967) noted that the utility of a shopping centre depends largely on the range of goods and stores provided by the centre. On the shopping trip "a broad and deep mix of stores and goods which enrich and ease the shopping endeavours of consumers" is the primary attraction of the town centre for shoppers (Teller and Reutterer, 2008, p. 137). Timmermans, van der Heijden and Westerveld (1982), in eliciting unprompted perceptions, confirmed that the size of the retail assortment was the most significant dimension that respondents considered in shopping centres. Hence Assortment is expected to strongly influence their image perceptions of the town centre.

The range of stores found within a shopping centre is referred to as the retail tenant mix or "the full line-up of appropriate and well-positioned stores" (Kirkup and Rafiq, 1994, p. 18). Shoppers are believed to select a shopping centre on the basis of the number and quality of the stores (Dennis, Murphy, Marsland, Cockett and Patel, 2002; Howard, 1992; Weltevreden and van Rietbergen, 2007). In addition, the role of specific stores, whether specific department stores (Finn and Louviere, 1996) or independent speciality stores (Marjanen, 1995; Stoel, Wickliffe and Lee, 2004), in attracting shoppers has been demonstrated by Nevin and Houston (1980).

Assortment also refers to the range and mix of goods sold within stores or "the total merchandise offer" (Hart and Rafiq, 2006, p. 334). Some shopping mall studies suggest that the characteristics of the merchandise within the stores are responsible for shopping mall image. Included in the merchandise characteristics are product quality (e.g. Bell, 1999; Chebat, el Hedhli and Sirgy, 2009), price (e.g. Severin, Louviere and Finn, 2001; Weltevreden and van Rietbergen, 2007), style and fashion (e.g. Bell, 1999; Finn and Louviere, 1996; Sit, Merrilees and Birch, 2003; Wong, Lu and Yuan, 2001). However, price was not found to be significant in a town centre as opposed to a shopping mall, suggesting that price levels may vary more widely across the greater range of stores in this more disparate retail location (Leo and Philippe, 2002; Nevin and Houston, 1980; Teller and Elms, 2010). Similarly, personnel and hours are expected to vary too considerably within a town centre and therefore will not be perceived as significant to consumers' images there (Nevin and Houston, 1980; Teller and Elms, 2010).

When studying image in a town centre, Downs (1970) questioned if "one speak[s] of individual goods or stores or the total number of stores" (p. 18). Within shopping mall literature, the images of either stores (e.g. Dennis, Murphy, Marsland, Cockett and Patel, 2002; Finn and Louviere, 1996; Marjanen, 1995; Stoel, Wickliffe and Lee, 2003) or merchandise (e.g. Chebat, el Hedhli and Sirgy, 2009; Finn and Louviere, 1996; Sit, Merrilees and Birch, 2003) are believed to contribute to shopping mall image. However, in town centre image studies, assortment is generally considered to be both the retail tenant mix and the assortment of goods (e.g. Gautschi, 1981; Nevin and Houston, 1980; Wee, 1986). Nevin and Houston (1980) found that quality and variety of stores, together with the quality of the merchandise and product selection, were key components of image. Similarly Bell (1999) created an image dimension consisting of the quality and variety of shops and products. Hence, the range and quality of goods and stores have been examined together as key dimensions in the image of a town centre, and this definition of assortment will be adopted for studying town centre image.

Therefore the assortment construct of the functional image dimension will be composed of the range, type and quality of stores together with the style, range and quality of products sold. It is hypothesised that shoppers' perceptions of the retail assortment in a town centre which are more favourable will be related to a more positive overall town centre image, leading to Hypothesis 2:

H2.: Retail assortment is positively related to the overall town centre image.

3.3.1.2 Accessibility

Accessibility is a key dimension of town centre image (Hart, Farrell, Stachow, Reed and Cadogan, 2007). Accessibility represents travel to the centre, including convenience of location, distance from home or work, and mode of travel, whether by public or private transport (Bell, 1999; Gautschi, 1981; Ruiz, Chebat and Hansen, 2004; Stoel, Wickliffe and Lee, 2004). The spatial and temporal distance consumers must overcome to travel to shop has long been included in consumer decision making studies as part of gravity models (Teller and Reutterer, 2008). When compared to purpose-built shopping malls, where the needs of consumers travelling by car are consciously included in the design and planning of the centre, town centres are often at a disadvantage because of infrastructural limitations, traffic restrictions and high parking prices (Teller, 2008).

Researchers have found that the accessibility component of image is significantly related to patronage measures in a town centre. Howell and Rogers (1980) demonstrated that accessibility, in terms of distance travelled and traffic congestion is an important predictor of preference of a downtown. Similarly Gautschi (1981) compared travel modes in terms of public and private transport as to cost and convenience, finding that accessibility was significantly related to frequency of patronage. The availability, cost and ease of parking is also an important consideration for town centre shoppers (Leo and Philippe, 2002). Gentry and Burns (1978) and Hauser and Koppelman (1979) both found that availability and cost of

parking were the second most important factor in shopping centre image, after assortment.

More recent studies have found that accessibility has a less significant impact on consumers' perceptions of town centres. Teller (2008) and Teller and Elms (2010) found that neither accessibility nor parking were significant in a town centre's attractiveness when compared to assortment. Similarly Bell (1999) found that convenience of access had little influence on predicting shopping behaviour. Bell (1999) speculated that, as consumers become more mobile, accessibility becomes a low involvement construct. Accessibility may be accepted as a physical and psychological cost, and only noticed if it becomes unexpectedly unpleasant or detrimental to the shopping trip. Therefore consumers may place less emphasis on this construct in their image perceptions.

However, accessibility has been identified as an important factor in image perceptions when consumers are asked to provide unprompted responses (Timmermans, van der Heijden and Westerveld, 1982). Gentry and Burns (1978) found that distance travelled was in fact the most important image factor in predicting frequency of shopping at a particular location. Hackett and Foxall (1994) also found accessibility, in terms of good road links, to be a factor in town centre image, as opposed to that of a purpose-built shopping mall. Drawing support from these studies, accessibility appears likely to form part of consumers' image perceptions.

For the purposes of this thesis, the accessibility construct is defined as the convenience of travel to the town centre in terms of transport links and ease of access, together with availability of suitable car parking provision at reasonable cost. It is hypothesised that more favourable perceptions of the accessibility to a town centre will be related to a more positive overall town centre image. This leads to Hypothesis 3:

H3.: Accessibility is positively related to the overall town centre image.

3.3.1.3 Layout

Although the internal layout of a shopping centre is often included in a measure of convenience of access (e.g. Bell, 1999; Hart, Farrell, Stachow, Reed and Cadogan, 2007), in other research it is considered as a distinct variable which influences perceptions of a town centre. Indeed, studies have distinguished between "macro" accessibility, which refers to transport links from the home location to the shopping centre, and "micro" accessibility, which refers to layout, orientation or ease of internal movement within the centre (Downs, 1970; Oppewal and Timmermans, 1999; Sit, Merrilees and Birch, 2005; Teller and Elms, 2010). Layout includes the organisation of the internal space of the town centre such as compactness, areas of covered space, ease of navigation and direction-finding, pedestrianisation of walkways, buildings and landscaping (Bell, 1999; Oppewal and Timmermans, 1999; Wee, 1986). Consumers need to navigate and negotiate the layout of the centre to reach the stores they seek.

Layout as internal movement within the centre has been arguably more important in shopping mall research compared to town centres, due to the planned design of these centres (Brown, 1992; Wakefield and Baker, 1998). The design of the physical environment of a mall is related to the synergy created by the number and proximity of the stores it contains (Chebat, Gelinas-Chebat and Therrien, 2005; Feinberg and Meoli, 1991). Brown (1992) showed that the placement of key retail outlets relative to main entrances and non-retail services influences shoppers' movement within a mall and how shoppers navigate between stores. The layout of a shopping centre thus determines shoppers' movement and behaviour, influencing sales levels in stores and the commercial viability of the centre (Kurose, Borgers and Timmermans, 2001). On the one hand, developers and mall managers need to maximise the movement and exposure to the entire mall assortment, but on the other hand, the physical design of the centre needs to ensure that movement is easy and convenient for shoppers (Brown, 1992). A more convenient layout in terms of ease of access to consumers' choice of stores, which means that consumers can reach those stores more easily

and speedily, is perceived more favourably (Chebat, Gelinas-Chebat and Therrien, 2005). As noted by Reimers and Clulow (2004), “all things being equal, a consumer will have to walk further in a retail centre with a linear design, than one that is clustered ... The success of a retail centre is dependent on the success of its retailers, which in turn rely on pedestrian volume” (p. 209).

Layout has previously been identified as an important part of consumer’s perceptions and hence image. Within a shopping mall, design and layout have been demonstrated as the key elements of the physical environment which influence patronage (Van Raaij, 1983; Wakefield and Baker, 1998). Oppewal and Timmermans (1999) also found that one of the elements of the public space in a town centre most favoured by consumers was compactness of layout, in terms of accessing stores and the space reserved for pedestrian access. Similarly, Teller and Elms (2010) found that layout factors, measured as ease of movement and orientation, significantly influenced perceptions of the attractiveness of a town centre.

Town centres are more complex environments than shopping malls and are often encountered as differently designed and managed spaces within the same location, hence the difficulty of negotiation will be on a larger scale (Foxall and Hackett, 1992). Perceptions of layout are also likely to be more important in a town centre than in a shopping mall, due to a town centre developing organically rather than planned (Foxall and Hackett, 1992). A well-designed layout will facilitate the shopping trip, hence the layout construct will represent the ease with which shoppers can move within the centre during the shopping trip. It is hypothesised that shoppers’ perceptions of the layout within a town centre which are favourable will be related to a more positive overall town centre image. This leads to Hypothesis 4:

H4.: Layout is positively related to the overall town centre image.

3.3.1.4 Non Retail

As well as purchase-related activities, consumers may also visit the town centre for purposes unrelated to shopping or may include shopping with other purposes (Tauber, 1972). Town centres include "the historical, cultural, legal, and economic environment" in an urban centre (Hackett, Foxall and van Raaij, 1993, p. 381). These associated facilities supporting the retailing functions include availability of food and refreshments (Nevin and Houston 1980; Wee 1986), leisure and entertainment (Sit, Merrilees and Birch, 2003; Stoel, Wickliffe and Lee, 2004; Wakefield and Baker, 1998), banking and financial services (Bellenger, Steinberg and Stanton, 1977), cultural facilities (Weltevreden and van Rietbergen, 2007), as well as library, post office, hair dressers, travel agents, pharmacies, advice bureaux (Hankinson 2005; Oppewal, Alexander and Sullivan, 2006; Ravenscroft, Reeves and Rowley, 2000; Reimers and Clulow, 2004; Warnaby, Bennison, Davies and Hughes, 2002). These elements are expected to influence consumers' image perceptions in the same way as the retail assortment, accessibility and layout functions, depending on the purpose of the visit (e.g. resident, visitor, shopper, worker).

The availability of food and refreshments to support the shopping trip is frequently included in image measures of shopping centres (e.g. Nevin and Houston, 1980; Teller, 2008; Wee, 1986). For example, Wakefield and Baker (1998) found that consumers are motivated to spend more time in a shopping mall if food service and entertainment functions are available. Timmermans, van der Heijden and Westerveld (1982) identified that non-retailing functions were reported unprompted by respondents. Moreover, Teller (2008) found evidence that non-retail tenant mix (food and entertainment venues) was significantly associated with patronage in town centres.

Consistent with the argument in the retail literature that image is a holistic construct, it is hypothesised that, when perceived holistically, town centre image encompasses the whole environment because it "is the configuration of the whole field of the object" (Dichter, 1985, p. 75). A holistic image has been considered by some researchers as

the sum of all perceptions of the environment (Birtwistle, Clarke and Freathy, 1999; Wong and Yu, 2003), or "the totality of [all] experiences when shopping there" (Berry, 1969, p. 5). In this view, image is "the total impression an entity makes on the minds of others" (Dichter, 1985, p. 75). This overall or total impression is also frequently referred to as a holistic image (Keaveney and Hunt, 1992; Zimmer and Golden, 1988). It is hypothesised that the holistic image of a town centre will be perceived as the entirety of the retailing provision, plus the totality of the other place elements from the wider non-retail environment (Warnaby, Bennison and Davies, 2005).

It is therefore proposed that in a town centre, the non-retail facilities such as bars, clubs and other entertainment venues; banks and financial services; and other commonly encountered services such as travel agencies, libraries and gyms, will contribute to image perceptions of the town centre as a shopping destination. Where these are perceived favourably, it is hypothesised that consumers' perceptions of the non-retail facilities will also be positively related to the overall town centre image, leading to Hypothesis 5 which states:

H5.: Non-Retail is positively related to the overall town centre image

3.3.2 Experiential dimension

Within the three dimensional town centre image model, the experiential image dimension corresponds to the affective component and is composed of the sensory and emotional aspects of the consumer experience. It relates to consumer experiences which provide sensory pleasure, variety and stimulation (Park, Jaworski and MacInnis, 1986), or "what it feels like to use the product or service" (Keller, 1993, p. 4). Experiential consumer experiences provide pleasure in terms of aesthetic enjoyment, entertainment and emotional arousal; alternatively they may provide the consumer with a sense of security, warmth and comfort; thus they represent a continuum between high and low intensity experiences (Fournier, 1991).

3.3.2.1 Atmosphere

The sensory element of the experiential image dimension is proposed in this study of town centre image as its atmosphere. Atmosphere is "apprehended through the sense[s]"and therefore describable in sensory terms (Kotler, 1973, p. 50). In a retail location, atmosphere is experienced as "the psychological effect or feeling created by a [location's] design, and its physical surroundings" (Ghosh, 1990, p. 465). Atmosphere is therefore partly responsible for conveying the cues which represent how a location feels for shoppers (Kotler, 1973). Atmosphere strongly influences patronage and a positive atmosphere increases the likelihood of consumers making purchases (Baker, Grewal and Parasuraman, 1994; Kotler, 1973; Ogle, Hyllegard and Dunbar, 2004).

Consumers perceive a retail environment as having an overall atmosphere, based on the components in the physical environment but distinct and independent of them (Ghosh, 1990; Mattila and Wirtz, 2001). Within the store or mall setting, atmosphere has been investigated through attributes such as music, scent, colour, crowding and attractiveness (e.g. Baker, Parasuraman, Grewal and Voss, 2002; Mattila and Wirtz, 2001; McGoldrick and Thompson, 1992). Wakefield and Baker (1998) found that, similar to store environments, the atmosphere of a shopping mall, particularly created by design, colours and music but less so by lighting and temperature, is associated with its image, and hence patronage and willingness to spend time in the mall. However, atmosphere in a store or mall can be manipulated and controlled more directly than within a town centre, hence the attributes of atmosphere in each shopping location are likely to differ.

Within the town centre image literature, atmosphere has been researched in terms of visual attractiveness (Bell, 1999; Downs, 1970; Wee, 1986), friendliness (Downs, 1970; Nevin and Houston, 1980; Hunter, 2006), safety (Wee, 1986; Hackett and Foxall, 1994), cleanliness (Downs, 1970; Wee, 1986; Hackett and Foxall, 1994), lighting and warmth (Wee, 1986; Hackett and Foxall, 1994). According to Warnaby (2009), the character of a town centre is formed partly from the appearance of the

individual stores, but also by the wider urban provision in “the variety and diversity of building types and architectural styles … and their juxtaposition. This in turn may create an interesting and distinctive perception of place in the minds of shoppers and other users” (p. 289). Visual attractiveness has been investigated by Bell (1999) in terms of the appearance of store fronts, signage and overall appearance and found to be significant in consumers’ image perceptions.

Other authors (Downs, 1970; Oppewal and Timmermans, 1999; Wee, 1986) have included aspects such as safety, maintenance, cleanliness and tidiness. As well as perceptions of crime, consumers’ overall impressions of safety in a town centre are believed to include “cleanliness, sufficient lighting and the absence of vagrancy” (Burns, Manolis and Keep, 2010, p. 53). If the environment is not well maintained, perceptions of crime and safety may contribute to negative atmosphere in a town centre (Bennison, Warnaby and Pal, 2010; Burns, Manolis and Keep, 2010). In times of recession, town centre atmosphere may be adversely affected by “long-term vacancies, lower-status stores replacing market leaders, the emergence of charity shops and the development of a general air of dilapidation” (Thomas and Bromley, 2000, p. 1405). Conversely, the presence of security personnel may have a positive effect of the safety aspects of the town centre atmosphere (Hackett and Foxall, 1994).

Downs (1970) further investigated atmosphere in a town centre in terms of relaxed, friendly and personal elements. Although in Downs’ study these atmospheric items did not load strongly on the atmosphere construct, other researchers (Dennis, Murphy, Marsland, Cockett and Patel, 2002; Gorter, Nijkamp and Klamer, 2003; Schmidt, Jones and Oldfield, 2005) have associated these items with town centres and shopping centres. A relaxed atmosphere was related to having enough time to enjoy shopping, finding quiet space in a busy centre and being able to have a short rest (Gorter, Nijkamp and Klamer, 2003; Schmidt, Jones and Oldfield, 2005; Sit, Merrilees and Birch, 2003). Dennis, Murphy, Marsland, Cockett and Patel (2002) found that consumers personalise the image of shopping centres and consider some shopping centres as having friendly characteristics. Personal elements have been

associated with the services provided in a shopping centre in terms of behaviour of employees such as knowledge, courtesy and empathy (Sit, Merrilees and Birch, 2003).

The numbers and density of other shoppers also influence perceptions of image (Downs, 1970; Oppewal and Timmermans, 1999). Whereas a greater density of shoppers may be desirable for retail managers, crowding in retail environments is generally perceived negatively, particularly in task-oriented shoppers, who may feel restricted or anxious, or distracted from the shopping trip (Eroglu and Machleit, 1990; Hackett, Foxall and van Raaij, 1993; Harrell and Hurt, 1976; Turley and Milliman, 2000). However, perceptions of crowding appear to be subjective, as in some retail situations a greater density of shoppers may offer reassurance as to the choice of location (Hackett, Foxall and van Raaij, 1993). Oppewal and Timmermans (1999) found that consumers disliked both crowded shopping centres and those with too few shoppers, with moderately busy and uncrowded centres perceived as most pleasant.

Whereas in many town centre studies, the various atmospheric elements are studied individually, Hackett, Foxall and van Raaij (1993) note that atmosphere should be researched as a multi-dimensional construct. Therefore atmosphere is here considered as multi-dimensional and constructed of the elements discussed above, in other words as attractive, safe, busy and not too crowded, relaxed, friendly and personal. Hypothesis 6 proposes that:

H6.: Atmosphere is positively related to the overall town centre image

3.3.2.2 Affect

Atmosphere and affect are related components of the experiential dimension, atmosphere influencing consumers' emotional responses to the retail environment through arousing visceral reactions (Kotler, 1973; Spies, Hesse and Loesch, 1997; Turley and Milliman, 2000). The experiential dimension contains more elaborate personal feelings and emotions relating to the consumer experience within the

environment (Dube, Cervellon and Jingyuan, 2003; Keller, 1993). Within the experiential dimension, as with attitudes, affect is defined as feelings or emotions, or "a general category for mental feeling processes … a mental state of readiness that arises from cognitive appraisals of events or thoughts" (Bagozzi, Gopinath and Nyer, 1999, p. 184). Emotional or affective responses to external stimuli are key components in image formation, distinguishing image from cognitive processes (Baloglu and MacCleary, 1999; Beerli and Martin, 2004; Oxenfeldt, 1974). Oxenfeldt (1974) describes how image "has some emotional content – i.e. it includes an element of being drawn toward or repelled by the store. … The customer reacts to the store's characteristics, as he views them, in an emotional way" (p. 9). Martineau (1958) describes how a store's image creates "a warm feeling of acceptance [which] makes you feel good to go shopping there" (p. 48).

Physical retail environments such as stores, malls, tourist destinations and town centres are therefore believed to have an affective quality, defined as its "emotion-inducing quality that persons … attribute to that place" (Russell and Pratt, 1980, p. 312, in Darden and Babin, 1994). Donovan and Rossiter (1982) associated retail environments with three factors: pleasure, arousal and dominance, subsequent research finding dominance less useful in retail settings. Babin and Attaway (2000) researched emotional responses to retail environments based on work by Donovan and Rossiter (1982), and found that the emotions of sleepy, bold, happy, satisfied, excited, energetic, disgusted, bored, and annoyed represented consumers' emotional responses to a store. Although affect has been more frequently researched in other retail contexts, such as stores and tourist destinations it is anticipated that, in the town centre also, higher levels of such emotional responses to the town centre will be related to a more positive overall image, leading to Hypothesis 7 which states:

H7.: Affect is positively related to the overall town centre image

3.3.3 Symbolic dimension

While the roles of functional/ cognitive and experiential/ affective elements in image formation have been recognised by retail and marketing researchers (Baloglu and McCleary, 1999; Beerli and Martin, 2004; Mazursky and Jacoby, 1986; Oxenfeldt, 1974), an additional dimension in image formation not included in current image models is the symbolic image dimension which was identified in the development of the image definition as above.

3.3.3.1 Self Image

The symbolic image dimension conveys meaning (Martineau, 1958; Grubb and Grathwohl, 1967; Stern, Zinkhan and Jaju, 2001), summarising the environment into an impression which has individual significance for a consumer (Boulding, 1956). The symbolic image dimension in the town centre image model fulfils internally-generated needs for consumers' identification with a desired social group (Park, Jaworski and MacInnis, 1986; Keller 1993). It relates to the need for self-enhancement, personal expression, group membership and ego-identification, associating the individual's self-image with the image of the group or community (Park, Jaworski and MacInnis, 1986; Keller, 1993).

The symbolic image dimension is based on the notion that people shop not only for functional and rational reasons but also because their purchase behaviour has a symbolic meaning (Escalas and Bettman, 2005; Grubb and Grathwohl, 1967; Solomon, 1983). Pohlman and Mudd (1973) consider that the symbolic meaning of a purchase is "the extent to which a purchase enhances the worth of a person in his own eyes (self-esteem) and in the eyes of others (status)" (p. 167). Extensive research in the store image domain in particular reveals that the symbolic meaning of the consumption experience highlights and reinforces consumers' self-image or self-concept, as purchases or behaviours are used to promote a desired self-image (Escalas and Bettman, 2005; Grubb and Grathwohl, 1967; Sirgy, 1982). Purchases have a symbolic value which interacts with the individual's psychological self-image, so that the act of purchasing assists in creating and managing consumer's identities

(Belk, 1988; Fournier, 1991; Grubb and Grathwohl, 1967). It is also a means of enhancing self-esteem, since products or behaviours advertise achievement of desired goals (Escalas and Bettman, 2005). Therefore a consumer's identity and lifestyle influence and are influenced by his or her consumption behaviours (Ogle, Hyllegard and Dunbar, 2004).

Ogle, Hyllegard and Dunbar (2004) use social identity theory to explain the symbolic nature of consumption. They note that "social identity arises from affiliation with an organisation … and represents degree of attachment to or sense of oneness with that organisation. Such an attachment is often based upon values and goals shared by the individual and the organisation" (p. 724). Social identity also involves consumer behaviour, such as the purchase and use of products and services. The context within which consumer behaviour is enacted is also a social context, involving affiliation or belonging to a particular social group and reflecting the shared values of that group. Purchasing and consumption are therefore a means of expressing and communicating self-image to that affiliation group (Ogle, Hyllegard and Dunbar, 2004).

Social identity theory is related to consumers' self-concept. The self-concept approach considers that "people have a desire and a propensity to hold a more positive self-esteem of themselves through their self-identity and to also hold a positive identity with the various groups with which they associate" (Lantz and Loeb, 1998, p. 486). Hence self-concept consists of two aspects: a personal identity and a social or community identity. Self-congruence, where the self-concept matches with the image of other shoppers, increases consumers' self-esteem and enhances his or her self-image by reducing the discrepancy between actual and ideal self-images (Kressman, Sirgy, Herrmann, Huber, Huber, and Lee, 2006; Onkvisit and Shaw, 1993; Park, MacInnis and Priester, 2008; Samli, 1998). A consumer who perceives his/her self-image as congruent with, or matching closely that of other shoppers in the affiliation group, is believed to view a shopping location more favourably and increases their likelihood of patronage (Sirgy et al., 1997; Sirgy and Samli, 1985).

Although much of the literature on the symbolic nature of consumption refers to the purchase and consumption of brands or products in creating consumers' self concept, self concept is related not just to objects and possessions but also to places (Solomon, 1983). The places where experiences are meaningful to consumers, such as retail environments, are also involved in creating consumers' self concept (Belk, 1988; Sirgy, Grewal and Mangleburg, 2000). The self-concept suggests that a consumer's self-image is formed in relation to how consumers distinguish between themselves and others within a physical environment (Sirgy et al., 1997; Lalli, 1992; Proshansky, Ittelson and Rivlin, 1976). Consumers select stores and products which have an image or personality consistent with their image of themselves (Bellenger, Steinberg and Stanton, 1976; Martineau, 1958; Samli, 1998). A consumer will therefore select a retail environment which most closely matches his/her self-image (Sirgy and Samli, 1985; Zinkhan and Hong, 1991). Hence the symbolic dimension of town centre image represents how consumers relate self-concept and place identity to their own individual self-image. It is hypothesised that consumers will perceive a town centre more favourably if its image is more consistent with their self-image. Therefore Hypothesis 8 states:

H8.: Self-image is positively related to the overall town centre image

3.3.3.2 Place attachment

According to Stern, Zinkhan and Jaju (2001), a symbolic image includes "the consumer's sense of [location]-evoked 'belongingness' and [location]/person compatibility" (p. 214), because self concept has been hypothesised as related to identification with a community (Lantz and Loeb, 1998; Oppewal, Alexander and Sullivan, 2006). The symbolic image dimension also represents the consumer's identification with the retail environment, its occupants and the community, stimulating a sense of belonging and "personalising" it by enabling consumers to imagine how they interact within it (Lindquist 1974; Stern, Zinkhan and Jaju, 2001; Martineau 1958). Martineau (1958) considers that a symbolic image relates to how an individual consumer fits in or belongs, and whether it is "my type of place". This suggests that

not only other shoppers but also the physical environment generate a sense of attachment to the location (Bell, 1999).

Retailing acts as “an integral element of place, being part of the glue that binds communities together” (Bennison, Warnaby and Pal, 2010, p. 849). The consumption experience generates “bonds” or attachments that consumers form with the environment and the community (Zeithaml, Berry and Parasuraman, 1996). A consumer develops place attachment by becoming attached to a retail location when a meaningful connection develops between self-image, location and community (Park, MacInnis and Priester, 2008). Consumption experiences in a retail location “foster a sense of one’s origin, history and core self, providing a basis from which current selves are viewed and future selves are framed. They provide a sense of security and comfort by referencing times of safety. They have the capacity to evoke feelings of bittersweet nostalgia, fondness and satisfaction … maintaining a sense of continuity, fostering identity, protecting the self against deleterious change, strengthening the self, and helping the individual retain a positive self-image … They emotionally bind a person to that place and evoke a sense of self over time” (Park, MacInnis and Priester, 2008, p. 14). Thus self-identity and attachment to the location are included in a consumer’s self-concept (Fournier, 1998; Park, MacInnis and Priester, 2008), and over time the consumer’s identity and the identity of the location become inter-linked.

Symbolic image will therefore be additionally represented by the notion of place attachment to the town centre. The notion of place attachment has as yet not been researched in town centres but has recently been demonstrated to be influential in consumers’ emotional bonding and perceptions of retail environments such as shopping malls (Allard, Babin and Chebat, 2009). Therefore it is likely to also form part of town centre image, and it is hypothesised that place attachment will be related to town centre image, leading to Hypothesis 9:

H9.: Place attachment is positively related to the overall town centre image

3.3.4 Patronage

The value of image to marketers and retailers lies in its ability to predict consumer behaviour (Boulding, 1956; Bucklin, 1976; Martineau, 1958). Researchers have long been interested in the relationship between image and patronage behaviour, for example, consumers' propensity to choose particular stores, shopping malls or brands, to travel to a shopping destination, or to demonstrate loyalty to a particular brand, store or shopping centre. Image increases the likelihood that a shopping centre will be included in a consumer's consideration set, so that it will be more likely to be selected as a shopping destination (Finn and Louviere, 1996). More positive images are likely to determine destination preferences and increased frequency of shopping visits, and hence loyalty (Bell, 1999; Hauser and Koppelman, 1976; Hunter, 2006).

For the purposes of this thesis, if a positive relationship can be demonstrated between overall town centre image, as hypothesised in the proposed three-dimensional town centre image model, and patronage, the nomological validity of the model will be strengthened (Hair, Black, Babin, Anderson and Tatham, 2006). There are two main ways in which patronage is assessed. One method is to calculate actual purchasing behaviour, the other is based on attitudes and behavioural intentions. Pan and Zinkhan (2006) note that some of the most frequent approaches to patronage in a store context are store choice and frequency of visit. Choice and frequency have also been used in town centre research to assess patronage (e.g. Hauser and Koppelman, 1979; Wee, 1986; Gautschi, 1981; Leo and Philippe, 2002; Howell and Rogers, 1980; Hunter, 2006). Other studies have assessed patronage using amount of spend or share of wallet (Gautschi, 1981; Howell and Rogers, 1980; Wee, 1986) and number of purchases (Howell and Rogers, 1980).

However it is argued that behavioural approaches to patronage lack a conceptual basis and hence are insufficient to enable understanding and, more importantly, predictions of underlying patronage behaviour (Bloemer, de Ruyter and Wetzels, 1999; Howell and Rogers, 1980; Jacoby and Kyner, 1973). Patronage behaviour may

be influenced by social context and other motivations, whereby some shoppers make choices due to convenience (Oliver, 1999) or inertia (Bloemer and Kasper, 1995), may be variety-seekers (Dick and Basu, 1994; Bloemer, de Ruyter and Wetzels, 1999), or have cost and mobility issues restricting their choice of shopping destination (Jones and Reynolds, 2006; Ogle, Hyllegard and Dunbar, 2004). This may be particularly the case in the town centre context, where the mobility of some shoppers to visit other town centre destinations may be restricted, compared to shoppers whose opportunities and choice sets of destinations are much wider (Phillips and Swaffin-Smith, 2004).

Of more interest to researchers and managers are the psychological and attitudinal processes underlying consumers' decisions and patronage behaviour (Dick and Basu, 1994; Jacoby and Kymer, 1973). Although there is debate as to the relationship between attitudes, intentions and actual behaviour (Bagozzi, Baumgartner and Yi, 1991; Ryan and Bonfield, 1975), attitudes and behavioural intentions are likely to be more reliable indicators of patronage because they are less subject to situational constraints (Dick and Basu, 1994). Within a town centre, the relationship between image and patronage behaviour has been demonstrated empirically through attitudinal constructs such as attractiveness (Teller and Elms, 2010), satisfaction (Leo and Philippe, 2002), willingness to buy (Bell, 1999), intentions to visit (Hunter, 2006; Nevin and Houston, 1980), and loyalty (Andreu, Bigne, Chumpitaz and Swaen, 2006).

In particular, loyalty has been used as an indicator of the attitudes and behavioural intentions which underlie purchasing behaviour (Jacoby and Kyner, 1973). Maintaining consumer loyalty is crucial to retailers because loyal customers spend more money, shop more frequently and demonstrate more commitment (Chaudhuri and Holbrook, 2001; Cronin, Brady and Hult, 2000; Sirohi, McLaughlin and Wittink, 1998). Zeithaml, Berry and Parasuraman (1996) suggest that loyalty consists of three types of behavioural intentions: intention to continue patronage; intention to spend more; and recommendation through positive word of mouth communications. If consumers have a more positive image towards a retail location, they will

demonstrate greater intentions to continue to patronise that location, and hence will be more inclined to spend more time and money there (Bloemer and de Ruyter, 1998; Dick and Basu, 1994). In addition, they are likely to communicate their positive attitude through recommending the location to others through positive word of mouth communications (Brown, Barry, Dacin and Gunst, 2005; Dick and Basu, 1994; Swan and Oliver, 1989). Loyalty as demonstrated by repatronage intentions and word of mouth communications has been associated with image perceptions of retail stores (Bloemer, de Ruyter and Wetzels, 1999; Sivadas and Baker-Prewitt, 2000; Sirohi, McLaughlin and Wittink, 1998), shopping malls and town centres (Andreu, Bigne, Chumpitaz and Swaen, 2006). Therefore it is proposed that, in a town centre, overall image is positively related to loyalty, leading to Hypothesis 10 which states:

H10.: Overall town centre image is positively related to Loyalty

3.4 Model of image formation in a town centre

In this thesis, a model of town centre image (see Figure 3.1) is proposed which considers retail image as an overall, holistic concept based on a set of dimensions (functional, experiential and symbolic) which represent the totality of the environment as perceived and processed by the consumer. These dimensions are composed of underlying cognitive attributes based on perceptions of the physical environment, and affective attributes formed from sensory and emotional responses to the environment, together with symbolic characteristics related to consumer self-concepts in relation to the image of the town centre. The model proposes that the cognitive attributes based on the external elements of the environment will form the functional dimension of image. Consumers' sensory and emotional responses to these functional elements form the experiential dimension of image. The symbolic dimension of image is based on consumers' self-generated needs for meaning and identity. The resulting image is proposed to result in an overall or global attitude towards the town centre, which in turn influences consumers' patronage intentions in the town centre, in particular loyalty towards shopping in the town centre.

Chapter Four: Methodology

> *"There seems to be a public image of any given city which is the overlap of many individual images. Or perhaps there is a series of public images, each held by some significant number of citizens. …. Each individual picture is unique, with some content that is rarely or never communicated, yet it approximates to the public image which, in different environments, is more or less compelling" (Lynch, 1960, p. 46)*

4.1 Introduction

This chapter describes the methodological approaches used to test and verify the conceptual model of town centre image and the hypotheses relating to it as proposed in the previous chapter. In order to test the model, this chapter initially considers the most suitable paradigmatic approach within which to conduct the research. Secondly, the exploratory research design is reported which suggests that consumers perceive town centre image according to the three-dimensional model proposed in the conceptual framework. A qualitative approach with a small sample of respondents was adopted for this stage. Following exploratory work, a questionnaire survey with a sample of over 800 consumers in three UK town centres was developed, to collect data to test the model and the hypotheses developed in the previous chapter. The processes involved in the development of the questionnaire are presented. Finally, the sampling process to select the sample of respondents and the locations where they survey was administered is described.

4.2 Research paradigms

To best achieve the aims of the research, the researcher must first consider the most appropriate paradigm within which to carry out the research. A research paradigm is the set of beliefs or principles which shape and define the way the researcher perceives the world. It "represents a *worldview* that defines for its holder, the nature of the 'world', the individual's place in it, and the range of possible relationships to that

world and its parts" (Guba and Lincoln, 1994, p. 107). The research paradigm determines the ontology of the research, or the philosophical assumptions a researcher holds about how the world is perceived, and its epistemology or how knowledge about the world can be investigated, discovered and known (Easton, 2002). Selecting the correct research paradigm is essential to successfully answering the research question (Johnson, Buehring, Cassell and Symon, 2006). Different paradigms seek different types of knowledge, and therefore different methods of data collection may better answer the questions posed by the research (Lee and Lings, 2008). This is because the research paradigm shapes the logic of the methods used and the interpretation of findings (Malhotra and Birks, 2003).

Research paradigms align along a spectrum ranging from positivism, under which research has historically followed a scientific methods approach, to social constructionism or interpretivism, where reality is assumed to be socially constructed and interpreted subjectively. Intermediate positions have also been identified. The two research paradigms of positivism and interpretivism will be examined for their suitability for the proposed research, and the intermediate position represented by the realism paradigm will be proposed as the most appropriate design for the research conducted in the town centre image study.

4.2.1 Positivism

The majority of research on town centre image, in using survey methodology to measure the attributes found in the town centre as described in Chapter Two, generally adopts a positivist paradigm. Positivism is a scientific approach to research, and is commonly used in the natural sciences (Malhotra and Birks, 2003). Positivists believe that social and natural worlds are organised according to pre-determined stable laws, and the aim of positivist research is to uncover cause and effect relationships explaining the phenomena being studied (Lee and Lings, 2008; Malhotra and Birks, 2003). Truth is assumed to be stable and neutrally accessible (Hunt, 1990; Johnson, Buehring, Cassell and Symon, 2006).Therefore positivist research requires

consistent and reliable factual information, and “a focus upon objectivity, rigour and measurement” (Malhotra and Birks, 2003, p. 136).

Positivist researchers assume that knowledge is gained through direct observation, and reality exists externally to and independently of the observer; the existence of unobservable entities is denied (Hunt, 1990, 1991; Lee and Lings, 2008; Easton, 2002). Research participants are objects to be measured in a consistent manner, and the researcher aims to avoid bias and subjectivity by remaining neutral and external to the research (Malhotra and Birks, 2003). The positivist approach is deductive, in that problems are investigated on the basis of theory about phenomena and relationships between variables (Lee and Lings, 2008; Malhotra and Birks, 2003). Hypotheses are tested in experimental situations to gain evidence in support of the theory (Easton, 2002; Hair, Bush and Ortinau, 2006; Lee and Lings, 2008).

Although not exclusively associated with quantitative methods, positivist research most commonly makes use of quantitative methodology. Quantitative methods using survey methodology allow the collection of substantial information from the target population to make accurate measurements (Hair, Bush and Ortinau, 2006). Measurement enables the researcher to examine and validate relationships between variables to test hypotheses by asking respondents structured questions (Hair, Bush and Ortinau, 2006). Reliability is based on replication and validation to enable the prediction of behaviour. Using rigorous sampling techniques and given sufficient sample sizes, the positivist approach enables generalisations about patterns of behaviour to be extended to the wider population beyond the participants in the research (Easterby-Smith, Thorpe and Lowe, 2002; Johnson, Buehring, Cassell and Symon, 2006).

4.2.2 Interpretivism

Whereas under the positivist approach phenomena are allowed to exist only if they are observable, many constructs have properties which are abstract and intangible (Lee and Lings, 2008). Such constructs include beliefs, attitudes, perceptions,

intentions and images, all of which are internal thought processes (Hair, Bush and Ortinau, 2006). In a strictly positivist sense, these cannot be studied since the researcher is unable to directly observe or measure them. The interpretivist paradigm enables these to be studied. In the interpretivist paradigm, reality is understood to be socially and culturally constructed as an output of human thought processes (Hunt, 1990; Peter, 1992). Hence this paradigm is also called social constructionism (Johnson, Buehring, Cassell and Symon, 2006; Easterby-Smith, Thorpe and Lowe, 2002). Rather than measurement, the aims of interpretivist research are to understand how people make sense of their environments. This understanding is gained through studying the language people use in creating meanings (Easterby-Smith, Thorpe and Lowe, 2002).

Unlike positivism, where reality is considered to be stable and predictable, the intepretivist approach accepts that human beings are complex, contradictory and changing (Zinkhan and Hirschheim, 1992). Hence a range of individual interpretations of varying realities exists within the minds of its perceivers as they idiosyncratically interpret their own subjective images (Denzin and Lincoln, 2003; Hunt, 1990; Malhotra and Birks, 2003; Peter, 1992; Zinkhan and Hirschheim, 1992). Within interpretivism, the researcher is also a participant in the interpretation of realities. It is accepted that the researcher's own values may affect how they question respondents and interpret responses, and the researcher is thus engaged in the shared creation of meaning with respondents (Malhotra and Birks, 2003).

The interpretivist approach is based on induction rather than deduction, in that it seeks to develop theory from data rather than impose existing theory on data (Lee and Lings, 2008). Theory construction involves observing, interpreting and examining data and drawing conclusions about how phenomena appear to work (Peter, 1992). The emphasis of interpretivist research is on gathering rich data from small samples, and this research paradigm is usually associated with exploratory research and qualitative methods (Malhotra and Birks, 2003; Miles and Huberman, 1994). Interpretivist research necessarily follows an unstructured format and interpretation of

data is subjective (Malhotra and Birks, 2003). Interpretivist research thus limits the researcher's ability to generalise data to the wider population due to the unstructured format of the questions and the small sample size (Hair, Bush and Ortinau, 2006; Lee and Lings, 2008). The reliability of interpretivist research is evaluated differently to positivist research. Interpretivist research is judged through iterative processing and debate among researchers (Zinkhan and Hirschheim, 1992) as to whether the theories that are generated are believable and consistent with others' understandings of reality (Peter, 1992).

The subject of this thesis, town centre image, is a construct which is subjective and abstract, and as such is not directly observable. Formed from consumer perceptions, it represents various intangible attributes which include personal affective responses and symbolic meanings that consumers apply to their interactions with town centre environments. Because the town centre image construct has not yet been fully established theoretically in academic research, an interpretivist approach appears to be most suitable for this research, in that qualitative data could be collected to generate a theoretical explanation of how consumers subjectively perceive this construct (Bryman, 2004; Lee and Lings, 2008).

However, an interpretivist approach cannot achieve the aim of the research to create a measure of town centre image using survey methodology which is generalisable to the wider population and across locations. Since the research is concerned with identifying town centre image as a phenomenon with a subjective component which is not directly observable by researchers, neither is a positivist approach compatible with the research aims. However, neither positivist nor intepretivist research paradigms are followed exclusively by researchers (Easterby-Smith, Thorpe and Lowe, 2002; Lee and Lings, 2008). Whereas both positivism and interpretivism are considered extreme manifestations of research paradigms, researchers in marketing frequently adopt a middle ground (Zinkhan and Hirschheim, 1992). The realist view represents such an approach, which takes a middle ground between the positivist and interpretivist paradigms.

4.2.3 Realism

Realism is similar to positivism in that it contends that a reality exists which is measurable and generalisable (Lee and Lings, 2008; Easterby-Smith, Thorpe and Lowe, 2002). Realists also agree that the world exists independently of its being perceived (Hunt, 1990). However, realism differs from positivism in accepting that concepts which are not directly observable can still be usefully measured (Hunt, 1991). Such constructs are known as latent constructs or variables, and include "beliefs, motivational states, expectancies, needs, emotions and perceptions" (De Vellis, 2003, p. 7). Researchers investigate such constructs in terms of their tangible manifestations, or manifest indicators, by reducing them to their simplest possible elements which can be directly observed and measured (Hair, Bush and Ortinau, 2006; Hunt, 1991).

Realism is therefore more conducive to researching constructs which are latent and unobservable, such as image. Although image is subjective and interpreted individually, Lynch (1960) suggests there is a "public image ... which is the overlap of many individual images", hence there is sufficient commonality in perceptions among perceivers to enable measurement to be carried out (p. 46). Realism does not claim to accurately depict and measure such abstract constructs; instead they are assumed to be close approximations of reality which can nevertheless be successfully measured (Hunt, 1990). Assumptions of accuracy depend on the building and testing of successive theoretical models to assess how closely they represent the world (Zinkhan and Hirschheim, 1992). Similar to positivism, the role of theory is central to the realist approach whereby empirical observations representing reality are verified against theoretical predictions (Lee and Lings, 2008; Easterby-Smith, Thorpe and Lowe, 2002). Abstract unobservable constructs are assumed to have a real existence if their measurement repeatedly and consistently confirms theory (Hunt, 1990).

Within the realist paradigm, theoretical knowledge is developed in terms of structures of relationships which exist and operate independently of perceptions (Zinkhan and

Hirschheim, 1992). Unobservable latent constructs are considered valid and reliable if they are related to other constructs within a hypothesised theoretical, or nomological network (Hair, Black, Babin, Anderson and Tatham, 2006; Malhotra and Birks, 2003; Spector, 1992). Latent constructs are operationalised using sub-components which represent the construct's abstract and intangible properties (Hair, Bush and Ortinau, 2006). Theoretical validations of these relationships suggest that latent constructs exist if they influence behaviour as predicted (De Vellis, 2003; Hair, Black, Babin, Anderson and Tatham, 2006). Research examining latent constructs can be applied more generally to the wider population by testing these nomological networks (Malhotra and Birks, 2003; Zinkhan and Hirschheim, 1992), and hence the realist paradigm allows generalisation.

The realist paradigm appears most suitable as the basis for the research design for investigating town centre image, as a latent construct. The realist paradigm does not imply any specific methodological technique, however, a mixed methods approach has frequently been associated with realist research (Hunt, 1990). Mixed methods are useful to give different perspectives on a research problem within the realist position, particularly where exploratory work is necessary (Easterby-Smith, Thorpe and Lowe, 2002). The next section outlines the mixed method research design and methodological approaches which are adopted to test the town centre image model and hypotheses.

4.3 Research design

Research designs have been classified according to three types: exploratory, descriptive and causal (Churchill, 1999; Hair, Bush and Ortinau, 2006). Exploratory research is useful when relatively little is known about the phenomenon to be investigated (Churchill, 1999). Descriptive research is concerned with determining the frequency with which a phenomenon occurs or to identify relationships between variables, and is guided by an initial hypothesis (Churchill, 1999; Hair, Bush and Ortinau, 2006). Causal research is concerned with determining cause and effect

relationships between two or more variables (Hair, Bush and Ortinau, 2006). Exploratory research is typically carried out using qualitative methods, while descriptive and causal research methods mostly use quantitative methods.

Since the research reported in this thesis investigates a model of image structure which has not yet been explored in the town centre context, the research design will involve an initial exploratory phase to identify the constructs through which consumers perceive town centre image. Following the exploratory phase, the nature of the image construct, the relationships between the constructs and variables, and the characteristics of consumer groups in image perception will be investigated in a descriptive research design involving a survey methodology. Each of these research designs, as they apply to this town centre image study, will be explained in the following sections of this chapter.

4.4 Exploratory research

Exploratory research is carried out "to provide insights and understanding of the nature of marketing phenomena" (Malhotra and Birks, 2003, p. 63). It is useful in the early stages of research to be able to collect primary data with a small sample of subjects to establish the specific nature of the research problem (Churchill, 1999; Hair, Bush and Ortinau, 2006). The key purposes of exploratory research are to gain preliminary insights into the attitudes of the target sample, clarify how respondents perceive constructs and variables in the context of interest, and develop hypotheses about behaviours or relationships between constructs and variables (Churchill, 1999; Hair, Bush and Ortinau, 2006; Malhotra and Birks, 2003). Qualitative methodology is used to gain understanding through allowing people to respond through the language they themselves use (Easterby-Smith, Thorpe and Lowe, 2002; Miles and Huberman, 1994).

Although qualitative methods are frequently associated with interpretivist research, the research paradigm adopted for this thesis was realism. Theory is central to a

realism approach, within which research is carried out from a deductive perspective. When researchers work with theoretical concepts within a well-delineated conceptual framework, exploratory research can follow deductive principles and be used to confirm a researcher's theory (Miles and Huberman, 1994). The aim of the exploratory phase of the methodology was to explore and test whether the theory and conceptualisation adopted for the research could explain how consumers perceive image in a town centre. Since the original Brand Concept theory by Park, Jaworski and MacInnis (1986) was proposed in the brand image literature and has not to date been tested empirically in any marketing context, it was important to examine whether the theory was transferrable to the town centre context. Hence the exploratory phase of the research took a confirmatory approach.

The exploratory phase of the town centre image study aimed to capture consumers' image of a town centre by allowing respondents to explain their perceptions in their own language, and understanding the meanings through which they interpret the town centre environment. Although qualitative research includes a number of methods, including structured and unstructured interviews and repertory grids, the approach chosen for this research was the focus group.

4.4.1 Focus group methodology

A focus group is a group interview consisting of several participants which is focussed on a specific topic, or a "steered conversation" (Easterby-Smith, Thorpe and Lowe, 2002, p. 105). Conducting focus group research enables the researcher to investigate the shared understanding of the concepts of interest through respondents' interaction in a social setting (Lee and Lings, 2008). In this way, focus groups offer the opportunity to generate richer data from a range of participants than would be gained from other qualitative techniques such as individual interviews.

Five focus groups were held in three locations which represent small, medium-size and large town centres, and participants were requested to discuss their perceptions of the location in which the focus group was held. To elicit a broad range of

consumers' image perceptions, subjects were recruited from a variety of backgrounds. Participants were recruited following a snowball or judgement sampling technique (Bryman, 2004), since as Churchill (1999) states "As long as the researcher is at the early stages of research when ideas or insights are being sought or when the researcher realises its limitations, the judgement sample can be used productively" (p. 504). To ensure sufficient breadth of sample, selection criteria included age, gender and occupation. As a result, between six and ten participants took part in each focus group, with 43 participants in total, aged between 20 and 67 with an average age of 41 years. There were more than twice as many females (31) as males (12).

A schedule was prepared to explore the structure by which respondents perceive town centre image. Initial image perceptions were stimulated by asking for top-of-mind responses (Woodside and Trappey 1996). Respondents were asked to write down their immediate responses to the question: "What is your overall impression of XXX as a place to shop". This wording was adapted from Zimmer and Golden (1988)'s study into spontaneous elicitations of store image responses. Participants were asked initially to write down their image impressions so as not to be influenced by other participants' responses. This initial exercise formed the basis of subsequent discussion.

The discussions were recorded and transcribed, and content analysis was carried out (Krippendorff, 2004; Miles and Huberman, 1994). The data were analysed using a template guided by the conceptual framework where recurring comments in the text were coded and grouped into categories (Bitner, Booms and Tetreault, 1990). This method of analysis has been used frequently in consumer behaviour research to identify dimensions and relationships in order to generate theoretical conclusions (Brady and Cronin, 2001). A selection of the findings from the focus groups will be presented in the following section.

4.4.2 Focus group findings

The focus group findings will be briefly outlined following the coding framework based on the conceptual model. Each of the three dimensions in the model (Functional, Experiential and Symbolic) will be discussed in turn in the following section.

4.4.2.1 Functional dimension

Numerous comments given by respondents across all five groups related to the physical town centre environment, and hence to the functional image dimension. These were categorised into four themes guided by the literature review and conceptual framework: retail provision or assortment; accessibility to the centre; the layout and design of the centre; and the non-retail facilities and services which support shoppers' visits to the centre.

Assortment

A majority of the comments related to retail assortment, and the range of shops and choice of goods was frequently discussed in relation to all the centres. There was a comprehensive range of (named) stores and choice of goods discussed in relation to all three centres. The types and quality of stores appeared to reflect participants' overall perceptions of the centres they were discussing. Stores referred to as "cheap", "charity shops", "expensive" or "designer" stores, or empty stores, implied a reflection on the positioning of the centre as a whole. Where the named stores were small independents they tended to be perceived favourably, but chain stores received mixed comments. Respondents were concerned that the proliferation of chain stores was detrimental to the image of the town centre, that their town centre may be in danger of losing its local character and identity, and that town centres in general were "turning into clone towns" (NEF, 2004, p.1). This was reflected in comments such as:

> *"What makes me frustrated when I shop is there are so many things the same in every shop and every town and you can be in the High Street … but it wouldn't matter which High Street because there is nothing different. Why*

> *would you go to look at a town, somewhere different to shop for the experience, when you know there will be a Boots, a Woolworths, a New Look?"*

Street markets were important to participants in all three centres and were in many cases held in great affection. The impact of purpose-built shopping malls within the town centre on attracting shoppers and influencing perceptions of the town centre was the subject of much discussion, as stated in *"I think the [redeveloped shopping centre] has an effect on the rest of the shopping streets, it's all a bit over the top".* This finding parallels that of Finn and Louviere (1996) who reported that, in the case of a shopping mall, the image of specific stores influences the image of the shopping mall as a whole. In this case, it would appear that the image of shopping centre/malls influences the image of the town centre itself. For example, in one of the towns discussed, respondents were very excited by a new in-town shopping centre/mall development, whose introduction seemed to modify the existing image of the town centre. They considered that the new development had improved the city as a whole, bringing it up *"on a par with other centres"* and having *"all the shops anybody could possibly want"*.

Choice and range of goods was perceived both positively and negatively. Too limited choice of the types of goods shoppers wanted to buy was criticised. Too much choice, as causing frustration and bewilderment, was also mentioned by several participants in relation to all three centres. However, perceptions were revealed as often complex and contradictory, as exemplified by references to new shopping developments which appeared paradoxically to reduce the perceived range and choice of stores available. The largest centre, despite having extensive choice and *"shops that sell everything"*, was considered as lacking more practical and useful items. In relation to this, one respondent, following the opening of a new shopping mall, stated:

> *"if you want something small like screws there's nowhere to buy them in the centre. … I remember I had to get a present for my grandma. And grandmas*

> *like specific things that are only available in old fashioned shops, department stores and stores like that don't have them"*

This category of responses relating to the range of stores and the range of goods sold within them was labelled "assortment" following categories identified by Nevin and Houston (1980) and Wee (1986).

Accessibility

Accessibility and convenience appear to be crucial issues for shoppers (Downs 1970; Hackett and Foxall 1994). Accessibility for shoppers, both for those using public transport and private cars, and the availability of parking, were prominent themes in their perceptions of a town centre as a whole. The reasons for most decisions to shop at the locations discussed were given as convenience of access to the town centre from where shoppers lived and/or worked. One respondent stated how the convenience of access encouraged her to shop more often:

> *"in a lot of ways the centre is on the way home, a lot of the roads actually go quite close to the centre… even from the other side of the city. You can park up and get your shopping done before you go home"*

Good transport links in attracting shoppers from outside the city were important; however, in some cases these also meant that shoppers were able to get away easily to more attractive destinations.

Layout

The layout within the town centre was also important in facilitating the shopping experience, particularly in terms of comfortable access within the town centre on foot, Whether the centre is spread out or compact was an important concern for shoppers in accessing stores in all three centres, with comments such as *"all the shops are quite easily accessible"* and *"everything within walking distance"*. Where a town centre was perceived as a compact or safe place to shop: *"I don't worry about being*

run down by a bus any more, and all belonging to me", this was favourably perceived as a result of improvements to the town centre through pedestrianisation schemes. Conversely respondents who perceived that the town centre was spread out, so that access to bus and train stations or cafes and restaurants was more difficult, were more negative towards the town centre itself. Surprisingly, the largest city of the sample was favourably considered "compact" in terms of its central retail core, highlighting that image perceptions have a contradictory element. Landscaping of pedestrianised areas within the urban street network and the planting of trees appeared to increase the attractiveness of shopping in a town centre.

Non Retail

Respondents' cognitive images of the functional dimension contain not just retail-related elements. The provision of refreshment facilities, such as cafes, bars and restaurants, was mentioned by shoppers of all three centres. These aspects of a town centre's functions are not strictly related to retail but are important in supporting the shopping experience and were clearly included in the discussions in this context. All groups considered these facilities added considerably to the shopping experience in the town centre. More modern independent café and restaurant venues were perceived more favourably than chains. As one respondent noted *"one improvement is that there are more 'nice' (i.e. independent) coffee shops so you could be inclined to spend more time there".*

There was also mention of retail related service provision such as banks and building societies. References to entertainment activities such as the cinema or theatre, and events occurring in the city centre, such as organised shopping events, fun fairs, festivals and entertainments were also perceived as contributing to and enhancing participants' perceptions of the shopping experience.

4.4.2.2 Experiential dimension

In addition to the physical features of the town centre environment, respondents reported a range of subjective responses, evaluations and emotions related to how

these environments made them feel. Visual appearance was noted in statements such as *"some of the shops are hideous and others are beautiful"* and *"instead of the [place] that I think is dirty and horrible, all I could see was it becoming cleaner and brighter".* These comments were deemed to relate to a notion of attractiveness. All three town centres were considered in terms of safety aspects, contrasting references to "safe" and "lots of police" with "intimidating" and "dodgy", as for example *"it's fairly safe … not dangerous like other places [are] supposed to be"*. Experiential descriptions were also expressed in terms such as "busy" and "bustling", "friendly" and "comfortable" but also "irritating" and "stressful", with comments such as *"it's really busy and I hate it"*.

Included in this dimension was an emotional response to shopping as part of an experiential approach to the town centre. Such responses were demonstrated by comments such as *"it's really nice to walk around because of all the small shops".* One respondent clearly perceived buying food in the town centre both as an emotional experience and as a sensory pleasure:

> *"I enjoy shopping … when I'm buying food I'm thinking what to make with it so it's a nice food experience which is what I want ... I can see that things are relatively fresh. I go to the same man so he knows me"*

Respondents referred to town centres in terms such as "amazing" and "gorgeous", as having a "buzz" or, less positively, as "intimidating" and "you have to be quite assertive". References such as *"I just love shopping and obviously love bargains"* and *"if you go there it's more because you want to go shopping and not because you actually go for stuff you need, you go for the experience"* underline that participants form emotional responses to the town centre.

4.4.2.3 Symbolic dimension

As well as such affective evaluations, there was a category of responses which were categorised as symbolic. These referred to aspects such as personal and group

identity and a sense of identification with the town centre. Respondents referred to how they perceived themselves in relation to other shoppers and whether or not they belonged there, according to the congruence or fit between their self- images and how they saw others. Self-image congruence has been shown to influence perceptions in terms of store image (e.g. Sirgy et al, 1997; 2000); the focus group findings appear to confirm that a similar process is at work in the town centre. Furthermore, these perceptions are frequently based on preferences and prejudices rather than any objective assessment. Many references such as *"on market days you get a lot of people from the villages coming in, so they are aiming for the older market"* and *"it's struck me a few times that there are people who don't look at home in the city centre to me, people who haven't got cars and hang around the city centre"* referred to how respondents perceived the other shoppers in the town centre and whether or not they belonged there. The implication was that other shoppers did not fit with how respondents saw themselves. Self-image congruence was also demonstrated by statements such *as "I don't think the shops have anything that's for me, for my personal shopping style",* and *"the clothes shops aren't suitable for me, they seem to be for young people"*.

Such perceptions of self- and other-image highlight even more strongly that the image of a town centre contains aspects of the physical environment which also play a social role in a consumers' image formation. Respondents suggested that not only other shoppers but also the physical environment generates a sense of attachment, identification or belonging. Respondents referred to places in terms of their interactions within it, such as *"if you're meeting anybody, you'll say I'll meet you at XXX, it's the traditional meeting place"*, or a sense of nostalgia towards it, as in *"it's a shame that XXX is such a historical town but there's not much of that left".*

The physical landmarks and artefacts of public spaces have also been reported as having symbolic meanings for consumers' images of a place (Relph, 1976). Respondents referred to the visual appearance of the town or city as a whole, and famous architectural features, key buildings and landmarks featured prominently.

Visual impressions included physical symbols unrelated to the retail provision, such as the Town Hall, churches and cathedrals, statues and urban art works, named squares and other public areas. Architecture, both modern and historical, was also discussed, such as the following reference to a recent shopping centre development which described *"the impression made by the silhouette against the night sky".* These references were categorised as representing a notion of place attachment.

Many of the respondents also included impressions of the wider socio-cultural urban environment as a holistic frame for their responses, as reflected in the comment that *"one of the things I like about [here] is that it's unpretentious, it has lots of historic buildings but they don't put lots of cotton wool around them".* References were made to the positioning of the town or city in terms of its relative prosperity, industrial activity and employment opportunities. Respondents referred to named local businesses, past and present, which seemed to represent perceptions of the overall town centre for them. This was reflected in comments such as *"this has always been viewed as a working city, and an industrial city, it will never be anything else".*

This suggests that historic character and tradition perform an important function for shoppers when perceiving the image of a town centre. Indeed, it may be the distinctiveness of these physical and architectural elements in the urban landscape which offer the clearest sense of uniqueness and identity, differentiation and hence competitive advantage to town centre image (Warnaby, 2009).

4.4.3 Implications for the development of survey instrument

Evidence from the analysis of the focus group data supported the three-dimensional model as hypothesised in Chapter Three (Figure 3.1), in that references were made to all three constructs underpinning the three Functional, Experiential and Symbolic dimensions in the model. Therefore the focus groups confirmed that the theory adopted from the brand image literature based on the Brand Concept model (Park, Jaworski and MacInnis, 1986) could also apply and be tested in the town centre

context. Hence the ability of the exploratory phase of the research to play a confirmatory role in a deductive research design was demonstrated.

The focus group data suggest that consumers perceive the functional dimension of town centre image using a broader range of features than are currently used in the town centre image literature. As well as assortment, accessibility and layout, additional functional features identified include the provision of services such as banks and refreshment facilities, events and festivals, which were the subject of much discussion but are not typically included in town centre image studies. Since the majority or existing studies base their image dimensions on store image studies (e.g. Nevin and Houston 1980; Hunter 2006), this finding underlines the limitations of adapting store image dimensions to town centre image and highlights how the image of a town centre includes a wider range of functional attributes than just those relating to stores. The exploratory research also demonstrated how the diverse image features of the functional dimension influence overall town centre image. The influence of the image of certain stores (as “cheap” or “expensive”) appears to reflect the image that a consumer holds of the town centre. This echoes findings in shopping mall image research which showed that the image of specific stores strongly influences the image of a shopping mall (Finn and Louviere 1996).

Functional attributes were also interrelated in consumers’ minds with more subjective impressions, as demonstrated by respondents who enjoyed street markets “because it’s in the open air so I don’t feel claustrophobic there”. Such comments support the belief that affective responses are formed from interactions with functional aspects. The large range of affective statements made by respondents appears to support the view that image of a town centre contains an affective dimension.

The symbolic image dimension was represented by responses related to the meaning of an environment for consumers, including self-image, group membership and a sense of place (Park, Jaworski and MacInnis 1986). As suggested in store image research, shoppers’ self-images are related to those of other shoppers and also to

their images of a store (Sirgy, Grewal and Mangleburg, 2000). The focus group data suggest that, in a town centre, self-image is closely linked to the image of other shoppers and by extension with the town centre image. References to the sense of place in terms of nostalgia, attachment and belonging were also noted. The history and character of the wider urban environment also appeared to play a role in the symbolic image dimension. Williams, Hubbard, Clark and Berkeley (2001) note that the act of consumption cannot be separated from the spaces in which it occurs. It appears that the formation of town centre retail image is similarly interrelated with the character of the urban environment.

As well as confirming the operation of the three Functional, Experiential and Symbolic dimensions in the town centre image model, the focus groups therefore provided much richness of detail as to how consumers perceive the image of a town centre through the lens of these dimensions. However, while some interesting results emerged, only the findings which are relevant to the conceptual model in Chapter Three were retained for the subsequent research. The broader aspects of the wider urban context commented on by respondents, particularly in terms of landmarks, historic character and wider urban influences on perceptions of the town centre, were noted as contributing to the place attachment construct, although these were considered as too specific and unique to each of the town centres to be retained in the empirical study.

Based as they are on a small sample, further empirical testing of the findings was carried out with a larger sample of consumers. In particular, specific measures to test the three-dimensional theory of town centre image were developed. Therefore the next phase of the town centre image study adopted a quantitative research design which is described in the following sections of this chapter.

4.5 Quantitative research design

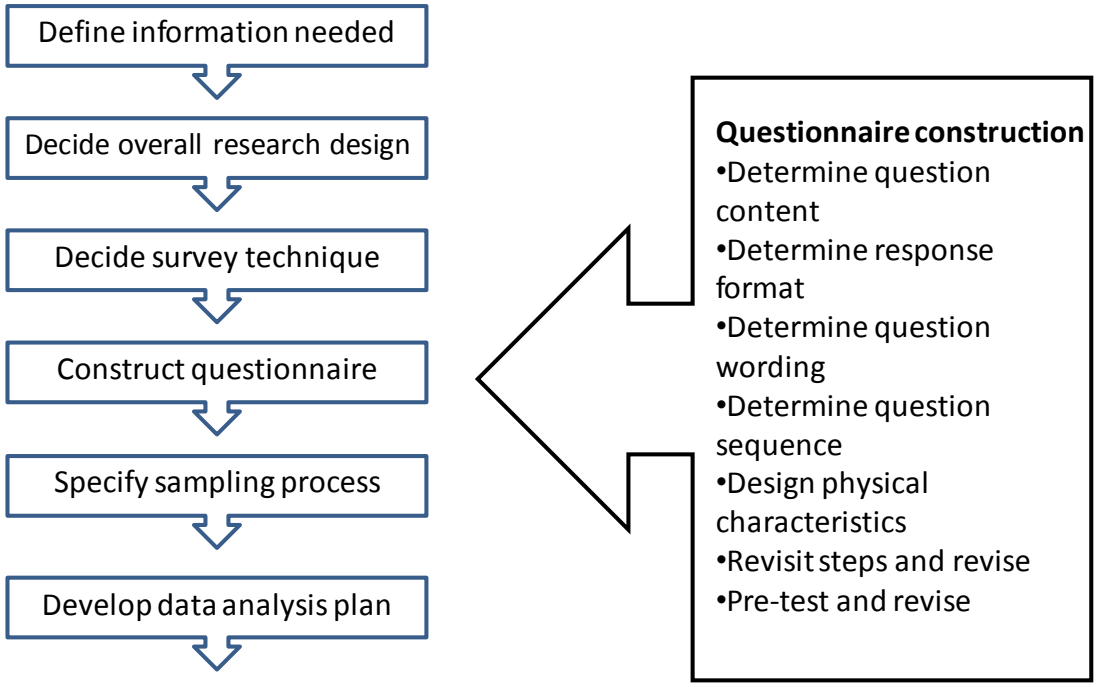
Following the exploratory phase of the research, which provided support for the theory that consumers perceive the town centre in terms of functional, experiential and symbolic dimensions, the next stage of the research design was to test the model and hypotheses using a quantitative approach. The realism paradigm adopted for this research requires large samples to validate and generalise findings. Hence a quantitative approach was utilised. Quantitative research most frequently employs a survey methodology based on questionnaires, as the researcher seeks to "ask questions to understand, explain, and predict marketplace behaviours" (Rindfleisch, Malter, Ganesan and Moorman, 2008, p. 261). Collecting and analysing questionnaire data enables the researcher to operationalise the latent constructs and empirically validate these relationships (Hair, Bush and Ortinau, 2006). The data gathered from the survey enable the use of statistical analysis, allowing factors and relationships which are not directly measurable to be studied and, given rigorous sampling, the findings can be generalised to the wider population (Hair, Bush and Ortinau, 2006). To achieve this, a sound research design is essential to ensure that the methodology adopted for the research study is consistent with the paradigmatic approach selected, and that the data collected is suitable for testing hypotheses and allowing meaningful conclusions to be drawn (Lee and Lings, 2008).

A research design under a quantitative methodology incorporates the following stages (adapted from Malhotra and Birks, 2003):

1. Define the information needed
2. Decide on the overall research design
3. Design the sequence of survey techniques
4. Construct and pre-test an appropriate form for data collection
5. Specify the sampling process
6. Develop a plan for data analysis

In addition, Churchill (1999) provides a framework for the questionnaire development process in Stage 4. The stages outlined in Figure 4.1 form the basis for the following sections of this chapter which describe the research design for the town centre image survey methodology.

Figure 4.1 Stages in research design and questionnaire construction



adapted from Malhotra and Birks (2003)

adapted from Churchill (1999)

4.5.1 Information needed (Stage 1)

The information to be sought in Stage 1 of the research design is guided by the research question and relates to measures of each of the constructs in the conceptual framework. Following a descriptive research design, the researcher is required to have prior knowledge of the constructs as developed from the academic literature. Thus the measurement instrument is operationalised to closely follow the conceptual framework developed in Chapter Three.

4.5.2 Overall research design (Stage 2)

Quantitative research designs typically fall into two types: descriptive and causal. Descriptive research is concerned with determining the frequency with which a phenomenon occurs or identifying relationships between variables, and is guided by an initial hypothesis (Churchill, 1999; Hair, Bush and Ortinau, 2006). Causal research seeks to determine cause and effect relationships between variables (Hair, Bush and Ortinau, 2006). Descriptive research is frequently used in retail image studies to determine consumers' perceptions of, for example, firms, products and brands (Malhotra and Birks, 2003). Although the conceptual model of town centre image contains a hypothesised relationship between overall town centre image and loyalty, the research is primarily concerned with the verification of theory as to the relationships between the constructs involved in forming town centre image as hypothesised in the conceptual model. Therefore a descriptive design is most suitable for this research.

The two main types of survey design are cross-sectional and longitudinal (Churchill and Iacobucci, 2005; Rindfleisch, Malter, Ganesan and Moorman, 2008). Researchers use cross-sectional survey designs when the research objectives are to measure constructs at a particular point in time (Churchill, 1999; Hair, Bush and Ortinau, 2006). Data are collected from a sample of cases in order to investigate relationships among the variables in the study (Churchill and Iacobucci, 2005).

A cross-sectional research design requires representative sampling of a large number of cases to measure the occurrence of the variables of interest simultaneously (Churchill and Iacobucci, 2005). The large sample size enables systematic variation in variables to be examined across multiple cases (Lee and Lings, 2008). However, cross-sectional survey designs raise some issues as regards the validity of the data generated, particularly in terms of bias due to common method variance (CMV) where respondents supply data on both predictor and outcome variables (Podsakoff, MacKenzie, Lee and Podsakoff, 2003; Rindfleisch, Malter, Ganesan and Moorman,

2008). Respondents may be influenced by the context in which the survey takes place), as well as issues relating to respondents' mood, tendency towards socially desirable responding, and influences relating to the design of the questionnaire itself (Chang, van Witteloostuijn and Eden, 2010; Podsakoff, MacKenzie, Lee and Podsakoff, 2003).

To overcome the effects of CMV, longitudinal survey designs are recommended, particularly to deal with issues relating to context effects (Rindfleisch, Malter, Ganesan and Moorman, 2008). In longitudinal surveys, a sample of the population is surveyed repeatedly over time while the measuring instrument remains the same (Churchill and Iacobucci, 2005). Gathering longitudinal data over multiple periods of time enables the temporal separation of data on predictor and outcome variables, which can also avoid the issues of respondent and context bias since respondents will be less subject to contextual influences (Rindfleisch, Malter, Ganesan and Moorman, 2008). However, there are also also disadvantages in the use of longitudinal survey designs. Longitudinal surveys suffer from smaller sample sizes due to attrition rates over time, and lack of representativeness since only certain types of respondents are willing to commit to long-term surveys (Churchill and Iacobucci, 2005). In addition, the greater requirements for time and money expenditures often make longitudinal studies prohibitive to academic research, which is often faced with budget and time constraints (Rindfleisch, Malter, Ganesan and Moorman, 2008). Consequently, a longitudinal study is a less feasible option for the town centre image survey, and therefore a cross-sectional survey of a sample of town centre locations was adopted for this research.

4.5.3 Survey technique (Stage 3)

Cross-sectional questionnaire surveys may be administered through a variety of formats, including face to face in person in a shopping centre or other location, telephone, mail, or by email or the Internet using web-based surveys (Churchill and Iacobucci, 2005). Each format has its advantages and disadvantages, with some more suitable in certain situations than others (Malhotra and Birks, 2003). In many

instances, the type of survey technique adopted depends on the purpose of the research and the level of information required (Churchill and Iacobucci, 2005). For example, personal face to face interviews allow the administration of lengthy or complex questionnaires. In contrast, telephone interviews offer only moderate ability to obtain complex in-depth responses. Mail or electronic surveys involve less personal input from the interviewer but also allow less flexibility as to depth or complexity of response, and also result in lower response rates (Churchill and Iacobucci, 2005; Malhotra and Birks, 2003).

The survey technique adopted for the town centre image research was face to face interviews in a street intercept survey. Due to the length of the questionnaire, the street intercept method was selected as more likely to guarantee a good response rate. The street intercept survey technique has been successfully adopted in many shopping locations to gain information directly in the research location, (e.g. Leo and Philippe, 2002; Teller and Elms, 2010; Teller and Reutterer, 2008), as respondents' perceptions and feelings about the location are likely to be clearly in mind at the time of data collection (Andreu, Bigne, Chumpitaz, and Swaen, 2006; Teller and Reutterer, 2008; Wakefield and Baker, 1998).

Similar to other methods, street intercept surveys have both advantages and disadvantages. Their main advantage is in the convenience of using a location where large numbers of the target population are likely to be found (Nowell and Stanley, 1991). Intercepting shoppers when they are shopping is cost efficient in gaining required response rates, since shoppers and interviewers are already both in a common location and respondents are easy to identify and recruit (Bush and Hair, 1985; Hair, Bush and Ortinau, 2006). Shoppers intercepted in a shopping location are likely to be more knowledgeable about the location, giving more accurate data (Bush and Hair, 1985; Teller and Reutterer, 2008; Wakefield and Baker, 1998). Face to face interviewing is effective in gaining compliance where long questionnaires are involved to ensure the questionnaire is completed fully (Bush and Hair, 1985; Churchill and Iacobucci, 2005). Data of higher quality is obtained because the personal nature of

the interaction between interviewer and respondent motivates the respondent to co-operate (Bush and Hair, 1985). This method also affords the most control over sampling, since interviewers can recruit respondents according to pre-selected sampling criteria (Churchill and Iacobucci, 2005).

However, the disadvantages of street intercept surveys include the fact that they are more costly than, for example, a mail or Web survey, due to the need for recruiting and training interviewers. In addition, frequent shoppers to a location, and those who stay longer when shopping, may be over-represented in the sample (Nowell and Stanley, 1991). However, the purpose of this study was to capture the image perceptions of actual shoppers in each location, therefore it was assumed that the sample would adequately represent the target population.

In addition, face to face interviews create further potential for common method variance (CMV). Respondents may be influenced by the presence of the interviewer, so that they answer in ways they perceive to be socially desirable and give inaccurate responses which they believe will please the interviewer (Malhotra and Birks, 2003; Podsakoff, MacKenzie, Lee and Podsakoff, 2003). The researcher can minimise the risk of CMV due to interviewer effects by reassuring respondents of the anonymity and confidentiality of their responses (Chang, van Witteloostuijn and Eden, 2010). Careful attention to questionnaire design, for example in terms of varying response formats, can also reduce CMV and ensure that respondents' answers are accurate and reliable (Podsakoff, MacKenzie, Lee and Podsakoff, 2003). Therefore bearing the limitations of the street intercept technique in mind, the next stage of the research design process addresses the development of the town centre image questionnaire, following the Questionnaire Construction framework adapted from Churchill (1999) in Figure 4.1.

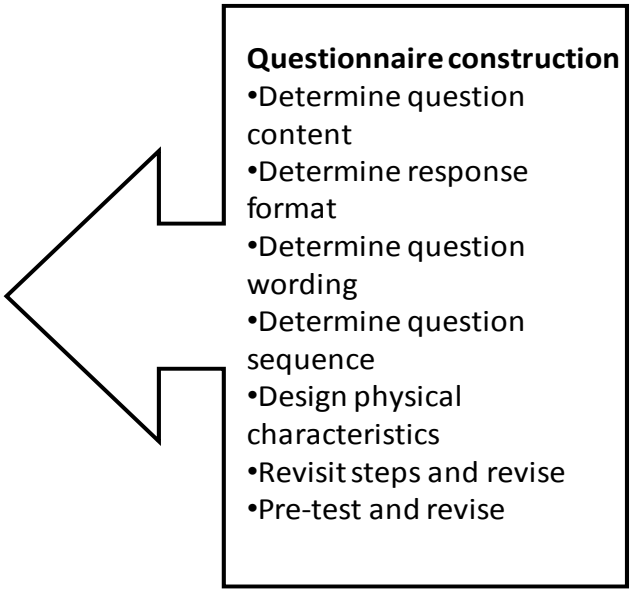
4.5.4 Construct questionnaire and pre-test (Stage 4)

Regardless of the method of administration, a questionnaire is fundamentally a "formalised set of questions for obtaining information from respondents" (Malhotra

and Birks, 2003, p. 326). Within the realist research paradigm, information may be gained on latent or unobservable variables such as attitudes and opinions (Churchill and Iacobucci, 2005). Although it could be possible to gather accurate information on these phenomena through asking simple and direct "yes or no" questions, it is more reliable to develop questionnaires using scales of multiple items to measure each construct or variable, particularly when the phenomenon of interest is latent and unobservable (De Vellis, 2003; Spector, 1992).

Figure 4.2 (adapted from Churchill, 1999) represents the stages to be followed by the researcher in the development of the questionnaire and scales to measure the latent variables. Figure 4.2 is the box on the right hand side of Figure 4.1 and details the specific stages involved in designing an effective questionnaire to gather the required data, by designing measurement scales, response formats, overall design and pre-testing.

Figure 4.2 Questionnaire construction process (from Figure 4.1)



adapted from Churchill (1999)

4.5.4.1 Determine question content

Scales of items to measure each construct in the conceptual model (see Table 4.1) were generated. Measurement scales are used "when we want to measure phenomena that we believe exist because of our theoretical understanding of the world, but that we cannot assess directly … Our theories suggest that these phenomena exist and that they influence behaviour, but that they are intangible" (De Vellis, 2003, p. 9). Measurement scales are therefore sets of items which indicate the level of the underlying theoretical construct they represent. Multiple indicators for each construct are utilised to capture as complete a range of the construct as possible and to reduce the incidence of measurement error (Churchill and Iacobucci, 2005; Hair, Bush and Ortinau, 2006).

Table 4.1 Dimensions and Constructs used to measure Town Centre Image

Dimension	Construct
Functional	Assortment
	Accessibility
	Layout
	Non-Retail
Experiential	Atmosphere
	Affect
Symbolic	Self-Image Congruence
	Place Attachment
	Overall Image
	Loyalty

A review of the scales in the town centre image literature showed that no scales currently exist to measure the constructs in the model of town centre image as defined in the conceptual framework. Accordingly a search was conducted in the wider literature (Lee and Lings, 2008; Spector, 1992), extending the search to

shopping mall and store image literature. Table 4.1 shows the constructs which are included in the town centre image model for which measurement scales were sought. Scales were drawn from existing literature on the basis of their conceptual closeness to the constructs in the model as defined in Chapter Three (face validity), the closeness of the context to the town centre, and their reliability as demonstrated using statistical analysis. Where necessary, they were adapted to more closely reflect the town centre environment. In addition, insights obtained from the focus groups informed the selection of items.

Table 4.2 shows the scales which were included in the questionnaire, together with the original scales and their sources. The operationalisation of the constructs is explained in the following section of this chapter.

Table 4.2 Construct operationalisation: scales and their sources

Image dimension	Construct and definition	Final scale as it appears in questionnaire		Original scale(s) from literature		Source
Functional	**Assortment** the range, type and quality of stores together with the style, range and quality of products	Variety of stores Quality of stores Choice of major stores I can buy well-known brands The products offered in this town centre are fashionable The range of products in this town centre is good The quality of the products in this town centre is high		Variety of shops Quality of shops Choice of products Range of products Quality of products Shops sell fashionable products Interesting and different products Can buy well known brands The style of the products is outdated/ up to date The product selection is inadequate/ adequate The quality of the products is low/ high		Bell 1999 Alpha = 0.88 Laroche Teng Michon and Chebat 2005 Alpha = 0.82
	Accessibility convenience of travel to the town centre in terms of ease of access, together with availability of suitable car parking provision at reasonable cost	I can get to the town centre easily I can get to the town centre reasonably quickly from my home It is convenient to get to the town centre There are always enough reasonably priced parking spaces There are sufficient parking options The town centre is easily and quickly reached from the car parks		You can get to … easily You can get to … quickly You can get to … without problems There are always enough free parking lots There are sufficient different parking possibilities … is easily and quickly reached from the parking lots		Teller and Reutterer 2008 Alpha = 0.91 accessibility Alpha = 0.65 parking
	Layout the ease with which shoppers can move within the centre	The layout makes it easy to get to the stores I want The layout makes it easy to get to places to eat or drink The layout makes it easy to get to the other town centre services e.g. travel agents, museum, gym, library, etc Overall the layout makes it easy to get around		The layout makes it easy to get to the stores you want The layout makes it easy to get to the food areas The layout makes it easy to get to the restrooms Overall the layout makes it easy to get around		Wakefield and Baker 1998 Alpha = 0.904
	Non-retail facilities town centre facilities unrelated to retail	I can find lots of places to eat or drink in the town centre The town centre offers a large variety of entertainment The town centre has good banking and financial services The town centre offers a good range of services other than shopping		You can find lots of gastronomy at … … offers a large variety of entertainment Having a bank Range of services like library, post office, [banks], hair dressers, travel agents, pharmacies, advice bureaux		Teller & Reutterer 2008 Alpha = 0.71 Bellenger et al 1977, Oppewal et al. 2006

Cont …

Image dimension	Construct and definition	Final scale as it appears in questionnaire		Original scale(s) from literature		Source
Experiential	**Atmosphere** sensory impressions of how the town centre feels	The town centre is attractive The town centre is a safe place The town centre is busy The town centre is relaxed The town centre is friendly The town centre is personal It is not too crowded		 Safe Busy Relaxed Friendly Personal Not too crowded		Wee 1986 Downs 1970 D'Astous 2000
	Emotional response personal feelings relating to the consumer experience within the environment	Sleepy Bold Happy Satisfied Excited Energetic Disgusted Bored Annoyed		Sleepy Bold Happy Satisfied Excited Energetic Disgusted Bored Annoyed		Babin and Attaway 2000 Alpha = > 0.7
Symbolic	**Self-image congruence** self-image congruence with other town centre shoppers	This town centre is consistent with how I see myself This town centre reflects who I am People similar to me shop here The kind of person who typically shops here is very much like me I can identify with the typical person who shops here		This outfit is consistent with how I see myself at work This outfit reflects who I am at work People similar to me wear outfits like this at work The kind of person who typically wears this outfit at work is very much like me This outfit is a mirror image of me at work		Sirgy et al 1997 Alpha = 0.90
	Place attachment meaning or attachment to the town centre	I do not feel emotionally attached to the town centre The town centre has personal meaning for me I do not feel a sense of belonging to the town centre		I do not feel emotionally attached to the area The area has personal meaning for me I do not feel a sense of belonging to the area		Bell 1999 Alpha = 0.73
	Overall image	Good/bad Like/dislike Favourable / unfavourable Positive/negative		Good/bad Like/dislike Favourable / unfavourable Positive/negative		Hu and Jasper 2007 Alpha = 0.91 Stern and Krakover 1993
	Loyalty	I would say positive things about this town centre I would recommend this town centre I would encourage friends and relatives to visit I will shop here more frequently in the next few years		Say positive things about this shopping area Recommend this shopping area Encourage friends and relatives to visit Do more business with this shopping area in the next few years		Andreu Bigne Chumpitaz and Swaen 2006 Alpha = 0.84

Assortment

Assortment is defined as the range and quality of goods and stores in the town centre. For the purposes of the town centre image study, Assortment was hypothesised as a unidimensional construct, where store assortment, or retail tenant mix, and product assortment were measured in the same construct. This is consistent with findings from factor analysis by Hackett and Foxall (1994), Nevin and Houston (1980) and Wee (1986) in a town centre context, and by McGoldrick and Thompson (1992) in a shopping mall. The Assortment factors identified by Nevin and Houston (1980) and Wee (1986) contained both quality and variety of stores, and merchandise quality and selection. The reliability of these scales was assessed using Cronbach alpha, whereby scores on this test should be at least 0.7 for internal consistency to be present (De Vellis, 2003; Nunally, 1978). Nevin and Houston (1980) investigated a range of shopping centres including a town centre, and Cronbach alpha for Nevin and Houston (1980)'s Assortment factor reached 0.88, while Wee (1986) reported a value of 0.74 in the town centre. Bell (1999) also successfully measured the image of shopping centres, including the town centre, using an Assortment scale including both quality and choice of products and quality and range of shops, reporting an alpha value of 0.88.

More recently, the work of Teller and colleagues (e.g. Teller, 2008; Teller and Elms, 201; Teller and Reutterer, 2008) has measured the Assortment construct using scales based on the retail tenant mix, and hence store assortment, only. They report acceptable reliability statistics, with alpha scores ranging between 0.76 and 0.89 for town centre locations for their scales. Conversely, other studies, for example Laroche, Teng, Michon and Chebat (2005) in a shopping mall, and Downs (1970) in a town centre, measure Assortment using items based on the assortment of goods alone. However the majority of town centre image literature has focussed on Assortment as a unidimensional construct consisting of both store and product assortment. Given the aim of grounding the scales in literature as close to the town centre context as possible and informed by the focus group findings where both store-related and product-related assortment featured prominently, the scale used by Bell (1999) was adopted for this study due to its statistical reliability. Bell (1999)'s eight-item scale was modified, following the focus

group findings, to reflect greater emphasis on the store assortment, with the addition of an item from McGoldrick and Thompson (1992) related to “choice of major stores”. Two items relating to goods and products were removed consistent with the scale used by Laroche, Teng, Michon and Chebat (2005), which had itself been based on established scales in the literature, and demonstrated strong internal reliability in a shopping mall context with an alpha score of 0.82. Hence the final items to measure Assortment in the town centre image survey were as shown in Table 4.3.

Table 4.3 Scale Items measuring the Assortment construct

Construct	Measurement items	Item sources
Assortment 1 = extremely poor, 7 = extremely good	*Store assortment* On a scale of 1 to 7 how would you rate this town centre on the following items?	
	1. Choice of major stores 2. Variety of stores 3. Quality of stores	Items adapted from Bell (1999)
1 = very strongly disagree, 7 = very strongly agree	*Product assortment* How far do you agree with the following statements?	
	4. The products offered in this town centre are fashionable 5. The range of products in this town centre is good 6. The quality of the products in this town centre is high 7. I can buy well-known brands	Items adapted from Bell (1999) and Laroche, Teng, Michon and Chebat (2005)

Accessibility

The Accessibility construct in the town centre image study was hypothesised as unidimensional, and based on convenience of travel to the town centre together with parking availability. A limited amount of work in the town centre image literature has measured Accessibility as one construct, namely Bell (1999) who included both convenience of location and car parking together in one scale, based on Marks (1976) and Singson (1975), with an alpha score of 0.69. Similarly,

Andreu, Bigne, Chumpitaz and Swaen (2006) created an Accessibility construct from two items measuring parking and accessibility, reporting reliability with an alpha score of 0.54 in the town centre although this reached 0.80 in a shopping mall context. In contrast, Teller and Reutterer (2008) measured Accessibility using two distinct constructs. The three-item accessibility scale returned an alpha score of 0.91, whereas the three-item parking scale reached 0.65. To create the unidimensional Accessibility measure for the town centre study as hypothesised, the scales by Teller and Reutterer (2008) were adopted but combined into one single construct, as utilised in Bell (1999)'s study due to its acceptable alpha score.

Table 4.4 Scale Items measuring the Accessibility construct

Construct	Measurement items	Item sources
Accessibility 1 = very strongly disagree, 7 = very strongly agree	*Access* How far do you agree with the following statements? 8. I can get to the town centre easily 9. I can get to the town centre reasonably quickly from my home 10. It is convenient to get to the town centre 11. There are always enough reasonably priced parking spaces 12. There are sufficient parking options 13. The town centre is easily and quickly reached from the car parks	Items adapted from Teller and Reutterer (2008)

Layout

The Layout construct was hypothesised as referring to ease of internal movement within the town centre. The town centre literature has not to date utilised a scale to measure Layout specifically in this context. Layout has instead been included with other items, in factors such as accessibility (McGoldrick and Thompson, 1992), choice and variety (Hackett and Foxall, 1994) and maintenance (Wee, 1986). However, in parallel with shopping mall studies, Layout was hypothesised as a distinct unidimensional construct in the town centre image study.

A scale developed by Wakefield and Baker (1998) was adopted from the shopping mall context, as the closest context to the town centre. The scale demonstrated good reliability statistics with alpha reaching 0.90. Research using this scale has since produced acceptable reliability statistics in shopping malls, for example Martin and Turley (2004) (alpha = 0.84), Kim, Christiansen, Feinberg and Choi (2005) (alpha = 0.90) and Martin (2009) (alpha = 0.88). Based on these results, it was not expected that this scale would present any problems when transferred to the town centre context, albeit with some modifications in wording to more closely reflect the provision in the town centre. The scale appeared to capture a broad range of provision within the shopping mall and, once adapted, was considered to be representative of the town centre as a complete entity, including the wider non-retail provision and the overall town centre environment.

Table 4.5 Scale Items measuring the Layout construct

Construct	Measurement items	Item sources
Layout	How far do you agree with the following statements?	
1 = very strongly disagree, 7 = very strongly agree	14. The layout makes it easy to get to the stores I want 15. The layout makes it easy to get to places to eat or drink 16. The layout makes it easy to get to the other town centre services e.g. travel agents, museum, gym, library, etc 17. Overall the layout makes it easy to get around	Items adapted from Wakefield and Baker (1998)

Non-retailing functions

No scales have been developed in the literature to measure the various functions that the town centre was hypothesised to provide, as represented by the Non Retail construct. Hence a scale was assembled from items currently existing in shopping centre studies. Teller and Reutterer (2008) included two items (food outlets and entertainment) (alpha = 0.71), and these were included in the newly-created scale. Two items adapted from Bellenger, Robertson and Greenberg

(1977) were included to measure the provision of banks and financial services, and the various other services, of which examples were presented to respondents.

Table 4.6 Scale Items measuring the Non-Retail construct

Construct	Measurement items	Item sources
Non-retail 1 = very strongly disagree, 7 = very strongly agree	How far do you agree with the following statements? 18. I can find lots of places to eat or drink in the town centre 19. The town centre offers a large variety of entertainment e.g. bars, clubs, theatres, etc 20. The town centre has good banking and financial services 21. The town centre offers a good range of services other than shopping e.g. travel agents, museum, gym, library, etc	Items 18 and 19 adapted from Teller and Reutterer (2008) Items 20 and 21 adapted from Bellenger et al (1977)

Atmosphere

The definition of atmosphere in this study is the quality of the environment perceived through the senses. Although extensively researched in terms of malls and stores, specific items to measure atmosphere in town centre image studies have been comparatively limited. Downs (1970) proposed an Atmosphere scale containing measures of busy, relaxed, personal and friendly, although this scale did not perform well and was eliminated from his study following factor analysis. Therefore, the Atmosphere scale was assembled for the town centre image study from items in the literature and the focus groups, in an attempt to produce a more reliable scale of town centre atmosphere. Items suggested by the focus groups included visual attractiveness, safety, busyness and crowding. Busyness (Downs, 1970), safety (Wee, 1986) and crowding (D'Astous, 2000; Oppewal and Timmermans, 1999) have previously been included in shopping centre measures. The remaining items of relaxed, personal and friendly, previously developed by Downs (1970), were included in the Atmosphere scale.

Table 4.7 Scale Items measuring the Atmosphere construct

Construct	Measurement items	Item sources
Atmosphere 1 = very strongly disagree, 7 = very strongly agree	How far do you agree that the following words describe this town centre? 22. The town centre is attractive 23. The town centre is a safe place 24. The town centre is busy 25. The town centre is relaxed 26. The town centre is friendly 27. The town centre is personal 28. It is not too crowded	Newly developed scale for town centres. Item 23 adapted from Wee (1986), items 24 to 27 from Downs (1970) and item 28 from d'Astous (2000). Item 22 from focus groups

Affect

Scales measuring affect, or emotion, have frequently been tested and validated in the retail literature. Measures were initiated by Donovan and Rossiter (1982) who assessed 18 items involved in affective responses to retail environments, associated with three factors: pleasure, arousal and dominance. Subsequent retail research has focussed on emotions linked to pleasure and arousal, finding dominance less useful in retail settings. Dawson, Bloch and Ridgway (1990) measured these two factors using measures of relaxed, contented, satisfied and happy (pleasure), and surprised, excited and rewarded (arousal). Reliability was reported by alpha scores of 0.72 for pleasure and 0.64 for arousal. Van Kenhove and Desrumeaux (1997) reduced a 12 item scale to two factors, with pleasure represented by happy, satisfied and hopeful, while arousal was represented by excited, frenzied and jittery. The reliability of both these scales was validated by composite reliability scores of over 0.60 (Bagozzi and Yi, 1988). In contrast, Darden and Babin (1994) developed four scales of four items each, grouped into pleasant, unpleasant, active and sleepy, arguing for a greater number of factors to represent a retail environment. These 16 items were reduced to nine by Babin and Attaway (2000) to measure emotions generated in a retail store setting. Babin and Attaway (2000) grouped these items into two scales, of excited, bold, energetic, satisfied and happy measuring positive affect, and disgusted, bored, sleepy and annoyed measuring negative affect. Both these scales showed acceptable reliability statistics, with alpha scores of 0.83 and 0.75 respectively.

Despite affect scales in the above studies being measured by multiple factors, in the town centre image model affect was hypothesised as a unidimensional construct. A similar approach was followed by Hunter (2006) who adopted a seven-item unidimensional scale to measure emotions in a shopping centre, including excited, delighted, happy, glad, satisfied, proud and self-assured, and demonstrating alpha scores of 0.91. In support of a unidimensional affect scale, Machleit and Eroglu (2000) argue that there are sound theoretical reasons to treat the affect construct as unidimensional, recommending that "a summary factor could adequately capture the range in the emotional responses" if the scope of the study is focussed on a specific purpose (p. 110). In the town centre image study, the purpose of the Affect scale is to test the relevance of an emotional construct to overall image perceptions, rather than to establish the relative importance of individual affective items or factors. The items developed by Babin and Attaway (2000) were adopted for the Affect scale, grouped into a single unidimensional scale. Response formats for these nine items were adapted for a 7 point semantic differential scale which was anchored by polar opposites of the emotions listed, as shown in Table 4.8.

Table 4.8 Scale Items measuring the Affect construct

Construct	Measurement items	Item sources
Affect 1 = very strongly disagree, 7 = very strongly agree	To what extent do the following words describe how you feel while shopping in this town centre? 29. Sleepy/awake 30. Bold/timid 31. Happy/unhappy 31. Satisfied/dissatisfied 33. Excited/calm 34. Energetic/lethargic 35. Disgusted/delighted 36. Bored/stimulated 37. Annoyed/pleased	Adapted from Babin and Attaway (2000)

Self-Image

Self-image congruence has been researched extensively in relation to products, brands and services, as well as shopping malls and stores. However, it has not yet been adopted in town centre image research. Therefore scales were adapted for the town centre image study. Sirgy et al. (1997) reviewed existing self-image scales to develop a five-item scale which captures self-congruity directly based on experience. Versions of this scale were tested by the above authors for brands, products and tourist destinations, and demonstrated acceptably reliable alpha statistics of between 0.82 and 0.91. Chebat, el Hedhli and Sirgy (2009) adapted a modified version of this scale for a shopping mall, using just two items; composite reliability for this modified scale was 0.706, above the recommended level of 0.60 (Bagozzi and Yi, 1988). It was expected that the original five-item scale could similarly be modified for the town centre context.

Table 4.9 Scale Items measuring the Self-Image construct

Construct	Measurement items	Item sources
Self-Image	How far do you agree with the following statements?	
1 = very strongly disagree, 7 = very strongly agree	38. This town centre is consistent with how I see myself 39. This town centre reflects who I am 40. People similar to me shop here 41. The kind of person who typically shops here is very much like me 42. I can identify with the typical person who shops here	Adapted from Sirgy et al.(1997)

Place attachment

To date, no scales have been developed to measure place attachment in a retail context. Bell (1999) used a scale of three items to measure the degree of liking for a shopping centre. These items also appeared to reflect the place attachment construct according to its definition, demonstrating face validity for this construct. Reliability statistics measured by an alpha score of 0.73 were acceptable. Bell

(1999)'s scale was therefore adopted to measure the Place Attachment construct in the town centre context.

Table 4.10 Scale Items measuring the Place Attachment construct

Construct	Measurement items	Item sources
Place Attachment 1 = very strongly disagree, 7 = very strongly agree	How far do you agree with the following statements? 43. I do not feel emotionally attached to the town centre 44. The town centre has personal meaning for me 45. I do not feel a sense of belonging to the town centre	Adopted from Bell (1999)

Overall image

Surprisingly few scales exist in the retail literature to measure Overall Image, which is most frequently assessed as a composite measure of its dimensions. Hu and Jasper (2007) assessed overall store image using a three-item semantic differential scale. Items focussed on measures of good/bad, like/dislike and favourable/unfavourable, and demonstrated acceptable reliability statistics of alpha = 0.91. An additional item from the urban image literature used by Stern and Krakover (1993) to measure positive/negative overall images was also included in the scale. The items were measured on a semantic differential scale from 1 to 7 which was anchored by polar opposites of the values listed, as in Table 4.11.

Table 4.11 Scale Items measuring the Overall Image construct

Construct	Measurement items	Item sources
Overall Image 1 = low score, 7 = high score	How would you rate your overall image of this town centre on the following? 46. Good/bad 47. Like/dislike 48. Favourable / unfavourable 49. Positive/negative	Adapted from Hu and Jasper (2007) and Stern and Krakover (1993)

Loyalty

Loyalty has been measured in various ways in retail image studies, frequently using single item-measures (e.g. Bloemer and de Ruyter, 1998; Martenson, 2007; Sirgy and Samli, 1985). In order to measure loyalty in the town centre image model, a multi-item scale measure was sought as more reliable and less prone to error (De Vellis, 2003). A four-item scale to measure loyalty was selected, adapted from the study in shopping centres by Andreu, Bigne, Chumpitaz and Swaen (2006), which returned acceptable reliability statistics (alpha = 0.85).

The items in this scale were originally developed in Zeithaml, Berry and Parasuraman (1996)'s service quality study. Versions of this scale have been validated many times in retailing and tourist destination contexts. For example, in a study on grocery retailers, Sirohi, McLaughlin and Wittink (1998) adapted the scale, producing composite reliability statistics of 0.87. Yuksel and Yuksel (2007) also modified this scale to measure shopping loyalty in a tourist destination, finding the scale reliable with alpha at 0.93. Cronin, Brady and Hult (2000) showed that a version of this scale adapted for a range of services produced composite reliability scores averaging 0.87. The reliability statistics for these studies, together with that of the study by Andreu, Bigne, Chumpitaz and Swaen (2006) suggest that the loyalty scale could also be transferred to the town centre image context. Hence these items were adapted for the town centre image measures.

Table 4.12 Scale Items measuring the Loyalty construct

Construct	Measurement items	Item sources
Loyalty 1 = very strongly disagree, 7 = very strongly agree	How far do you agree with the following statements? 50. I would say positive things about this town centre 51. I would recommend this town centre 52. I would encourage friends and relatives to visit 54. I will shop here more frequently in the next few years	Adopted from Andreu, Bigne, Chumpitaz and Swaen (2006)

Demographic information

In addition, questions relating to respondents' demographic characteristics and detailed information as to their shopping habits, including frequency of shop and distance travelled were included in the questionnaire, to give background information as to the respondent profile and ensure a reasonably representative sample.

4.5.4.2 Determine response format

In parallel with developing the measurement scales, a decision needs to be made regarding the format of interviewees' responses to the items. Questionnaire response formats may take the form of either open-ended or fixed response scales (Churchill, 1999). Open-ended questions allow respondents freedom to return answers in a way that is relevant to their views and opinions, rather than being limited to choosing from a set of pre-specified alternatives (Churchill and Iacobucci, 2005). However, their responses are non-standard, subject to interpretation bias by the researcher, and data analysis is time-consuming (Hair, Bush and Ortinau, 2006; Malhotra and Birks, 2003). Fixed response formats allow the researcher to impose structure on the responses collected, and may be multiple choice, dichotomous or a scale (Churchill, 1999; Hair, Bush and Ortinau, 2006; Malhotra and Birks, 2003). Respondents are asked to select from a choice of alternative responses, resulting in data that is standardised, comparable across respondents and suitable for statistical analysis (Malhotra and Birks, 2003).

Researchers need to also consider the level of the measurement scale. Measurement scales may be nominal, ordinal, interval or ratio. Whereas nominal scales measure frequency and ordinal scales calculate relative magnitude, interval and ratio scales show absolute differences between each scale point. Therefore only interval and ratio scales allow the researcher to perform meaningful statistical analysis (Hair, Bush and Ortinau, 2006). In the town centre image questionnaire, the response scales were determined as interval at least.

The most common response formats are agreement, evaluation and frequency (Spector, 1992). In the town centre image study, Likert scale response formats were selected for the majority of items. Likert scales ask respondents to indicate the extent to which they are in agreement (or disagreement) with a series of statements. They are best used when respondents are asked about attitudes, opinions or beliefs, when interviewed face to face or when using self-completed questionnaires (De Vellis, 2003; Hair, Bush and Ortinau, 2006). Likert scales are considered interval, thus allowing statistical analysis to be performed (Hair, Bush and Ortinau, 2006).

Where a Likert scale response format was used, a seven-point agreement scale was selected throughout the questionnaire, with anchor points of very strongly disagree to very strongly agree, with the mid-point classed as neither disagree nor agree (Spector, 1992). Although a greater number of response choices allows for greater precision in analysis, most scales use either five or seven response choices, with seven choices considered sufficiently sensitive for data analysis (Spector, 1992). Some researchers prefer an even number of response choices so that respondents are forced to give either a positive or negative response (De Vellis, 2003). However in this research it was recognised that some respondents (for example those with less familiarity) could have lower awareness of some items and allowing a mid-point choice enabled them to enter a neutral score (Hair, Bush and Ortinau, 2006).

To reduce respondent fatigue and the issue of common method bias, the Likert scale response format was varied within the questionnaire to include semantic differential scales and evaluation scores (Podsakoff, MacKenzie, Lee and Podsakoff, 2003). The semantic differential scale uses bipolar adjectives as the end points of a symmetric continuum, with most scales containing five or seven points for respondents to select (Hair, Bush and Ortinau, 2006). Furthermore, a small number of evaluation scores were included for the items relating to assortment, with respondents asked to rate the choice, variety and quality of stores on a similar seven-point scale as the Likert scale agreement choices.

4.5.4.3 Determine question wording

Due to a number of scales in the town centre image questionnaire being adapted from shopping mall and store image literature, the question wording in these cases was adapted to more closely reflect the town centre context. In addition, steps were taken to further reduce the effect of common method variance. One source of CMV occurs when some respondents agree or disagree to the same extent (and give identical scores) to a set of items regardless of their content (Podsakoff, MacKenzie, Lee and Podsakoff, 2003). To avoid this issue, a small number of questions were worded in a negative direction. Negatively worded items make respondents think more carefully about their answers and reduce the chances that they will score items carelessly or inappropriately (De Vellis, 2003).

4.5.4.4 Determine question sequence

The context within which items are presented may induce further CMV if items measuring the same construct are placed together in a block. Responses to earlier items in the block can create a mood within respondents which influences the remaining responses in the set (Podsakoff, MacKenzie, Lee and Podsakoff, 2003). In addition, respondents could recognise and react to certain sensitive constructs in a socially desirable way if these are presented in a block, creating a spurious internal consistency within the items (Chang, van Witteloostuijn and Eden, 2010). The solution to this issue is to randomise the order of the questions (Chang, van Witteloostuijn and Eden, 2010). Accordingly, the question sequence of the town centre image questionnaire was randomised where appropriate.

4.5.4.5 Design physical characteristics

The physical characteristics of the questionnaire can influence how respondents co-operate with the study (Churchill and Iacobucci, 2005). Despite the fact that the town centre image survey was to be administered by trained interviewers, it is important to be aware of issues affecting respondents' co-operation, such as the length of the questionnaire and number of questions. The questionnaire was designed to include an introductory statement as to the purpose of the study and the importance of the research, with the intention of mitigating respondents'

concerns as to the length of time they would be required to give (Churchill and Iacobucci, 2005).

4.5.4.6 Revisit questionnaire construction process and revise

To ensure that the previous steps in the research design had been carried out effectively, the questionnaire was passed to a panel of judges made up of a small group of academics and researchers with experience of retailing and marketing, who reviewed the questionnaire wording and response scales (De Vellis, 2003; Lee and Lings, 2008). The purpose of this exercise was to establish the content validity (or face validity) of the measurement scales of each construct. Testing for face validity assesses how well the measurement items represent the meaning of each construct, particularly if the items have been adapted from existing scales, and is an important step in screening the questionnaire items before the final survey is administered (De Vellis, 2003; Hair, Bush and Ortinau, 2006). Face validity exists if judges agree that items are both relevant and representative of the theoretical construct as defined (Ping, 2004).

Furthermore six questionnaires were administered at random by the researcher in face to face interviews in a nearby town centre, to replicate as closely as possible the actual conditions under which the final survey would be carried out (Churchill and Iacobucci, 2005). Initial pre-testing by personal interview by the researcher is recommended, so that any questions or instructions which are unclear to the respondent can be identified (Churchill and Iacobucci, 2005). The town centre image questionnaire was evaluated for clarity of wording, understanding of instructions and ease of administration, particularly regarding the length of the questionnaire. No issues with the wording of the questions or completing the questionnaire were noted by either the panel of judges or by the town centre respondents.

4.5.4.7 Pilot testing

According to Oppenheim (1992), “pilot work is expensive and time-consuming, but avoiding or skimping on pilot work is likely to prove more costly still” (p. 47). Oppenheim (1992) notes that carrying out a pilot to test for issues such as

administration, the design, wording and sequence of questions, and the likelihood of obtaining good response rates ensures that the resulting data satisfies the requirements of the analytical techniques to be adopted. Hence the aim of the pilot testing was to identify any problems with the final questions, question sequence, intended method of administration, and to ensure that the questions would provide the information required for statistical analysis purposes (Churchill and Iacobucci, 2005).

The questionnaire was therefore piloted with a sample of 80 respondents in one of the town centres where the final survey was planned. The pilot was conducted by Market Research Company trained interviewers and took place during specified periods over five working days. The purpose of the pilot was to collect data for analysis from a sample of respondents who were typical of the final target sample, so that simple analysis could be performed on the questionnaire items to assess the reliability of the scales measuring town centre image.

The reliability of the scales representing each construct was performed through assessing their internal consistency (Lee and Lings, 2008). A common method of assessing internal consistency, which is the degree to which the multiple items of a scale correlate with the scale as a whole, is the Cronbach alpha test (Hair, Bush and Ortinau, 2006). Scores on the Cronbach alpha test should be at least 0.7 if internal consistency is present (De Vellis, 2003; Nunally, 1978). The majority of scales performed well on the reliability tests, with Cronbach alphas mostly around or above 0.7. However, some scales appeared problematic. The Accessibility scale, when the three items measuring parking were included, only reached an alpha of 0.605. When the three parking items were removed, alpha increased to 0.751. On the basis that internal consistency was lacking, it was concluded that parking did not reach the required level of measurement reliability, suggesting that respondents in the town centre did not consider parking as part of their image of the town centre. Therefore the parking items were removed from the Accessibility scale. The items measuring the Layout construct also only achieved alpha scores of 0.626 and the Place Attachment items only reached 0.683. However, in the absence of clear theoretical reasoning as to why these scales should be

problematic, all items in these scales were retained at this stage of the analysis. All other items were progressed to the final questionnaire (see Appendix 1.).

4.5.5 Sampling (Stage 5)

Churchill (1999) recommends that since cross-sectional surveys only provide a snapshot of the construct of interest at a single point in time, care should be given when selecting a representative sample, and data from a sufficiently large number of cases should be collected to allow for calculations of covariances in the variables. The researcher should consider two types of sampling methods: probability and non-probability. With probability samples each element of the population has an equal chance of being included in the sample, and the probability of inclusion in the sample can be known (Churchill, 1999). A probability sample is selected through a random sampling process. Using probability sampling, the results of the survey will be representative and can be generalised to the target population with a prespecified margin of error, and the validity of the research can be demonstrated (Hair, Bush and Ortinau, 2006). With non-probability samples, the probability that an element will be included in the sample cannot be known, and hence the researcher cannot accurately determine that a non-probability sample is representative.

4.5.5.1 Respondent sampling

The final number of items to measure the eight image constructs, together with Overall Image and Loyalty, in the town centre image model was 54. To assess these items using statistical techniques such as factor analysis, it is recommended that between five and ten cases per item are collected (Hair, Black, Babin, Anderson and Tatham, 2006). Hence the minimum number of respondents for this study was assessed as 540. However, the questionnaire also contained additional variables relating to shopper characteristics, which are outside the purpose of this study. To allow measurement of these variables for future research, a larger sample was required, and therefore a sample of 800 respondents was planned.

The population of interest in the town centre image study was defined as shoppers in all town centres in England. The research in this study sampled from a population of shoppers in locations in which the target population cannot

accurately be calculated, since shoppers may be attracted by not only their home town centres but also by an unknown number of alternative locations. Hence random sampling of the target population is difficult to achieve within the limitations of the town centre image study. However, “one of the researcher’s most creative tasks in sampling is developing an appropriate sampling frame when the list of population elements is not readily available” (Churchill, 1999, p. 500). Clearly defining the target population, the elements of the population who are of interest and the research objectives are of benefit in deciding on the sampling frame (Churchill, 1999).

An appropriate sampling method in these circumstances is cluster sampling. In cluster sampling, the population is divided into mutually exclusive clusters which are each assumed to be representative of the target population. An example of cluster sampling is area sampling, where the clusters are specifically-bounded geographic areas. Within each area an appropriate random sampling technique can then be applied. There are then two further options available. Under a one-step approach, the researcher assumes that all clusters are representative and focuses on one cluster only to generalise to the population. With a two-step approach, a set of clusters is randomly selected and then respondents are chosen using an appropriate sampling approach within each cluster (Churchill and Iacobucci, 2005; Hair, Bush and Ortinau, 2006).

The sample of geographic areas for the town centre image study was selected using the two-step approach, and determined following the criteria described below, resulting in the choice of three town centres for the study: Cambridge, Nottingham and Wakefield. Within each area (town centre) cluster, a quota sampling process was adopted to ensure that pre-specified sub-groups of the target population are represented in the final sample (Churchill and Iacobucci, 2005; Hair, Bush and Ortinau, 2006). Quota sampling also reduces selection bias by interviewers, who might otherwise over-sample shoppers who are conveniently available regardless of their lack of representativeness (Hair, Bush and Ortinau, 2006; Nowell and Stanley, 1991). Interviewers were issued with instructions to intercept respondents according to set quotas to ensure a representative spread of respondents. A gender quota was set at 60% female to 40% male respondents,

consistent with studies which found similar gender splits using random sampling in shopping centres (e.g. Bell, 1999; Teller and Elms, 2010; Teller and Reutterer, 2008). Interviewers were further requested to intercept an even spread between ages 18 to 34, 35 to 50, and 51 to 60+ in age, and equal numbers of respondents in social-economic groups A to C1, and C2 to E, as far as possible, following established sampling quotas frequently adopted in retail research (e.g. BCSC, 2006).

Overall, the resulting sample was 59% female and 41% male. Respondents aged between 18 and 30, between 31 and 50, and over 51 years old each accounted for one-third of the sample. Slightly over half (54%) of the sample were in full or part time employment, with the remainder of respondents either students, unemployed, or retired, reflecting the characteristics of available shoppers at the times surveyed. The Descriptive Statistics section in the following chapter gives more detail as to the respondent profile, and indicates that the sampling process represented a reasonable spread of shoppers in each location.

4.5.5.2 Location sampling

The choice of locations in which to administer the town centre image survey took an area sampling approach, selecting initially from all available shopping destinations. In the UK there are over 2000 retail venues, including town centres, stand-alone malls, retail parks and factory outlet centres (Venuescore, 2009). A list was obtained of the top 200 shopping locations in the UK from Venuescore. Although other lists are available from commercial organisations (e.g. Experian), these are costly to obtain, whereas the Venuescore listing is free on request. An additional advantage of the Venuescore listing is that ranking scores allocated to each location are based not only on retail area or numbers of stores, but are weighted according to factors such as market position (a calculation of the numbers of stores in each of five categories from discount to luxury), fashion orientation and age of shopping population. The Venuescore list of 200 top shopping locations divides the shopping locations into five market position groups: upscale, upper middle, middle, lower middle and downmarket towns. Venuescore

claims these weighted scores are more representative of their true market area and attraction to shoppers than other commercially available listings.

The original Venuescore list of 200 locations, together with their scores on the above measures, was entered into an Excel database and then reduced according to the following criteria to produce the location sampling frame. The aim was to select towns and cities which were typical of an "average" English town or city, as opposed to major metropolitan centres, distinctive tourist destinations or very small market towns. The Venuescore list was reduced by eliminating locations following these criteria:

1. All locations which were not in England (i.e. locations in Scotland, Wales and Northern Ireland)
2. Free-standing purpose-built shopping malls
3. Locations with a seaside (e.g. Blackpool) or strong historic tourist profiles (e.g. Bath, York, Tunbridge Wells)
4. Major conurbations of Greater London (Venuescore, 2009), Greater Manchester, Merseyside and Birmingham conurbations (www.statistics.gov.uk Population Estimates Data Mid-2007) and locations within these areas
5. Town centres which had had major shopping centre developments since 2007 (Venuescore), since the presence of a newly opened shopping centre of significant size was expected to dominate shoppers' images of the town centre as a whole.

From this remaining population of "average" town centres, the sampling task was to select three representative town centre locations. It was decided that the location sample would consist of one town centre in each of the North, Midlands and South East of England. A two-step cluster sampling procedure was then adopted to select the locations to be included in the survey sample (Churchill and Iacobucci, 2005; Hair, Bush and Ortinau, 2006). Three clusters were selected to achieve a good spread of market positioning: upscale, upper middle and lower middle. In addition, the Venuescore rankings indicate the size of retail provision, ranging from Major City, through Major Regional and Regional, and down to Sub-regional. To ensure that a sufficiently sized shopping population could be surveyed

in each location, it was decided to restrict locations to the Major City, Major Regional and Regional groups.

As a result of eliminating all unsuitable locations, a final sample of 30 towns and cities was obtained, representing 3 Major Cities, 5 Major Regional Cities and 22 Regional towns and cities. These locations were entered into a matrix according to size and market position (see Table 4.13), and a selection was made to achieve a spread between geographical areas (North, Midlands, South) and a contrast between population sizes (not shown here). Following this process, the locations selected were Nottingham, Oxford and Wakefield.

Table 4.13 Final set of town centres from which survey locations were selected

	Upscale	Upper middle	Lower middle
Major City		**Leeds** **Nottingham** **Reading**	
Major Regional	**Chester** **Oxford/Cambridge**	**Cheltenham**	**Middlesbrough** **Preston**
Regional	**Canterbury**	**Leamington Spa** **Shrewsbury** **Salisbury** **St Albans** **Truro** **Winchester**	**Huddersfield** **Darlington** **Bradford** **Sunderland** **Wakefield** **Coventry** **Wolverhampton** **Burton On Trent** **Mansfield** **Chesterfield** **Basildon** **Slough** **Luton** **Bedford** **Stevenage**
	North **Midlands** **South**		

A final and unexpected filtering criterion to the location selection process occurred once the survey was commissioned, and the interviewers were briefed on their project. It became apparent that some local authorities did not allow any canvassing of shoppers to be carried out in town centres for any purpose (unfortunately including academic research). This emerged in the instance of Oxford town centre, and led to the sampling process being revisited to determine a town centre with a profile similar to Oxford. At this stage the original filtering criteria were relaxed slightly in the interests of pragmatism. On all Venuescore measures (market position, fashion orientation and age of shopping population), the most similar town centre to Oxford emerged as Cambridge which, despite having a recent shopping centre redevelopment in the town centre, was adopted as a replacement for Oxford town centre as representing the South East of England.

The final questionnaire was administered face to face by trained Market Research Society interviewers. The interviews took place in the three town centres, Nottingham, Cambridge and Wakefield between mid-October and early November 2009. A street intercept method was used where interviewers were instructed to interview 16 respondents per day in various pre-specified locations in the town centres. In all, 51 days of interviews took place, shared evenly across the three centres, so that the sample resulted in 272 shoppers in each location, and a total sample of 816 respondents.

4.5.6 Data analysis procedures (Stage 6)

The procedures to be followed to analyse the data collected through the town centre image survey will be described in detail in the following chapter.

4.6 Chapter summary

This chapter has described the four main objectives of the research methodology. Firstly, the main research paradigms were reviewed and the realism paradigm was determined as the most suitable for the town centre image study. Once the research paradigm was determined, the research framework was designed to follow a mixed method approach. Initially an exploratory phase based on focus

groups was adopted which confirmed that the three-dimensional model could be assumed to reflect how consumers perceive town centre image. Secondly, the quantitative methodology, based on a descriptive research design using a questionnaire survey of 816 respondents in three town centre locations was presented. The development of the questionnaire according to established research guidelines was detailed, including questionnaire design, scale selection, response format and pre- and pilot-testing. Finally the process of constructing the sampling frames for respondents and survey locations was described.

Chapter Five: Data Preparation and Data Analysis Procedures

> *"The image itself was not a precise, miniaturized model of reality, reduced in scale and consistently abstracted. As a purposive simplification, it was made by reducing, eliminating, or even adding elements to reality, by fusion and distortion, by relating and structuring the parts" (Lynch, 1960, p. 87)*

This chapter describes the statistical procedures adopted for the analysis of the town centre image model. Following initial data cleaning and preparation, descriptive statistics relating to the respondent profile are presented. The procedures involved in statistical analysis through structural equation modelling are then discussed. Structural equation modelling is a two stage process. Firstly confirmatory factor analysis is carried out on a measurement model to purify the scales and assess the fit of the theoretical model. Then the structure of the relationships between town centre image, its latent constructs and its effect on the dependent variable of Loyalty is assessed through the use of a structural model. Each of these stages is discussed in turn in the following sections of this chapter.

5.1 Preliminary analysis

5.1.1 Data preparation

The preliminary stages of data preparation are essential to ensure that the raw data is of sufficient quality to produce valid and accurate results. At the same time it enables the researcher to gain a basic understanding of the data and potential relationships between the variables (Hair, Black, Babin, Anderson and Tatham, 2006; Churchill, 1999). Careful data preparation avoids the results being compromised through biased findings and incorrect interpretation (Malhotra and Birks, 2003). The researcher must "check that there are no coding errors, that variables have been recoded appropriately if necessary, and that missing values have been dealt with properly" (Baumgartner and Homburg, 1996, p. 148). The purpose of the preliminary stages of data preparation is therefore the detection and elimination of errors in the data (Hair, Bush and Ortinau, 2006).

In preparation for analysis, the data were entered manually into a MS Excel spreadsheet. As all the questionnaire items to be subjected to analysis were closed questions with pre-specified answer categories coded on the questionnaire, values were transferred directly into the spreadsheet (Churchill, 1999). Negatively worded items were reverse scored so that, for all items, lowest scores were entered as 1 and highest scores were entered as 7.

Initial data editing was performed to identify and correct inaccurate or inconsistent entries resulting from errors in questionnaire completion or data entry (Churchill, 1999). To ensure the accuracy of data entry, a sample of the raw data was compared with the original questionnaires, with no errors identified at this stage. A check was carried out to verify that all variables were within the expected limits of between 1 and 7 on the Likert-type scale (Tabachnick and Fidell, 2007). The dataset was then transferred into SPSS v. 18, and examined for missing values and assumptions of normality which enable statistical analysis to be performed correctly. The profile of the survey respondents was also prepared.

5.1.2 Missing values

The statistical analysis method selected for this research, structural equation modelling, requires that no missing values should occur in the dataset (Bentler and Chou, 1987; Hair, Black, Babin, Anderson and Tatham, 2006). Missing values occur either from the omission of answers by respondents, or from errors in data collection or data entry (Hair, Black, Babin, Anderson and Tatham, 2006). Since data for this research were collected by trained Market Research Company interviewers, the quality of the raw data was very good but not perfect. However, it is rare for even such commissioned surveys to be returned without some incomplete responses (Hair, Black, Babin, Anderson and Tatham, 2006; Churchill, 1999). Since respondents had (optionally) given a phone number, where possible those who had given incomplete data were recontacted and asked to revisit their responses. Nevertheless there remained a small number of questionnaires containing missing data which remained to be dealt with.

Statistical analysis packages provide several methods of dealing with missing data. Cases with missing values may be removed from the dataset altogether (listwise deletion), may be excluded from specific calculations where data is missing in the variables analysed (pairwise deletion), or missing data may be replaced by a suitable value (imputation). Each of these methods is not without problems. With listwise deletion, removing entire cases from the dataset can result in a loss of valuable information which may have been costly to obtain and, if large numbers of cases have missing values, the dataset may be severely reduced, thus biasing the remaining sample (Cohen, Cohen West and Aiken, 2003; Olinsky, Chen and Harlow, 2003). Pairwise deletion by excluding cases only if missing data exists in the variables being analysed can result in loss of comparability, as sample size will vary between each procedure (Malhotra and Birks, 2006).

Replacing missing values by imputation enables the researcher to avoid the problems associated with removing cases and to retain the maximum sample size. Replacing missing data by imputation is recommended if the extent of missing data is acceptably low (under 3%), if the number of respondents with unsatisfactory responses is small, if the proportion of unsatisfactory responses for these respondents is low, and if the pattern of missing data is random (Cohen, Cohen, West and Aiken, 2003; Hair, Black, Babin, Anderson and Tatham, 2006; Malhotra and Birks, 2003).

Although empirical tests can be performed to assess the randomness of missing data, when the number of missing items is small a simple visual test is sufficient (Hair, Black, Babin, Anderson and Tatham, 2006). In this study, there were 27 questionnaires containing missing data out of a total of 819, with 53 missing items in total. Although this was only around 3.3% of the total sample, a combination of the above methods of dealing with missing data was used. Firstly listwise deletion was used, and three cases which had five or more missing values were deleted listwise, with the added benefit of eliminating 19 missing values. This resulted in a dataset of 816 cases. Of the remaining 24 cases with missing values, the majority (19) only had one missing value. The maximum number of missing values on any one variable was four (0.49%). The cases with missing values were evenly spread

among the three survey locations. Hence the remaining missing values were considered sufficiently random and suitable for imputation.

Missing values can be imputed using a number of methods. Missing data can be replaced with a suitable value, for example calculated from the mean of its variable. However, replacing with the mean can distort the results by underestimating variance and is not recommended (Enders and Bandalos, 2001). Other methods include the use of regression, Expectation Maximisation (EM) and other multiple imputation techniques to calculate a replacement value. These methods infer information from all available data, but whereas regression uses information about relationships between the variables in the dataset, the other methods use iterative processes of repeated calculations to reach the best possible replacement value (Enders and Bandalos, 2001; Schafer and Graham, 2002).

The method chosen in this study was EM due in part to its availability in SPSS but also because, as a multiple imputation method, its advantages over other techniques have been demonstrated (Peters and Enders, 2002; Schafer and Graham, 2002). The EM algorithm uses a two-step iterative procedure whereby missing observations are initially estimated and replaced from the observed data in the covariance matrix; then the mean vector and covariance matrix are estimated as though there were no missing data, from the statistics calculated from the previous step, until the difference between the observed and estimated covariance matrices falls below a pre-specified acceptable level (Enders, 2001; Peters and Enders, 2002). Following imputation using EM, the remaining town centre image dataset contained complete data for 816 cases.

5.1.3 Assumptions of normality

To perform structural equation modelling, all variables are required to meet the assumptions of multivariate normality (Bentler and Chou, 1987). Lack of multivariate normality affects the power of statistical analysis to distinguish between good and bad models, adversely influences goodness-of-fit indices and standard errors, and thus calls into question the validity of results (Baumgartner and Homburg, 1996). Normality of variables can be assessed using either

statistical or graphical methods (Baumgartner and Homburg, 1996; Tabachnick and Fidell, 2007).

The first condition for multivariate normality is univariate normality, where “each variable and all linear combinations of the variables are normally distributed” (Tabachnick and Fidell, 2007, p. 78). Univariate normality is a necessary but not sufficient condition of multivariate normality (Hair, Black, Babin, Anderson and Tatham, 2006). A common indicator of normality compares skewness, which represents the symmetry of the distribution, and kurtosis, which describes its peakedness. In a normal distribution both skewness and kurtosis are zero (Tabachnick and Fidell, 2007). While formal statistical tests can be used, if the sample is large a visual assessment of the shape of the distribution is sufficient (Tabachnick and Fidell, 2007). Accordingly, descriptive statistics in the form of histograms with normal curves superimposed were created for each variable, and a visual check was performed (Hair, Black, Babin, Anderson and Tatham, 2006; Tabachnick and Fidell, 2007). This served the purpose of checking for any scores outside the expected range, as well as assessing if the variables were evenly spread around the mean and hence normally distributed. Mean scores, standard distributions, and skewness and kurtosis measures were obtained, which revealed that the majority of the variables had means that were higher than the midpoint of the scale and were (negatively) skewed. However, in many research situations, variables have scores which are skewed either positively or negatively, reflecting the underlying reality of the construct rather than problems with measures (Pallant, 2007). None of the variables were outside of the expected range (Tabachnick and Fidell, 2007).

To achieve multivariate normality, achieving univariate normality is sufficient particularly with large samples (over 200 cases) (Hair, Black, Babin, Anderson and Tatham, 2006). Due to the large sample size in the town centre image dataset, problems as a result of skewness and kurtosis were not expected to impact on the results and no modifications to the data were considered necessary (Tabachnick and Fidell, 2007). Large sample sizes can accommodate divergence from multivariate normality since they increase stability and decrease variability (Hair, Black, Babin, Anderson and Tatham, 2006; Tabachnick and Fidell, 2007).

Outliers may also affect the normality of the variables (Baumgartner and Homburg, 1996). An outlier "is a case with such an extreme value on one variable ... or such a strange combination of scores on two or more variables ... that it distorts statistics" (Tabachnick and Fidell, 2007, p.72). Outliers are important to identify as they may result from incorrect data entry, may be cases which do not belong to the sample population, or may represent real values which nevertheless are not representative of the sample as a whole (Tabachnick and Fidell, 2007). Outliers may be problematic if they are not representative of the sample and may influence the results in a way that cannot be generalised to other samples (Hair, Black, Babin, Anderson and Tatham, 2006). Outliers can be diagnosed by using box-plots (which specify cases that fall outside the median), or Mahalanobis distance tests (which measure the distance of cases from the intersection of the means of all the variables) (Tabachnick and Fidell, 2007). Tests were carried out for outliers in SPSS v. 18 using box-plots: no action was considered necessary at this stage.

5.2 Respondent profile

A second purpose of examining the dataset is to establish the profile of the respondents. Understanding the characteristics of the sample helps in interpreting the results of the data analysis. The sample of 816 respondents was therefore analysed using descriptive statistics in SPSS v. 18. Table 5.1 shows the breakdown of the characteristics of the sample.

It was important to capture as wide a range of consumers in the three town centres as possible. The sample consisted of 59% females and 41% males. The age group between 18 and 30 years old was somewhat over-represented, making up 33.7% of the sample. Whereas this was unsurprising in the cases of Cambridge and Nottingham whose age profiles are well below national average, the high percentage of respondents under 30 in Wakefield (with an average age profile) was less expected (Venuescore, 2009). Shoppers over 61 years were relatively under-represented at 12.6% of the sample. The remaining age groups were spread evenly in between. Those in employment made up over half (54.2%) of the sample, with full time at 35.4% and part-time at 18.8%. Those not working either

through unemployment but of working age or homemakers represented 21.4%. Retired people were 10.3%, and students in full time education made up 14.1% of the sample.

Respondents represented a comprehensive range of shoppers in the three town centres in terms of economic status and activity. Respondents in socio-economic groups A to C1 made up 56% of the sample, while those in groups C2 to E were 44%. Respondents were evenly spread between those with secondary, further education and higher education qualifications. The majority of respondents (94%) were white, reflecting a slightly higher proportion among those shopping in the town centres when compared to resident populations (average 84%).

It was important to establish an understanding of the relationships respondents had with the town centres in which they were interviewed. Out of the total sample, 86.3% were shopping in the town centre on that day, while 13.6% were visiting that town centre for other reasons, such as employment. Slightly more than half of the sample (57.1%) shopped on a daily or weekly basis in the town centre where they were interviewed, while only 14.5% were infrequent shoppers (less than monthly). Almost two-thirds of the sample (61.9%) had shopped in the town centre where they were interviewed for over 5 years, while only 22.8% had started shopping in that town centre within the last 12 months. Thus the majority of respondents were familiar with and knowledgeable about the town centre where they were interviewed.

The sample was reasonably coherent across all three town centres, albeit with some differences. Cambridge respondents were far more likely to be in full time employment (45.1%) than in part-time work (16.1%), unemployed/ homemakers (13.9%), students (15.4%) or retired (9.5%). In contrast, respondents in Nottingham and Wakefield were more evenly spread across these categories. Similar proportions of full time employees and unemployed/homemakers were surveyed (Nottingham - 28.4% and 23.6%, Wakefield - 32.7% and 26.8%) with part-time workers at a similar level in both cities (19.2% and 21.0%). Retired people were equally represented (10.7%) in both cities. Respondents who were students were of similar frequency in Cambridge and Nottingham (15.4% and

18.1%) but were fewer in Wakefield (8.8%) due to the fact that unlike the other two cities, Wakefield is not a university town. Over the whole sample, the percentage of respondents who were classed as students was 14.1%.

Cambridge respondents thus appeared more prosperous and educated to a higher level than respondents in the other two cities. They were more than twice as frequently found to belong to the two higher socio-economic groups (A and B) (30.8% when compared to 15.1% in Nottingham and 13.6% in Wakefield). Cambridge respondents were also more likely to have completed higher education (50.5% as opposed to 24.4% in Nottingham and 22.8% in Wakefield). Conversely, Nottingham respondents who had only completed secondary education made up almost half of the sample in that city (46.9%), representing the highest proportion of all three cities. Cambridge respondents made up 29.7% and Wakefield 37.1% in the secondary education category.

Nottingham had the highest proportion of respondents who had shopped there for less than one year (27.3% as opposed to 22.8% average) but also the highest number of shoppers over 61 (16.6% as opposed to 12.6%). However, only 74.2% of Nottingham respondents (as opposed to 86.3% overall) were shopping in the town centre on the day they were sampled, suggesting that the town centre provides other reasons than shopping for visiting there. In terms of frequency of shopping, respondents who shopped on a weekly basis in the town centre where they were interviewed were those most frequently represented in all three cities. In Wakefield, weekly shoppers represented over half of the sample (52.6%) while in Cambridge and Nottingham respondents who shopped on a weekly basis made up 35.2% and 36.2% respectively. Cambridge had the highest proportion of respondents who shopped infrequently (less than monthly), at 19.4%. Wakefield respondents were more likely have shopped there for longer than five years (73.2%) as opposed to respondents in Cambridge and Nottingham of 57.5% and 55.0% respectively, suggesting that the Wakefield sample contained more loyal shoppers than the other two cities.

These respondent profiles give confidence that the sample was a reasonable representation of shoppers in the three town centres.

Table 5.1 Respondent Characteristics

	Cambridge n=273		Nottingham n=271		Wakefield n=272		Total n-816	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Gender								
male	116	42.5	109	40.2	110	40.4	335	41.1
female	157	57.5	162	59.8	162	59.6	481	58.9
Age								
18 - 30	93	34.1	87	32.1	95	34.9	275	33.7
31 - 40	56	20.5	47	17.3	34	12.5	137	16.8
41 - 50	42	15.4	54	19.9	57	21.0	153	18.8
51 - 60	53	19.4	38	14.0	57	21.0	148	18.1
61+	29	10.6	45	16.6	29	10.7	103	12.6
Employment								
full time	123	45.1	77	28.4	89	32.7	289	35.4
part time	44	16.1	52	19.2	57	21.0	153	18.8
student	42	15.4	49	18.1	24	8.8	115	14.1
not in work	38	13.9	64	23.6	73	26.8	175	21.4
retired	26	9.5	29	10.7	29	10.7	84	10.3
Socio economic group								
A	4	1.5	0	0.0	0	0.0	4	0.5
B	80	29.3	41	15.1	37	13.6	158	19.4
C1	98	35.9	98	36.2	98	36.0	294	36.0
C2	41	15.0	49	18.1	56	20.6	146	17.9
D	27	9.9	45	16.6	42	15.4	114	14.0
E	22	8.1	38	14.0	39	14.3	99	12.1
Education level achieved								
secondary	81	29.7	127	46.9	101	37.1	309	37.9
further education	53	19.4	78	28.8	106	39.0	237	29.0
higher education	138	50.5	66	24.4	62	22.8	266	32.6
Shopping here today								
yes	261	95.6	201	74.2	242	89.0	704	86.3
no	12	4.4	69	25.5	30	11.0	111	13.6
Frequency of shopping								
daily	50	18.3	35	12.9	44	16.2	129	15.8
weekly	96	35.2	98	36.2	143	52.6	337	41.3
fortnightly	39	14.3	64	23.6	21	7.7	124	15.2
monthly	35	12.8	45	16.6	27	9.9	107	13.1
less than monthly	53	19.4	28	10.3	37	13.6	118	14.5
Length of time since first shopped								
less than 1 year	59	21.6	74	27.3	53	19.5	186	22.8
between 1 and 5 years	57	20.9	48	17.7	20	7.4	125	15.3
more than 5 years	157	57.5	149	55.0	199	73.2	505	61.9

5.3 Data analysis using Structural Equation Modelling

Once the preliminary stages of data preparation and respondent profiling were complete, the data were ready to be entered for analysis using Structural Equation Modelling (SEM). SEM is a data analysis technique which is performed in two stages: first a measurement model of the latent constructs and their measures is assessed to see how well the model fits the data, according to a selection of measures of goodness-of-fit. Then the structural model tests theory about hypothesised relationships between the latent constructs using a path diagram, and if the model fits well according to the goodness-of-fit measures, the researcher can have confidence in the theoretical model (Anderson and Gerbing, 1988).

SEM has been adopted by many researchers in marketing and consumer behaviour, including many studies using cross-sectional data (Baumgartner and Homburg, 1996). The primary use of SEM is to estimate and confirm theoretical models of relationships between latent variables (Anderson and Gerbing, 1988; Hair, Black, Babin, Anderson and Tatham, 2006). The researcher develops a model describing an entire set of relationships between constructs or variables in a path diagram, and determines the items to measure them in advance of the analysis. The researcher draws primarily on theory to develop the relationships but also on past experience and the research objectives. The key characteristic of SEM is that the model development, measure confirmation and estimation processes are driven by theory and not by the data or empirical results (Diamantopoulos and Siguaw, 2000).

There are considerable differences between SEM and other multivariate analysis techniques such as multiple regression. Firstly, SEM allows the simultaneous analysis of multiple relationships between variables, similar to the simultaneous testing of multiple regression equations. In so doing, the SEM procedure is more sophisticated in that it analyses more complex models while considering all possible information in the dataset (Kelloway, 1998). Secondly, SEM varies from other multivariate techniques in its treatment of variables, which may be both

independent and/or dependent, depending on their role in the model. In order to avoid confusion between independent and dependent variables, in SEM the independent variables are called exogenous since they are determined from outside the model and are independent of any other construct in the model. Dependent variables are endogenous in that they are determined by their relationships with other constructs in the model. In SEM models, variables can simultaneously be both exogenous and endogenous depending on their role in the theoretical network of relationships (Hair, Black, Babin, Anderson and Tatham, 2006).

A third characteristic of SEM is that it allows the measurement of latent constructs. A latent construct is an abstract concept, such as an attitude or perception, which cannot be observed directly but is hypothesized to be measurable by certain other variables which are observable (Hair, Black, Babin, Anderson and Tatham, 2006). It is therefore measured indirectly using scales containing several manifest or observed indicators (Byrne, 2010; Tabachnick and Fidell, 2007). Because latent variables cannot be measured directly, multiple indicators are employed. Single items do not capture the full range of the concept and increase the potential for error. Instead the researcher designs “the best questions to measure the concept knowing that individuals may interpret any single question somewhat differently, but that the collective set will represent the concept better than any single item” (Hair, Black, Babin, Anderson and Tatham, 2006, p. 712).

Fourthly, unlike regression techniques, the SEM technique incorporates and accounts for measurement error. Statistical theory as well as practical experience indicates that measurement error is inevitable when researching abstract concepts, primarily because of the possibility of inaccurate response (Bollen, 1989). Respondents may be unable or unwilling to give an exact answer, may not have sufficient information, or may misinterpret questions from the way intended in the research. Unless measurement error is accounted for, parameter estimates may be biased and inaccurate, therefore incorporating measurement error improves the accuracy of the theoretical model (Bollen, 1989; Tabachnick and Fidell, 2007).

Fifthly, SEM can be used to determine causal inference (Hair, Black, Babin, Anderson and Tatham, 2006). SEM enables the researcher to test hypothesised cause and effect relationships with some degree of certainty. Ideally causality will be demonstrated if the following conditions are met. If significant covariation exists in a dependent relationship between two constructs in the path diagram, or if it can be demonstrated that the relationship between two constructs is not influenced by a third unrelated construct, non-spurious causality may be assumed. Causality may also be established in a longitudinal design where there is a temporal sequence of events; however, since cross-sectional designs are more common in SEM studies, this condition is unlikely to be fulfilled. Finally strong theoretical support is needed for empirical evidence of a causal relationship, otherwise only a correlational relationship may be claimed. Although SEM may be helpful in inferring causality, such causal relationships need interpreting with caution (Hair, Black, Babin, Anderson and Tatham, 2006).

From the above it can be seen that SEM is a technique which is primarily driven by theory. As noted by Tabachnick and Fidell (2007) “one cannot do SEM without prior knowledge of, or hypotheses about, potential relationships among variables” (p. 682). SEM is theoretically based because a model of hypothesised relationships between latent constructs and a set of indicators determined to measure each of the constructs are developed in advance of analysis and model estimation (Schumacker and Lomax, 2004). The researcher specifies which items are associated with each construct following previously established hypotheses, and assesses how well they represent that construct (Anderson and Gerbing, 1988; Bagozzi and Yi, 1988). This is initially done through Confirmatory Factor Analysis (CFA) which will be described in the following section.

5.4 Measurement models and Confirmatory Factor Analysis

SEM is carried out in two stages: the measurement model and the structural model. The measurement model tests how well the indicators measure the hypothesised latent variables, and this process is referred to as Confirmatory Factor Analysis (CFA). Unless the initial loadings of the item scales onto their

variables demonstrate good fit, the structural model cannot be tested. Thus the CFA stage of SEM enables modifications to be made to the model to generate an improved fit to the data (Schumacker and Lomax, 2004). The structural model specifies the path diagram of structural relationships between the latent constructs, and estimates the direction in which particular latent variables influence or potentially cause effects in certain other latent variables in the model (Bollen, 1989).

CFA, as the first stage of SEM, is called confirmatory because the researcher specifies a model and seeks to confirm its fit with the observed data. The confirmatory technique is both more rigorous and more parsimonious than exploratory techniques such as factor analysis (Kelloway, 1998). The role of CFA is to test the psychometric properties of the measurement scales and how well the pattern of manifest indicators measuring the latent variables fits the actual data, in order to confirm or reject the researcher's theory. In CFA a model is constructed in advance, with the number of latent constructs and the indicator scales used to estimate them set by the researcher (Bollen, 1989).

Multiple indicators are recommended for measuring each latent construct, to reduce the impact of measurement error (Steenkamp and Baumgartner, 2000). Even though the researcher aims to develop the best questions to measure the construct, each respondent is likely to interpret each question in their own individual way. Including several questions increases the likelihood that collectively these idiosyncratic interpretations will balance each other out (Hair, Black, Babin, Anderson and Tatham, 2006). While a latent construct can be measured by fewer indicators, scales with a minimum of three or (ideally) four indicators are preferred (Baumgartner and Homburg, 1996; Bollen, 1989; Hair, Black, Babin, Anderson and Tatham, 2006). Measuring a latent construct using only two indicators increases the chances of an invalid result, as the model will not satisfy the requirements for parameter identification: a minimum of three indicators is needed for satisfactory identification (see Section 5.4.4) (Anderson and Gerbing, 1988; Baumgartner and Homburg, 1996; Bentler and Chou, 1987). The use of only one indicator, as well as raising the problem of inconsistent interpretation by individuals, does not allow for assessing unidimensionality (see Section 5.4.7.3)

and hence does not provide evidence of construct reliability (Baumgartner and Homburg, 1996; Bentler and Chou, 1987). However in the interests of model parsimony the set of indicators should also not be larger than necessary, as too many indicators can make analysis more complex and reduce the likelihood of unidimensionality (Hair, Black, Babin, Anderson and Tatham, 2006).

In SEM, the latent constructs are assumed to predict the manifest variables or indicators, so that the indicators are dependent upon their constructs. This means that in the model they are drawn with the arrow from the latent construct to the indicator (Tabachnick and Fidell, 2007). CFA then assesses the theoretical hypotheses relating to specified latent variables and their indicator scales (Hair, Black, Babin, Anderson and Tatham, 2006). Measurement error is also accounted for in this stage (Bollen, 1989), with error representing the inability of the indicators to measure the latent variables accurately (Hair, Black, Babin, Anderson and Tatham, 2006).

To assess the measurement properties of the manifest indicator scales, the researcher sets up the model by constraining direct effects between certain parameters and latent or observed variables to a specified constant (for example a value of 1), allowing measurement errors to correlate, and estimating the covariance of latent variables (Bollen 1989; Kelloway, 1998). Tests are then carried out on both the overall quality of the factor solution and the specific parameters, such as factor loadings and covariances, composing the model (Kelloway, 1998). The procedures involved in preparing, testing and modifying a measurement model are described in the following sections.

5.4.1 Data input - covariance and correlation matrices

Data is input into the SEM program as a covariance matrix computed from the observed data. The values in the observed covariance matrix are then compared with their equivalent values in the estimated covariance matrix, which is derived from regression equations which estimate correlations between the constructs in the path diagram analysis. SEM calculates the difference between the observed and estimated matrices to test the model. If the estimated covariance matrix is

within sampling variation of the observed matrix, the model is accepted as having good fit. Differences between observed and estimated covariances are the error terms, also called residuals. A covariance matrix differs from a correlation matrix only in that the correlation matrix represents standardised values. Covariance values are in exactly the scale or magnitude in which they were measured, while correlations are standardised and hence not scale-dependent, and range between -1 and +1. Whereas the covariance matrix retains key information on the measures used and enables meaningful comparisons when scale or magnitude are important considerations, a correlation matrix is easier to interpret and can be requested as a standardised solution in the software package (Hair, Black, Babin, Anderson and Tatham, 2006).

5.4.2 Sample size

SEM needs larger sample sizes than other statistical techniques (Hair, Black, Babin, Anderson and Tatham, 2006; Kelloway, 1998). Covariances and correlations are less accurate when estimated using small samples, so a larger sample will produce more information and greater stability, while parameter estimates and chi-square tests are also very sensitive to sample size (Hair, Black, Babin, Anderson and Tatham, 2006; Kelloway, 1998; Tabachnick and Fidell, 2007). Although there remains debate as to the ideal sample size, the minimum recommended for SEM analysis is 200 cases (Kelloway, 1998). A common recommendation is to ensure between five and ten, but ideally fifteen, respondents for each parameter in the model (Bentler and Chou, 1987; Hair, Black, Babin, Anderson and Tatham, 2006).

Sample size also depends on the complexity of the model, with increased numbers of variables or parameters requiring a larger sample. However, unless the model is complex and there is a large number of parameters to be estimated, sample sizes of over 400 may be highly sensitive to any differences that may be detected, and measures of model fit may produce poorer values than actually exist (Hair, Black, Babin, Anderson and Tatham, 2006). If the number of factors in the model exceeds six, if there are fewer than three indicators per factor and communalities are low, the sample size required may exceed 500 without affecting

the validity of the results. If multigroup analysis is to be performed, a sufficiently large sample size for each group, using the calculations as above, needs collecting (Hair, Black, Babin, Anderson and Tatham, 2006).

5.4.3 Estimation technique

The method most widely used in SEM to estimate the model is maximum likelihood estimation (ML). It is the default estimation method in most available programs (Diamantopoulos and Siguaw, 2000). A key assumption of this method is multivariate normality for the exogenous variables. Although ML has appeared in the past to demonstrate sensitivity to data which is not normally distributed, it is now believed to be robust in cases where non-normality exists, and has produced reliable results in a variety of circumstances (Hair, Black, Babin, Anderson and Tatham, 2006). The ML method is adopted for the town centre image study reported in this thesis.

5.4.4 Identification

Before analysis can take place, the researcher must determine whether there is sufficient information in the model to obtain a unique solution for the parameters to be estimated (Diamantopoulos and Siguaw, 2000; Hair, Black, Babin, Anderson and Tatham, 2006). In other words, model identification must be assessed. If there are more parameters than there are item variances, there is insufficient information for estimation, the model cannot be calculated and is therefore underidentified. If there are exactly equal numbers of parameters and item variances, the model is just-identified and will produce one perfect solution, and theoretical testing of the model becomes unrealistic. Hence the researcher is seeking a model which is overidentified, where more than one solution can be calculated, so that the statistical analysis can seek the best possible solution to explain the observed data (Kelloway, 1998). Identification is measured by the formula $1/2\ [p\ (p+1)] - k$, where p is the number of measured items and k is the number of parameters to be estimated, and should always be greater than 1 (Bentler and Chou, 1987).

5.4.5 Model fit

The validity of the measurement model is assessed by goodness-of-fit measures. Goodness-of-fit measures assess the extent to which the hypothesised model fits the data by calculating how closely the observed sample matrix fits the estimated population covariance matrix. The fundamental measure of fit is the chi-square **(χ^2)** statistic. This test assumes a null hypothesis that there is no difference between the observed matrix and the estimated matrix, chi-square is not significant and the model fits the data perfectly. If chi-square is large and statistically significant, the null hypothesis is rejected and the model is assumed to be a poor fit. In contrast to conventional hypothesis testing, the aim in SEM is not to reject the null hypothesis (Diamantopoulos and Siguaw, 2000). However, the chi-square test is highly sensitive to sample size (Anderson and Gerbing, 1988; Bentler and Chou, 1987; Fornell and Larcker, 1981). As discussed above, SEM requires a substantial sample for analysis to be performed, yet it is unlikely that a non-significant chi-square can be achieved in a sample size which is sufficiently large for analysis to proceed (Kelloway, 1998). In addition, the chi-square test measures perfect fit, which is an unlikely circumstance in real life research situations, since researchers generally test models which are approximations of reality at best (Diamantopoulos and Siguaw, 2000). The chi-square test is also sensitive to degrees of freedom (*df*), which is the number of observed variables and parameters in the model (Hair, Black, Babin, Anderson and Tatham, 2006). Hence, an alternative and more pragmatic measure of fit calculates the ratio between chi-square and the number of degrees of freedom (χ^2 /df) (Byrne, 2010). Although values of under 5 have been supported (Diamantopulos and Siguaw, 2000), a model with good fit is generally considered to have been achieved when this ratio is less than 2 (Tabachnick and Fidell, 2007).

Hence, although the chi-square test is useful as a guide to model fit, in that a small chi-square indicates good fit and a large chi-square indicates poor fit, alternative measures of goodness-of-fit have subsequently been developed. These can be grouped into three categories: indices which measure absolute fit, indices which measure incremental fit, and indices of parsimonious fit (Hu and Bentler, 1999).

5.4.5.1 Absolute fit indices

Absolute fit indices measure how well the model specified by the researcher reproduces the observed data (Hu and Bentler, 1999). The model is evaluated directly, without comparison to other models. One of the most common absolute indices reported is the Goodness-of-Fit Index (GFI), which assesses the relative amount of variances and covariances accounted for in the model and how closely the model comes to perfectly reproducing the observed covariance matrix (Byrne, 2010; Diamantopoulos and Siguaw, 2000). An Adjusted Goodness-of-Fit index (AGFI) adjusts the GFI values in relation to the complexity of the model and hence accounts for degrees of freedom. Both GFI and AGFI values should exceed 0.90 if the model fits well (Diamantopoulos and Siguaw, 2000).

The Root Mean Square Residual (RMSR), Standardised Root Mean Residual (SRMR) and Root Mean Square Error of Approximation (RMSEA) are all measures of fit based on the values of the error terms in the covariances, or residuals. However, unlike the other two measures, the RMSEA assesses not only how well the model fits the population, but also considers model complexity and sample size; hence it is a more informative measure of model fit (Diamantopoulos and Siguaw, 2000; Hair, Black, Babin, Anderson and Tatham, 2006). Lower RMSEA values represent better fit: values below 0.05 indicate good fit, between 0.05 and 0.08 suggest reasonable fit, 0.08 and 0.10 mediocre fit, and above 0.10 poor fit (Diamantopoulos and Siguaw, 2000; Hu and Bentler, 1999).

5.4.5.2 Incremental fit indices

Incremental fit indices, in contrast, compare alternative models. Initially the specified model is compared relative to an alternative baseline or null model, which assumes that all variables are unspecified and uncorrelated and which does not result in good fit (Hu and Bentler, 1999; Kelloway, 1998). Incremental indices assess the improvement in fit when parameters are specified as in the model. The Normed Fit Index (NFI) compares the chi-square value of the null model with the specified model, so that values range between 0 and 1, with perfect fit values at 1. The Non Normed Fit Index (NNFI) adjusts the NFI for model complexity by including the number of degrees of freedom (Kelloway, 1998). The Tucker-Lewis

Index (TLI) is a similar index to the NNFI, falling between 0 and 1 with values close to 0.95 indicating good fit (Byrne, 2010; Hu and Bentler, 1999). The Comparative Fit Index (CFI) is less sensitive to model complexity and is thus more desirable (Hair, Black, Babin, Anderson and Tatham, 2006). The CFI again ranges between 0 and 1, with values greater than 0.95 assumed to represent good fit (Hu and Bentler, 1999; Kelloway, 1998).

5.4.5.3 Parsimony fit indices

Parsimony fit indices assess the fit of competing models to determine if a better fit can be achieved by a simpler model, i.e. one with fewer specified parameter paths. They may be seen as combining absolute and comparative measures when comparing two models. The basis for parsimony fit measures is the ratio of degrees of freedom in the model as specified to the total degrees of freedom available. The most widely used index is the Parsimony Normed Fit Index (PNFI) which again falls between 0 and 1. However even with a model which fits well, this index is unlikely to reach as high a cut off point as 0.90 and is most useful when assessing the relative fit of two competing models (Hair, Black, Babin, Anderson and Tatham, 2006; Kelloway, 1998).

5.4.5.4 Reporting goodness-of-fit indices

Since these measures of fit are all considered a guide to the plausibility of a model rather than evidence of perfect fit, no one measure can determine a correct model, and researchers are recommended to report more than one measure from each of at least the absolute fit and incremental fit indices, together with the chi-square statistic, when assessing a model's fit (Bentler and Chou, 1987; Diamantopoulos and Siguaw, 2000; Hair, Black, Babin, Anderson and Tatham, 2006).

5.4.6 Measurement model modification

Once the CFA model is estimated and evaluated according to goodness-of-fit measures, the next stage is model modification. Measurement models are modified for one of two reasons: to improve fit, especially in exploratory research, and to test hypotheses in theoretical studies (Tabachnick and Fidell, 2007). Models are modified either by testing model parameters and deleting those which

are non-significant or problematic; or by adding parameters which should be included but which have not been specified (Kelloway, 1998). In modifying a CFA model the researcher is guided by information derived from inspection of factor loadings, error variances and modification indices.

5.4.6.1 Factor loadings

Factor loadings (also called regression weights) measure the relationships between each latent variable and its indicator or manifest variables. When assessing the measurement model, factor loading parameters are examined for their magnitude, significance, and statistics relating to their error terms. The researcher is seeking evidence of their reliability by assessing whether factor loadings are high and significant. Standardised factor loadings should be positive and range between 0 and 1. Loadings of greater than 0.71 and which are significant indicate that the latent variable represents at least half of the variance of that indicator ($0.71^2 = 0.5$). The *t*-value or critical ratio (C.R.) indicates whether the factor loading is significant. For the factor loading to be significant, its *t*- value needs to have an absolute value greater than 1.96.

5.4.6.2 Error variances

Error terms measure the difference between each observed and estimated covariance. Standard errors indicate the accuracy of parameter estimation, with small values reflecting that the parameter has been estimated accurately (Diamantopoulos and Siguaw, 2000). Standard error terms, or standardised residuals, with an absolute value of greater than 2 are considered large as they are greater than one standard deviation from an acceptable score (Anderson and Gerbing, 1988; Diamantopoulos and Siguaw, 2000). However, a standard error which is either too small or too large means that the test statistic for that parameter cannot be estimated, and reveals cause for concern (Byrne, 2010).

5.4.6.3 Modification indices

Modification indices provide key information for improving the model fit. Modification indices (MIs) indicate the amount of improvement (i.e. reduction in size) in chi-square if a path which is not currently estimated was set to be

estimated freely (Diamantopoulos and Siguaw, 2000; Hair, Black, Babin, Anderson and Tatham, 2006; Kelloway, 1998). MIs are presented together with the expected (unstandardised) parameter change (either positive or negative) which would be achieved if the parameter concerned was freed (i.e. with a path specified). The largest modification index indicates the parameter which should be set free to best improve fit. Modification indices can be interpreted as a chi-square distribution with 1 degree of freedom, so MIs larger than 3.84 are considered to be large, although Kelloway (1998) recommends freeing parameters where MIs indicate a change in chi-square of greater than 5.

Parameters should be freed one at a time in an iterative process, because freeing a parameter may reduce or eliminate the improvement in fit made possible by freeing a second parameter (Bentler and Chou, 1987). However, particularly in measurement models, many of the parameters suggested by modification indices will not necessarily make theoretical sense. For instance, the researcher is not concerned with changes to error parameters because correlated measurement error suggests that other unmeasured variables may be causing the common variation in the measurement error (Bagozzi, 1983; Gerbing and Anderson, 1984). Freeing a parameter according to the size of the largest modification index needs to be based on substantive interpretation. If it does not make substantive sense to free the parameter with the largest MI, large MIs for other parameters should be examined for deletion based on theoretical reasoning. Above all other considerations, modifications should be carried out only if supported by valid theoretical logic rather than based on statistical estimation (Anderson and Gerbing, 1988; Bentler and Chou, 1987).

5.4.7 Reliability and validity assessment

Following modification to obtain the best fitting model, the next stage in CFA is to assess the reliability and construct validity of the model, to demonstrate the accuracy with which the latent variables are represented by their indicators (Diamantopoulos and Siguaw, 2000; Hair, Black, Babin, Anderson and Tatham, 2006).

5.4.7.1 Reliability

Reliability is defined as “the degree to which measures are free from error” (Peter, 1979, p. 16) and therefore measures the consistency of the results (Diamantopoulos and Siguaw, 2000). In SEM, reliability is assessed by examining factor loadings of each indicator on to its latent variable. In particular the squared multiple correlations of the indicators on to latent variables show the proportion of variance in an indicator that is explained by its underlying latent variable after measurement error is accounted for (Diamantopoulos and Siguaw, 2000). A value in the squared multiple correlation of above 0.5 means that at least half of the variance in an indicator is explained by its latent variable.

Composite reliability (CR) (also known as construct reliability) can be calculated for each latent variable. It is a measure of the proportion of variance in the latent variable shared between all its indicators. Hence it is a measure of convergent validity or the degree to which the indicators converge on to the construct. CR is calculated from the squared sum of the (standardised) factor loadings divided by the sum of that value and the sum of the error variances for each factor loading, and should ideally exceed 0.7 for good reliability (Hair, Black, Babin, Anderson and Tatham, 2006).

5.4.7.2 Unidimensionality

A well-specified measurement model assumes that constructs are unidimensional, and that the measures in a scale associated with a latent construct measure that construct only (Gerbing and Anderson, 1984). Unidimensionality means that each indicator has only one underlying construct, and a unidimensional scale consists of only unidimensional indicators (Ping, 2004; Steenkamp and van Trijp, 1991). Where a model contains more than one construct, unidimensionality exists when there are no cross loadings (i.e. no indicators which load on more than one construct and cross-loadings are set to zero), and all covariances between error variances are also zero (Hair, Black, Babin, Anderson and Tatham, 2006). Therefore in SEM the researcher specifies the measurement model using unidimensional measures and a good model fit suggests that unidimensionality

exists (Ping, 2004). A model which fulfils these conditions is known as a congeneric model (Hair, Black, Babin, Anderson and Tatham, 2006).

5.4.7.3 Validity

Validity is "the degree to which instruments truly measure the constructs which they are intended to measure" (Peter, 1979, p. 16). Construct validity is assessed through face validity, nomological validity, convergent validity and discriminant validity. Face validity concerns whether the scale of items captures what it seeks to measure (Churchill, 1979), and how well the items match the definition of a construct as it was originally conceptualised (Ping, 2004). Nomological validity refers to whether the predicted relationships in the model are supported by the measures. The researcher identifies theoretical relationships between constructs from prior research and then assesses whether the scale similarly measures these relationships. If these relationships are confirmed by the measures, nomological validity can be said to exist (Hair, Black, Babin, Anderson and Tatham, 2006).

Convergent validity represents how well measures of the same construct are correlated (De Vellis, 2003). A measure of convergent validity is Average Variance Extracted (AVE). AVE measures the amount of variance captured by the intended construct relative to the variance relating erroneously to other constructs not hypothesised as related in the model (Diamantopoulos and Siguaw, 2000). The AVE of a construct is the sum of the squared (standardised) factor loadings divided by the number of indicators (Hair, Black, Babin, Anderson and Tatham, 2006; Ping, 2004). AVE values of more than 0.5 show that the scale of items will converge on to that construct more than on any other construct in the model (Fornell and Larcker, 1981; Ping, 2004).

Discriminant validity, on the contrary, tests that a construct does not correlate highly with any other construct to which it is not conceptually related (Churchill, 1979; Ping, 2004). Discriminant validity of a construct can be tested by assessing correlations with other constructs. Correlations between two constructs which are below an absolute value of 0.7 (or squared correlations below 0.5) show that these pairs of constructs are distinct and hence discriminant validity exists (Ping, 2004).

A more rigorous test of discriminant validity is to use AVE tests. As described by Ping (2004): "If the squared correlation between constructs (r^2) is less than either of their individual AVEs, this suggests the constructs each have more error-free (extracted) variance than variance shared with other constructs (r^2). In other words, they are more internally correlated than they are with other constructs. This in turn suggests discriminant validity" (p. 132). This is the method used to assess discriminant validity in the data analysis reported in the following Chapter.

5.4.7.4 Common method variance

In addition to reliability and validity, another concern is the issue of common method variance (CMV). CMV is "variance that is attributable to the measurement method rather than to the constructs the measures represent" (Podsakoff, MacKenzie, Lee and Podsakoff, 2003, p. 879). This is of particular concern when the survey method is cross-sectional, when self-reported perceptual data on both the independent and dependent variables is gathered concurrently from respondents (Chang, van Witteloostuijn and Eden, 2010). CMV can create a false internal consistency whereby correlations are found between variables due to their common source, rather than the existence of a valid relationship (Chang, van Witteloostuijn and Eden, 2010).

Methods to avoid CMV have been discussed in the previous chapter (Sections 4.5.2 and 4.5.3), and include using different sources of information, creating temporal separation, randomly mixing the order of questions and varying the response formats (Podsakoff, MacKenzie, Lee and Podsakoff, 2003; Rindfleisch, Malter, Ganesan and Moorman, 2008). In the town centre image survey, it was not possible to implement the first two methods, for practical reasons, although questions were randomised and response formats varied.

There are also several statistical remedies available to control for CMV. One of the most common is Harman's single-factor test. This method is based on the assumption that a substantial amount of CMV is present if, using either exploratory or confirmatory factor analysis, all variables can be demonstrated to load on to one factor, or a single factor accounts for the majority of covariance among measures

(Chang, van Witteloostuijn and Eden, 2010; Podsakoff, MacKenzie, Lee and Podsakoff, 2003). A more rigorous method is to use the marker variable technique (Lindell and Whitney, 2001). A marker variable is included in the analysis which is not theoretically related to the other variables in the study. Any relationships observed between the marker and the other variables not hypothesised to be related to it are assumed to be due to CMV (Podsakoff, MacKenzie, Lee and Podsakoff, 2003).

5.4.8 Cross-validation

Once the fit of the CFA model has been improved through deleting and adding parameters, the model is no longer confirmatory but becomes exploratory (Bollen, 1989). As Tabachnick and Fidell (2007) note, “if numerous modifications of a model are tested in hopes of finding the best-fitting model, the researcher has moved to exploratory data analysis and appropriate steps need to be taken to protect against inflated Type 1 error levels” (p. 682). Researchers are urged to use caution in assessing significance levels, since there is the possibility that the research has achieved good fit through capitalising on chance (Steenkamp and van Trijp, 1991). Hence cross-validation is recommended before the modified model can be accepted as having good fit.

There are several ways of cross-validating the modified measurement model. Researchers are often advised to reassess the modified model by collecting a new sample of data from the original population (Anderson and Gerbing, 1988; Diamantopoulos and Siguaw 2000). Otherwise the modified model is specific to the original sample only and may not fit when applied to any other sample (Kelloway, 1998). However, collecting new data to validate the measurement model is not realistic in many research situations, and other methods have also been proposed. Cross-validation may be assessed using the original sample which is divided into two smaller, not necessarily equal, samples. One of these smaller samples, a calibration sample, is used to develop the best-fitting model and the other, a validation sample, is used to test the modified model (Diamantopoulos and Siguaw 2000).

Where two or more groups are used to cross-validate a model, this process can also be carried out using multigroup invariance (Byrne, 2010; Steenkamp and Baumgartner, 1998). Multigroup invariance determines the degree to which one sample produces the same results as another sample on the same model, and is determined by applying progressively more rigorous tests across samples (Hair, Black, Babin, Anderson and Tatham, 2006). Initially, loose cross-validation is performed where the same CFA model is tested separately on one sample, then this procedure is repeated with the validation sample. If the fit of the model is acceptable in both groups, the researcher may have confidence that there is evidence of cross-validation. However, with loose cross-validation, there is no statistical comparison of fit between the groups (Hair, Black, Babin, Anderson and Tatham, 2006).

Instead, the researcher progresses to tight cross-validation whereby increasingly stringent tests are performed to compare groups simultaneously (Steenkamp and van Trijp, 1991). First, a baseline model is established in which the same CFA model is tested on both samples simultaneously but all parameters are freely estimated, meaning they are not constrained and can vary between the groups. If this model has good fit, there is some evidence that cross-validation can be demonstrated and configural invariance exists (Byrne, 2010). This baseline model and its fit statistics provide the basis for comparison for the next, progressively more stringent, tests.

First, the factor loadings are constrained to be equal and, if there is equivalence in factor structure across samples, this provides good evidence of cross-validation. This is known as partial cross-validation. The samples are then compared with both loadings and covariances constrained and the final, most stringent, test compares groups with loadings, covariances and error variances constrained (Byrne, 2010; Hair, Black, Babin, Anderson and Tatham, 2006; Steenkamp and van Trijp, 1991). The final test is however considered excessively restrictive in most cases (Byrne, 2004; Byrne, 2010; Hair, Black, Babin, Anderson and Tatham, 2006). As each test is carried out, the model fit is assessed by examining the difference in the chi-square statistic ($\Delta \chi^2$) for that test compared with chi-square for the previous level of testing. An insignificant $\Delta \chi^2$ as the constraints are

progressively added demonstrates that there is no worsening of fit and hence invariance can be assumed, giving confidence that the model fits well across all samples.

Because of the sensitivity of the chi-square statistic to sample size, an alternative method of assessing multi group invariance is sometimes used. Particularly if sample sizes are very small or very large, invariance can be assessed by examining changes in other relevant fit statistics as the constraints become progressively more stringent (Baumgartner and Steenkamp, 1998; Netemeyer and Maxham, 2007). In particular, assessment of the change in CFI values has been proposed as a measure of invariance (Byrne, 2010; Cheung and Rensvold, 2002). If the difference in CFI (ΔCFI) between each progressively constrained model is below 0.01, then invariance may be assumed and the model can be said to fit well across all samples (Byrne, 2010).

In summary, having tested and modified the measurement model through CFA and satisfactorily assessed its reliability and validity, the researcher is then prepared to progress to the next stage of SEM, assessing the structural model.

5.5 Structural model

In contrast to the measurement model which measures relationships between the latent constructs and their indicators, the structural model specifies relationships between the latent constructs to evaluate whether the theoretical relationships specified in the conceptual framework compare with the data (Diamantopoulos and Siguaw, 2000). Using SEM to assess the structural model is a preferable statistical technique to other regression methods, since even with a simple model SEM uses all the available information relating to all the constructs in a simultaneous analysis (Hair, Black, Babin, Anderson and Tatham, 2006).

Assessment of the structural model follows the same procedures as those for the measurement model, including goodness-of-fit measurement and model modification. Measures of fit of the structural model should be close to those of the measurement model. However model fit will not be equal, and a structural model

whose fit is much worse than the measurement model suggests that the hypotheses lack reliability. Unlike the measurement model, the validity of the structural model is additionally measured through the assessment of the magnitude, direction and significance of the structural relationship parameters (Hair, Black, Babin, Anderson and Tatham, 2006).

The structural model represents the researcher's theory, with path diagrams showing specified paths between exogenous and endogenous latent variables representing the hypothesised relationships between the constructs. These paths are assessed for their direction and significance according to the researcher's hypotheses (Hair, Black, Babin, Anderson and Tatham, 2006). Firstly, the signs of the parameters representing the paths are examined to assess whether the relationships between the specified variables are positive or negative as hypothesised. Secondly the magnitudes of the estimated parameters indicate the strength of the relationships between the variables. These should be significant, as demonstrated by *t*- values, or critical ratio (C.R.) values above ±1.96. Thirdly, the squared multiple correlations for the structural equations show the amount of variance in each endogenous latent variable which is accounted for by its exogenous variable, with values closer to 1 accounting for greater amounts of variance explained (Diamantopoulos and Siguaw, 2000).

Structural models can be modified as a result of the goodness-of-fit indices in a similar way to measurement models, with parameters added or deleted as the modification indices demonstrate improved fit. This results in post hoc analysis, in that the modified model now tests relationships which were not hypothesised in the original conceptual framework. Any relationship derived from post hoc analysis is based on only empirical evidence which may reflect chance associations, and not on theoretical development (Bentler and Chou, 1987). The model may fit well but may not be generalisable. Therefore, similar to measurement models, modified structural models should be cross-validated before accepting the model (Hair, Black, Babin, Anderson and Tatham, 2006).

5.6 Chapter summary

In summary, this chapter has described the preparation of the data for statistical analysis and outlined the procedures involved in carrying out the analysis. The results of empirically testing the data against the model of Town Centre Image as hypothesised will be presented in the next chapter.

Chapter Six: Analysis of the Town Centre Image Model

> *"Environmental images are the result of a two-way process between the observer and his environment. The environment suggests distinctions and relations, and the observer … selects, organizes, and endows with meaning what he sees. The image so developed now limits and emphasises what is seen, while the image itself is being tested against the filtered perceptual input in a constant interacting process" (Lynch, 1960, p. 6)*

6.1 Introduction

Following the procedures outlined in the preceding chapter, Structural Equation Modelling was accordingly the statistical analysis method chosen to assess the model of town centre image as hypothesised in Chapter Three. Since the measurement items forming the indicators of the latent variables have been drawn from previous literature, which is not always in the town centre image domain, the reliability of the scales forming the measurement model first needed to be assessed through Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA).

Initially the scales measuring each individual construct were assessed using EFA and then CFA, following which a measurement model was created from all variables relating to the Overall Town Centre Image construct. Examination of the fit measures for this model indicated that scale purification was necessary. The final purified measurement model demonstrated good fit. The variables measuring Overall Town Centre Image were next entered into a higher order model, which again demonstrated good fit, giving confidence in the existence of the town centre image construct. This model was entered into a structural model with Loyalty as the Dependent Variable (DV) to test for validity and reliability. The structural model was validated through cross-validation, using multigroup invariance, testing the model by splitting the sample according to the three town centres where data was collected. Finally a comparison of the images of the three town centres was carried out. The results of these stages of the data analysis using SEM will be discussed in turn in the following sections of this chapter.

6.2 Software used

The three most popular SEM computer programs available are LISREL, EQS and AMOS. The program selected for this research was AMOS v.18, due to its user-friendly and intuitive graphical interface and its ready availability to the researcher. AMOS allows the model to be input graphically directly into the software program.

6.3 Inter-item correlation matrix

Before carrying out SEM, a correlation matrix of all items to be entered into the measurement model (see Table 6.) was produced using SPSS v.18 and examined to perform an initial assessment of scale validity. The matrix is reproduced in Appendix 2. Strong correlations between items within a scale can be assumed to indicate that these items share a common cause and therefore measure the same construct (De Vellis, 2003). Conversely, items with low correlations within a scale suggest they may become candidates for deletion during measure purification. Although there is debate as to a definitive level of inter-item correlation, levels around 0.4 or 0.5 are considered acceptable (Clark and Watson, 1995).

Items measuring the constructs of Assortment, Accessibility, Layout and Self Image showed strong and positive inter-item correlations with all other items measuring the same construct (ranging between 0.495 and 0.815). Items measuring Non Retail had slightly lower inter-item correlations (between 0.366 and 0.508). Other constructs were not so straightforward. All Atmosphere item correlations were reasonably good (between 0.473 and 0.761) except for correlations involving ATMOS3 and ATMOS7; the correlation between these two items was well below the expected value at 0.011 and non-significant, suggesting serious problems with these items. This finding was surprising since these items measured “busy” and “not too crowded” and at face value would be expected to be linked in meaning, although potentially showing a negative correlation. The reason for this finding was unclear, although one explanation could be the effect of negative wording, since confusion caused by mixing positively and negatively worded items can adversely affect consistency in response (Ping, 2004; Steenkamp and Burgess, 2002; Swain, Weathers and Niedrich, 2008).

Items measuring the Affect construct similarly showed an uneven pattern, with most items correlating between 0.3 and 0.749. However, the correlation between EMOTION5 (“excited/calm”) and the remaining Affect items was generally lower than the average (between 0.192 and 0.556). This suggests that excitement is an emotion which respondents did not associate with the town centres in this study, indicating that EMOTION5 was a poor item to include in the Affect scale.

For the Place Attachment construct, inter-item correlations showed a similarly problematic pattern with correlations ranging below expected values for items measuring this construct (between 0.238 and 0.348). Again this scale may have been affected by its emphasis on negatively-worded items (two items out of the three forming this scale) which may have confused respondents (Ping, 2004; Steenkamp and Burgess, 2002; Swain, Weathers and Niedrich, 2008). Alternatively although the scale was derived from validated measures of shopping centres (Bell, 1999), the poor inter-item correlations suggest that Place Attachment may not be a construct which respondents associate with shopping specifically in a town centre.

The Loyalty items showed good correlations, ranging from 0.457 to 0.831. However while the first three items correlated strongly with each other, correlations with LOYALTY4 were lower on average suggesting that this item, in reflecting repatronage intentions, may not be closely linked with the other three items, which refer to word of mouth recommendation in the minds of respondents.

Items reflecting different constructs which correlated more highly than expected were also examined. Correlations above 0.7 were found in two instances. The unexpected high levels of correlation between ASSORT6 and LOYALTY2 (0.712) and between LAYOUT3 and NONRETAIL4 (0.823) were both of concern. However, there appeared to be no substantive reason for the high correlations between these two pairs of items. The problems associated with ATMOS3, ATMOS7, LAYOUT3, NONRETAIL4, EMOTION5, LOYALTY4 and the Place Attachment construct were noted as potentially contributing to poor model fit in subsequent analysis.

Table 6. Items entered into initial measurement model

Construct	Item label	Item wording
Assortment	ASSORT1	The choice of major stores
1=extremely poor	ASSORT2	The variety of stores
7=extremely good	ASSORT3	The quality of stores
1=very strongly disagree	ASSORT4	The products offered in this town centre are fashionable
7=very strongly agree	ASSORT5	The range of products in this town centre is good
	ASSORT6	The quality of the products in this town centre is high
	ASSORT7	I can buy well-known brands
Accessibility	ACCESS1	I can get to the town centre easily
1=very strongly disagree	ACCESS2	I can get to the town centre reasonably quickly from my home
7=very strongly agree	ACCESS3	It is convenient to get to the town centre
Layout	LAYOUT1	The layout makes it easy to get to the stores I want
1=very strongly disagree	LAYOUT2	The layout makes it easy to get to places to eat or drink
7=very strongly agree	LAYOUT3	The layout makes it easy to get to the other town centre services e.g. travel agents, museum, gym, library, etc
	LAYOUT4	Overall the layout makes it easy to get around this town centre
Non Retail	NONRETAIL1	I can find lots of places to eat or drink in the town centre
1=very strongly disagree	NONRETAIL2	The town centre offers a large variety of entertainment e.g. bars, clubs, theatres, etc
7=very strongly agree	NONRETAIL3	The town centre has good banking and financial services
	NONRETAIL4	The town centre offers a good range of services other than shopping e.g. travel agents, museum, gym, library, etc
Atmosphere	ATMOS1	The town centre is attractive
1=very strongly disagree	ATMOS2	The town centre is a safe place
7=very strongly agree	ATMOS3	The town centre is busy
	ATMOS4	The town centre is relaxed
	ATMOS5	The town centre is friendly
	ATMOS6	The town centre is personal
	ATMOS7	The town centre is not too crowded
Affect		How do you feel when shopping in this town centre?
to what extent do you feel? scale of 1 to 7	EMOTION1	Sleepy/awake
	EMOTION2	Bold/timid
	EMOTION3	Happy/unhappy
	EMOTION4	Satisfied/dissatisfied
	EMOTION5	Excited/calm
	EMOTION6	Energetic/lethargic
	EMOTION7	Disgusted/delighted
	EMOTION8	Bored/stimulated
	EMOTION9	Annoyed/pleased

Cont ……

Construct	Item label	Item wording
		Cont …
Self Image	SELFIMAGE1	This town centre is consistent with how I see myself
1=very strongly disagree	SELFIMAGE2	This town centre reflects who I am
7=very strongly agree	SELFIMAGE3	People similar to me shop here
	SELFIMAGE4	The kind of person who typically shops here is very much like me
	SELFIMAGE5	I can identify with the typical person who shops here
Place Attachment	PLACEATT1	I do not feel emotionally attached to the town centre
1=very strongly disagree	PLACEATT2	The town centre has personal meaning for me
7=very strongly agree	PLACEATT3	I do not feel a sense of belonging to the town centre
Loyalty	LOYALTY1	I would say positive things about this town centre
1=very strongly disagree	LOYALTY2	I would recommend this town centre
7=very strongly agree	LOYALTY3	I would encourage friends and relatives to visit
	LOYALTY4	I will shop here more frequently in the next few years

6.4 Exploratory Factor Analysis

The next stage of the analysis, using Exploratory Factor Analysis (EFA) in SPSS v.18, aimed to carry out a preliminary validation of the item scales and their loadings onto their intended constructs. The sample size of 816 was more than adequate for carrying out the analysis, which requires a minimum of 10 cases per item (Hair, Black, Babin, Anderson and Tatham, 2006). Accordingly the 42 items measuring the eight constructs hypothesised as reflecting the Town Centre Image construct were analysed simultaneously in EFA.

Using principal components analysis and direct oblimin rotation, a solution of seven factors was obtained, with 63.31% cumulative variance extracted (see Appendix 3). Given the sample size exceeded the recommended level of 350, factor loadings of above 0.3 were reported as the minimum required for definition of the factor structure (Hair, Black, Babin, Anderson and Tatham, 2006). Six constructs were represented by their hypothesised items as expected. These constructs were Assortment, Accessibility, Atmosphere, Affect, Self Image and Place Attachment. The seventh factor which emerged from the EFA combined all items measuring Layout and Non Retail into one single factor, with loadings

ranging between 0.306 and 0.689. The resulting factor was the source of some concern, but in the absence of theoretical reasoning as to why the Layout and Non Retail items loaded on to the same factor, these results were noted but no action was taken at this stage. The set of 42 items hypothesised as representing the eight constructs of Town Centre Image, together with the four items measuring the dependent variable of Loyalty, were then entered into the next, and more stringent, stage of model modification and scale purification of the analysis using SEM.

6.5 Confirmatory Factor Analysis for individual constructs

The first stage of the SEM analysis process involved Confirmatory Factor Analysis. Confirmatory Factor Analysis (CFA) was carried out to assess the psychometric properties of the measurement scales in advance of hypothesis testing (Kelloway, 1998). The purpose of the Confirmatory Factor Analysis was to obtain a set of valid and reliable measures for testing the structural model. All items hypothesised as manifest indicators representing the constructs of interest (see Table 6.) were entered into individual CFA models using AMOS v.18 with Maximum Likelihood estimation (ML). Since the CFA procedure requires that the researcher determines the relationships between latent variables and their indicators in advance, the constructs and indicators in the model were entered into the individual measurement models in AMOS as specified in Table 6.

Each latent variable and the indicators it reflects were submitted to CFA individually to establish how well the items represent the construct (Ping, 2004). Each of the scales in turn was examined for unidimensionality, goodness of fit, reliability and validity before using this information to subsequently assess the complete measurement model. Investigation was focussed on examining the factor loadings of each path, examining measures of goodness of fit where available, and calculating reliability and validity measures including composite reliability (CR) and average variance extracted (AVE).

Factor loadings indicate convergent validity, in that a statistically significant high loading on a factor indicates that an item converges on that factor. As explained in Section 5.4.7.1, convergent validity exists if the loadings of each indicator on the

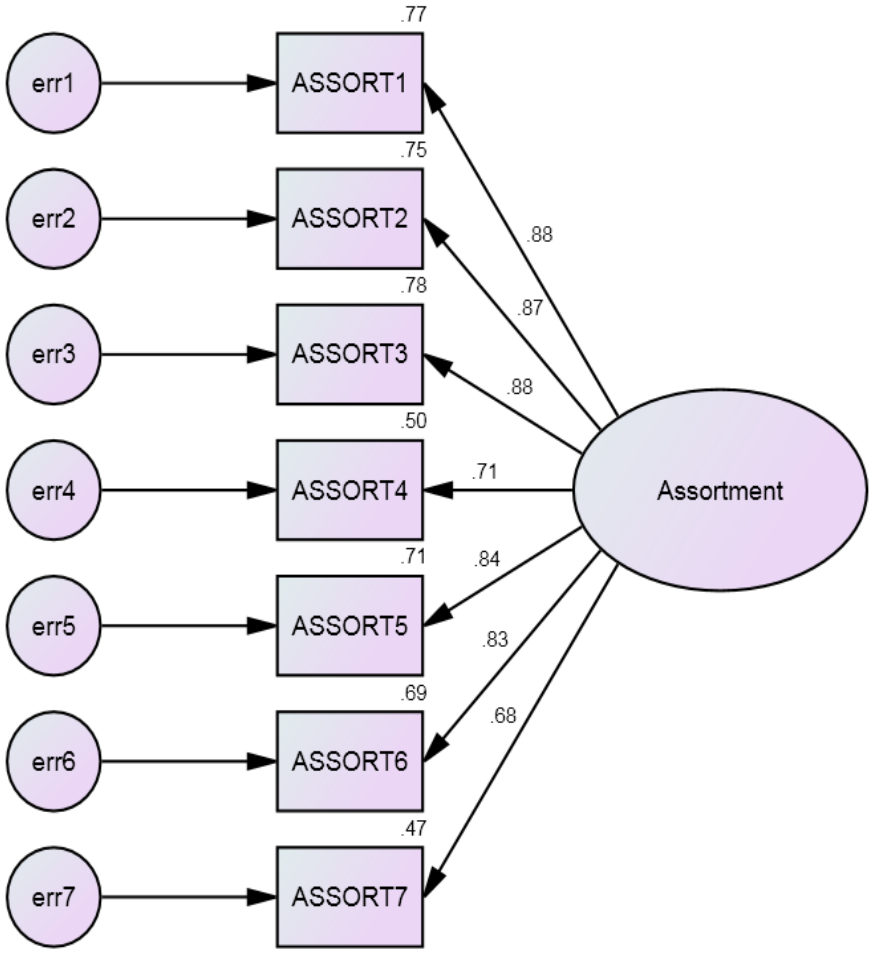
construct they measure are acceptably high (Anderson and Gerbing, 1988). Standardised factor loadings should be at least 0.5 and ideally 0.71, since the square of a standardised factor loading represents the amount of variance in an item that is explained by the latent construct, the residual loading being error (Hair, Black, Babin, Anderson and Tatham, 2006). Composite reliability (CR) should be above 0.7 for good reliability and AVE should exceed 0.5 for convergent validity (Hair, Black, Babin, Anderson and Tatham, 2006).

Assessment of each of the latent constructs is presented in turn in the following section.

6.5.1 Assortment scale

All items on the Assortment variable exceeded the cut-off standardised loading value of 0.5, with except one (ASSORT7 at 0.68) exceeding the recommended value of 0.7. Average variance extracted (AVE) for the Assortment construct was 0.668 which exceeded the criterion for validity of 0.5. Composite reliability (CR) was 0.933, again comfortably exceeding the required value of 0.7. However, all fit indices demonstrated that the fit of this scale of items was poor. The χ^2 /df ratio at 21.943 was well above the recommended level of 2. GFI at 0.886 fell below the recommended value of 0.90, and TLI at 0.904 was below 0.95, as was CFI at 0.936. RMSEA at 0.160 was well above the limit for even mediocre fit of 0.10. Hence although on first sight the Assortment items appeared to perform well, goodness of fit measures indicate that modification would be required to improve the fit of this scale once the full measurement model is assessed.

Figure 6.1 CFA measurement model for Assortment construct



Note: Numbers against arrows represent item factor loadings
Numbers against item boxes represent loadings squared

Table 6.1 Factor loadings, reliability and fit statistics for Assortment scale

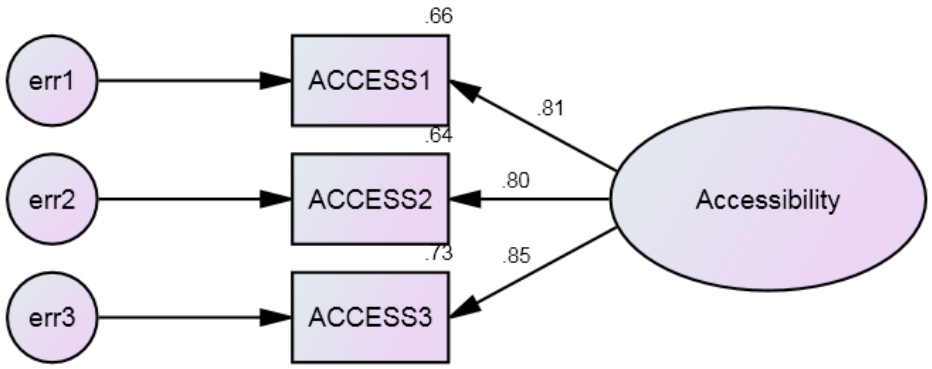
Item	***Description***	***Factor loading***	***R²***	***C.R.****
ASSORT1	The choice of major stores	0.879	0.773	23.036
ASSORT2	The variety of stores	0.869	0.755	22.812
ASSORT3	The quality of stores	0.881	0.776	23.093
ASSORT4	The products offered in this town centre are fashionable	0.706	0.498	18.882
ASSORT5	The range of products in this town centre is good	0.845	0.714	22.248
ASSORT6	The quality of the products in this town centre is high	0.832	0.692	21.953
ASSORT7	I can buy well-known brands	0.685	0.469	23.036
	Composite Reliability = 0.933; Average Variance Extracted = 0.668			
	Fit indices: χ^2= 307.204, df = 14, χ^2 /df = 21.943, p = < 0.001,			
	GFI = 0.886, TLI = 0.904, CFI = 0.936, RMSEA = 0.160			

R² represents squares of factor loadings, C.R. represents critical ratios
**Critical C.R values = 1.96 (p = <0.05)*

6.5.2 Accessibility scale

Factor loadings on all items exceeded 0.7. No fit indices were returned by AMOS since the construct has only three items, making the model just identified. However, other measures supported the reliability of the Accessibility scale. Average variance extracted was 0.675 and composite reliability reached 0.862. Hence the Accessibility construct showed good reliability and convergent validity with no concerns at this stage prior to entering the Accessibility items into the full measurement model.

Figure 6.2 CFA measurement model for Accessibility construct



Note: Numbers against arrows represent item factor loadings
Numbers against item boxes represent loadings squared

Table 6.2 Factor loadings, reliability and fit statistics for Accessibility scale

Item	*Description*	*Factor loading*	*R^2*	*C.R.**
ACCESS1	I can get to the town centre easily	0.812	0.659	24.156
ACCESS2	I can get to the town centre reasonably quickly from my home	0.800	0.640	23.921
ACCESS3	It is convenient to get to the town centre	0.852	0.726	24.156
	Composite Reliability = 0.862; Average Variance Extracted = 0.675			
	No fit indices available as model just identified			

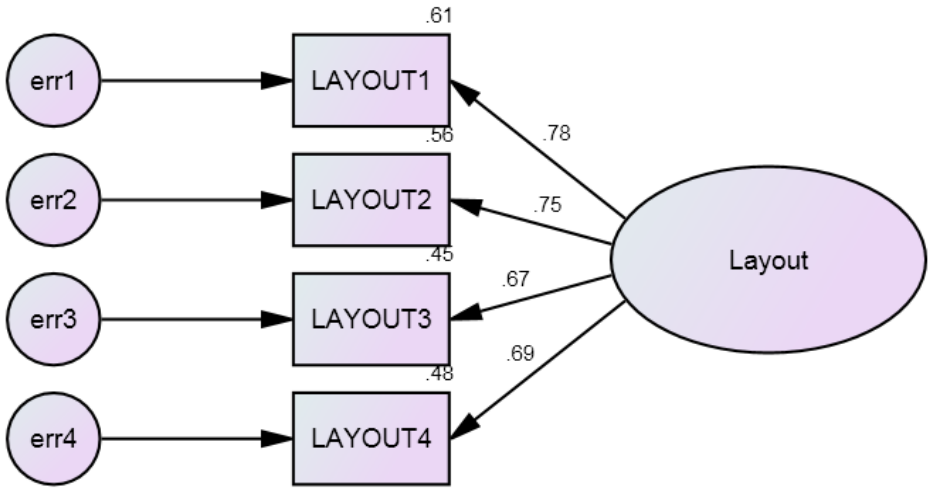
R^2 represents squares of factor loadings, C.R. represents critical ratios
**Critical C.R values = 1.96 (p = <0.05)*

6.5.3 Layout scale

Standardised factor loadings on the Layout variable again either approached or exceeded the preferred cut-off value of 0.7. Average variance extracted was 0.525 and composite reliability was 0.815, both measures exceeding their required

value. Goodness of fit measures were good, with GFI at 0.994 exceeding the required value of 0.90, and TLI at 0.979 and CFI at 0.993 exceeding the required value of 0.95. RMSEA at 0.067 indicated a reasonable fit. However, the result of the χ^2/df ratio at 4.649 was higher than the desirable level of 2, suggesting that the items measuring the Layout construct would potentially need modification once the full measurement model was assessed.

Figure 6.3 CFA measurement model for Layout construct



Note: Numbers against arrows represent item factor loadings
Numbers against item boxes represent loadings squared

Table 6.3 Factor loadings, reliability and fit statistics for Layout scale

Item	*Description*	*Factor loading*	*R^2*	*C.R.**
LAYOUT1	The layout makes it easy to get to the stores I want	0.781	0.610	17.965
LAYOUT2	The layout makes it easy to get to places to eat or drink	0.750	0.563	17.578
LAYOUT3	The layout makes it easy to get to the other town centre services e.g. travel agents, museum, gym, library, etc	0.670	0.449	16.157
LAYOUT4	Overall the layout makes it easy to get around this town centre	0.693	0.480	16.157
	Composite Reliability = 0.815; Average Variance Extracted = 0.525			
	Fit indices: χ^2= 9.298, df = 2, χ^2/df = 4.649, p = < 0.001, GFI = 0.994, TLI = 0.979, CFI = 0.993, RMSEA = 0.067			

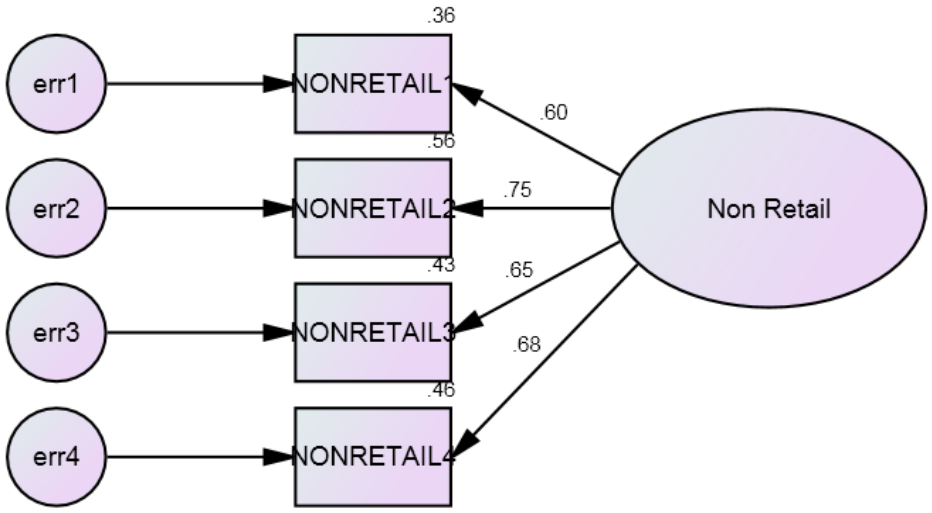
R^2 represents squares of factor loadings, C.R. represents critical ratios
**Critical C.R values = 1.96 (p = <0.05)*

6.5.4 Non Retail scale

All Non Retail factor loadings reached the cut off value of 0.5; however only one item (NONRETAIL2) exceeded the more desirable level of 0.7. Although the

composite reliability for the 4-item construct was good at 0.767, the AVE value of 0.453 was below the criterion for construct validity of 0.5. This indicates potential cause for concern with the items measuring the Non Retail construct, and demonstrates that this scale needs modification. GFI at 0.996, TLI at 0.984, CFI at 0.995 and RMSEA at 0.050 all reached the required levels for good fit. However, the χ^2/df ratio = 3.061 exceeded its recommended level of 2. These somewhat contradictory results from the CFA examination of the Non Retail construct were noted for future reference in the analysis of the full measurement model.

Figure 6.4 CFA measurement model for Non Retail construct



Note: Numbers against arrows represent item factor loadings
Numbers against item boxes represent loadings squared

Table 6.4 Factor loadings, reliability and fit statistics for Non Retail scale

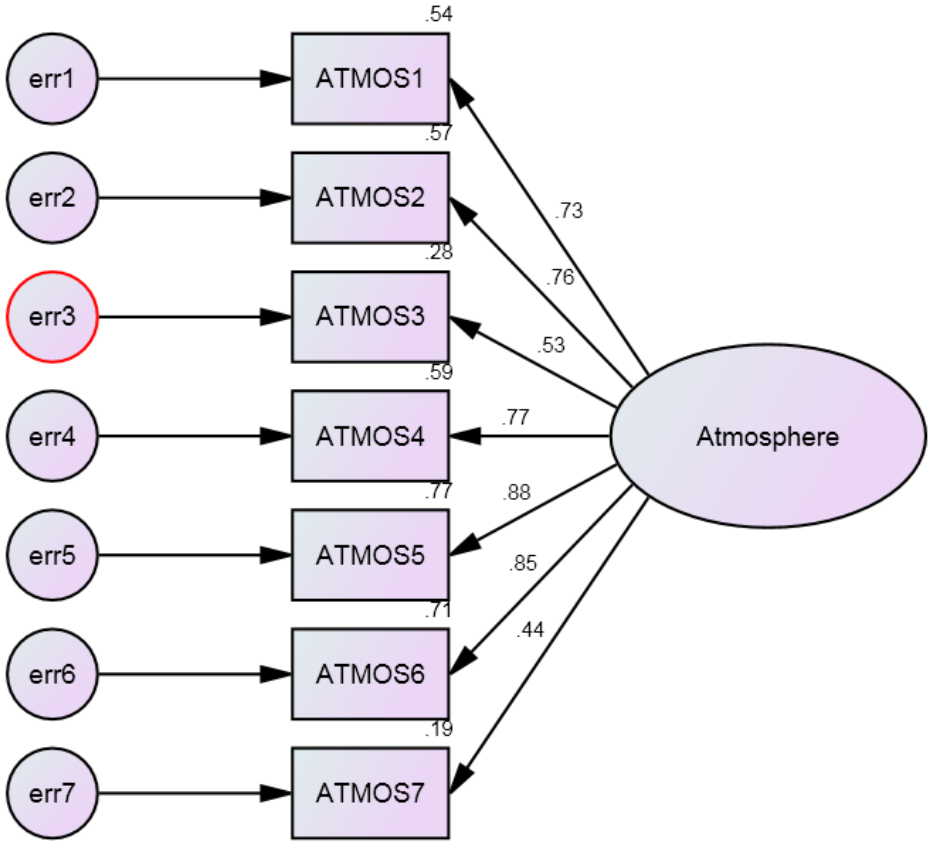
Item	***Description***	***Factor loading***	***R^2***	***C.R.****
NONRETAIL1	I can find lots of places to eat or drink in the town centre	0.604	0.365	13.177
NONRETAIL2	The town centre offers a large variety of entertainment e.g. bars, clubs, theatres, etc	0.746	0.557	15.412
NONRETAIL3	The town centre has good banking and financial services	0.655	0.429	13.177
NONRETAIL4	The town centre offers a good range of services other than shopping e.g. travel agents, museum, gym, library, etc	0.680	0.462	14.414
	Composite Reliability = 0.767; Average Variance Extracted = 0.453 Fit indices: χ^2= 6.121, df = 2, χ^2/df = 3.061, p = < 0.001, GFI = 0.996, TLI = 0.984, CFI = 0.995, RMSEA = 0.050			

R^2 represents squares of factor loadings, C.R. represents critical ratios
**Critical C.R values = 1.96 (p = <0.05)*

6.5.5 Atmosphere scale

Of the seven items measuring the Atmosphere variable, two items (ATMOS3 “busy” and ATMOS7 “not too crowded”), which had already suggested cause for concern in the inter-item correlation matrix, failed to reach a factor loading value of 0.7. The remaining loadings exceeded 0.7. The AVE and CR were satisfactory, at 0.522 and 0.880 respectively. However, the majority of fit indices indicated that the Atmosphere scale did not reflect the construct well. The χ^2/df ratio at 18.55 was well above the recommended level of 2. Although GFI at 0.908 exceeded its recommended value of 0.90, the remaining fit indices were poor, with neither TLI at 0.875 nor CFI at 0.917 reaching the recommended level of 0.95, and RMSEA at 0.147 exceeding the level for even mediocre fit of 0.10 by a considerable amount. On the basis of the AVE and CR results, the Atmosphere scale was entered into the full measurement model but was expected to be subject to modification following further analysis.

Figure 6.5 CFA measurement model for Atmosphere construct



Note: Numbers against arrows represent item factor loadings
Numbers against item boxes represent loadings squared

Table 6.5 Factor loadings, reliability and fit statistics for Atmosphere scale

Item	*Description*	*Factor loading*	*R^2*	*C.R.**
ATMOS1	The town centre is attractive	0.733	0.537	12.074
ATMOS2	The town centre is a safe place	0.757	0.573	12.231
ATMOS3	The town centre is busy	0.534	0.285	10.495
ATMOS4	The town centre is relaxed	0.765	0.585	12.255
ATMOS5	The town centre is friendly	0.875	0.766	12.766
ATMOS6	The town centre is personal	0.845	0.714	12.647
ATMOS7	The town centre is not too crowded	0.439	0.193	12.074
	Composite Reliability = 0.880; Average Variance Extracted = 0.522			
	Fit indices: χ^2= 259.775, df = 14, χ^2 /df = 18.555, p = < 0.001, GFI = 0.908, TLI = 0.875, CFI = 0.917, RMSEA = 0.147			

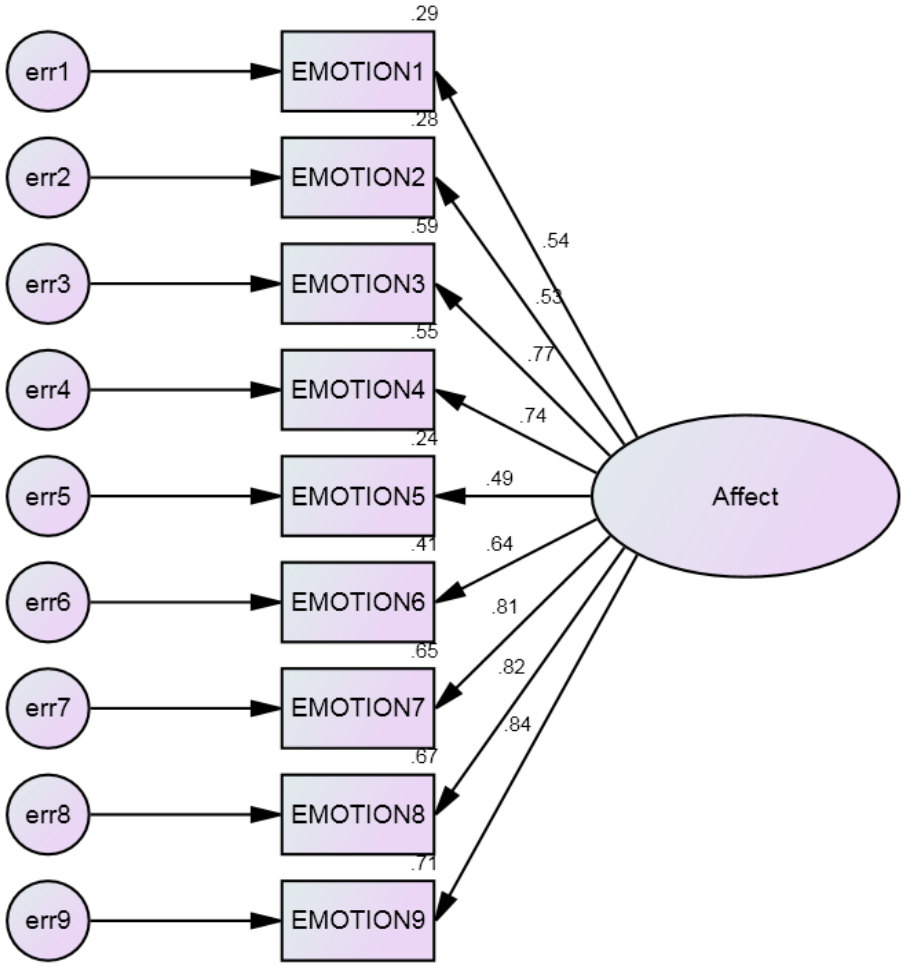
R^2 represents squares of factor loadings, C.R. represents critical ratios
**Critical C.R values = 1.96 (p = <0.05)*

6.5.6 Affect scale

Only five of the factor loadings on the Affect construct reached a level of 0.7. As well as the EMOTION5 item identified as problematic from the inter-item correlation matrix, items relating to sleepy/awake (EMOTION1) and bold/timid (EMOTION2) also demonstrated factor loadings of below 0.7, at 0.54 and 0.53 respectively. The item measuring energetic/ lethargic (EMOTION6) at 0.64 also loaded below 0.7, although as this was well above the lower level of 0.5, it provided less cause for concern. In addition, the AVE for Affect only reached 0.489, indicating that over half of the variance in the Affect item scale was accounted for by other constructs in the model. However, composite reliability was satisfactory at 0.893.

Goodness of fit indices also highlighted problems with the Affect scale. The χ^2 /df ratio at 16.797 substantially exceeded the recommended level of 2, GFI at 0.871 was below its recommended value of 0.90. The remaining fit indices were poor, with neither TLI at 0.848 nor CFI at 0.886 reaching the recommended value of 0.95, and RMSEA at 0.139 considerably exceeding the level for even mediocre fit of 0.10. On the basis of satisfactory composite reliability, all items proceeded to the full measurement model, although potential problems with the Affect construct were noted for modification during CFA.

Figure 6.6 CFA measurement model for Affect construct



Note: Numbers against arrows represent item factor loadings
Numbers against item boxes represent loadings squared

Table 6.6 Factor loadings, reliability and fit statistics for Affect scale

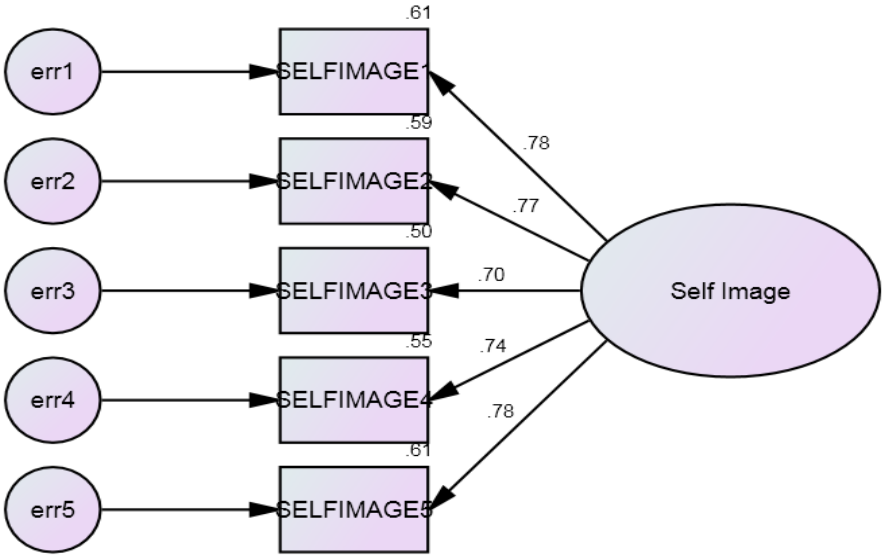
Item	*Description*	*Factor loading*	*R^2*	*C.R.**
	How do you feel while shopping in this town centre? …			
EMOTION1	Sleepy/awake	0.542	0.294	16.412
EMOTION2	Bold/timid	0.531	0.282	15.440
EMOTION3	Happy/unhappy	0.768	0.590	24.602
EMOTION4	Satisfied/dissatisfied	0.743	0.552	23.429
EMOTION5	Excited/calm	0.490	0.240	14.055
EMOTION6	Energetic/lethargic	0.641	0.411	19.351
EMOTION7	Disgusted/delighted	0.806	0.650	27.729
EMOTION8	Bored/stimulated	0.819	0.671	28.467
EMOTION9	Annoyed/pleased	0.841	0.707	24.602
	Composite Reliability = 0.893; Average Variance Extracted = 0.489			
	Fit indices: χ^2= 453.517, df = 27, χ^2 /df = 16.797, p = < 0.001,			
	GFI = 0.871, TLI = 0.848, CFI = 0.886, RMSEA = 0.139			

R^2 represents squares of factor loadings, C.R. represents critical ratios
**Critical C.R values = 1.96 (p = <0.05)*

6.5.7 Self Image scale

All the factor loadings on the Self Image construct exceeded the recommended value of 0.7. Average variance extracted was 0.573 and composite reliability was calculated as 0.870. Hence Self Image demonstrated good reliability and convergent validity at this stage of the analysis. Apart from the χ^2/df ratio which was significantly higher than 2, the other fit indices showed good to mediocre fit. GFI at 0.978 exceeded the recommended value of 0.90, TLI at 0.957 and CFI at 0.979 were both above the recommended value of 0.95, and RMSEA at 0.098 demonstrated acceptable although mediocre fit. All Self Image items therefore progressed to the CFA of the full measurement model.

Figure 6.7 CFA measurement model for Self Image construct



Note: Numbers against arrows represent item factor loadings
Numbers against item boxes represent loadings squared

Table 6.7 Factor loadings, reliability and fit statistics for Self Image scale

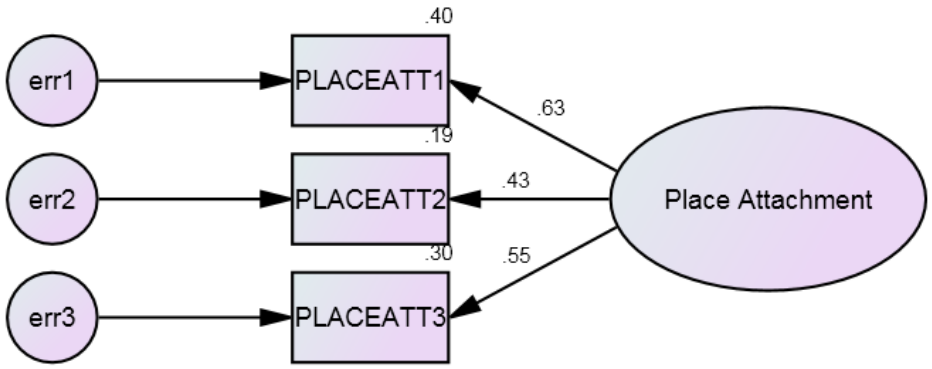
Item	*Description*	*Factor loading*	*R^2*	*C.R.**
SELFIMAGE1	This town centre is consistent with how I see myself	0.781	0.610	22.443
SELFIMAGE2	This town centre reflects who I am	0.769	0.591	22.085
SELFIMAGE3	People similar to me shop here	0.705	0.497	22.062
SELFIMAGE4	The kind of person who typically shops here is very much like me	0.744	0.554	21.296
SELFIMAGE5	I can identify with the typical person who shops here	0.783	0.613	22.443
	Composite Reliability = 0.870; Average Variance Extracted = 0.573			
	Fit indices: χ^2= 44.238, df = 5, χ^2/df = 8.848, p = < 0.001,			
	GFI = 0.978, TLI = 0.957, CFI = 0.979, RMSEA = 0.098			

R^2 represents squares of factor loadings, C.R. represents critical ratios
**Critical C.R values = 1.96 (p = <0.05)*

6.5.8 Place Attachment scale

No fit indices were returned by AMOS since the construct is measured by only three items, making the model just identified. The Place Attachment items did not appear to measure this construct satisfactorily, with none of the three items reaching the preferred factor loading level of 0.7. The AVE was well below the cut-off point of 0.5, at 0.297, and CR similarly failed to reach its minimum value of 0.7, at 0.554. Therefore it was noted that Place Attachment as measured by its indicators did not demonstrate reliability or validity and was therefore eliminated from the testing of the full measurement model. The poor CFA results for Place Attachment support the findings from the correlation matrix which showed a similarly problematic pattern of low inter-item correlations.

Figure 6.8 CFA measurement model for Place Attachment construct



Note: Numbers against arrows represent item factor loadings
Numbers against item boxes represent loadings squared

Table 6.8 Factor loadings, reliability and fit statistics for Place Attachment scale

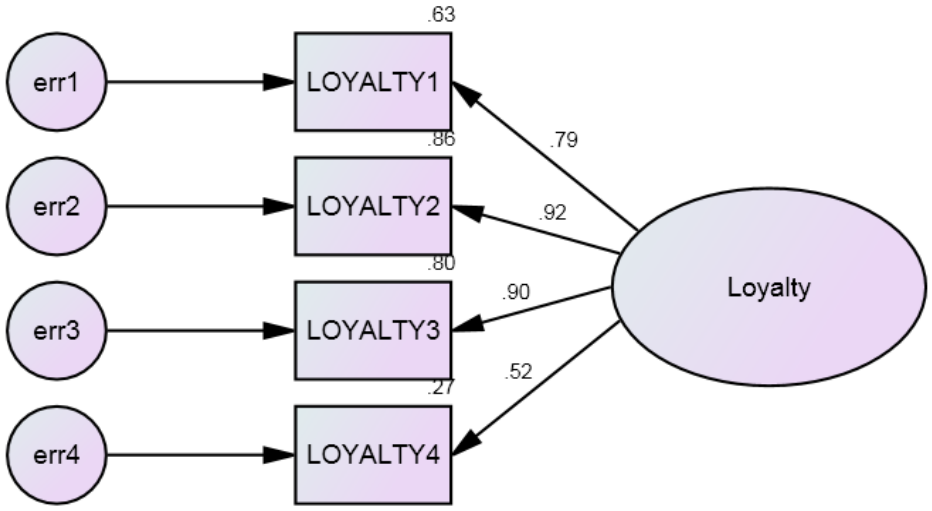
Item	*Description*	*Factor loading*	*R^2*	*C.R.**
PLACEATT1	I do not feel emotionally attached to the town centre	0.634	0.402	6.350
PLACEATT2	The town centre has personal meaning for me	0.434	0.188	7.029
PLACEATT3	I do not feel a sense of belonging to the town centre	0.549	0.301	6.350
	Composite Reliability = 0.554; Average Variance Extracted = 0.297 No fit indices available as model just identified			

R^2 represents squares of factor loadings, C.R. represents critical ratios
**Critical C.R values = 1.96 (p = <0.05)*

6.5.9 Loyalty scale

The Loyalty construct was to be included in the Town Centre Image structural model as the dependent variable. Its role was to confirm nomological validity. Only three items in the Loyalty scale exceeded the preferred cut off level of 0.7, with LOYALTY4 only reaching a factor loading of 0.522. However, the AVE reached 0.641 and CR was 0.873. With the exception of the χ^2/df ratio at 3.392, which was above the preferred level of 2, all fit indices showed good fit. GFI at 0.996 was well above the recommended value of 0.90, TLI at 0.992 and CFI at 0.997 were above 0.95, while RMSEA at 0.054 demonstrated that the Loyalty scale was a reasonable fit. Therefore the Loyalty construct demonstrated good reliability and validity, and all Loyalty items were retained for further analysis in the full structural model.

Figure 6.9 CFA measurement model for Loyalty construct (DV)



Note: Numbers against arrows represent item factor loadings
Numbers against item boxes represent loadings squared

Table 6.9 Factor loadings, reliability and fit statistics for Loyalty scale

Item	*Description*	*Factor loading*	*R^2*	*C.R.**
LOYALTY1	I would say positive things about this town centre	0.795	0.632	29.198
LOYALTY2	I would recommend this town centre	0.925	0.856	36.527
LOYALTY3	I would encourage friends and relatives to visit	0.896	0.803	29.198
LOYALTY4	I will shop here more frequently in the next few years	0.522	0.272	15.949
	Composite Reliability = 0.873; Average Variance Extracted = 0.641 Fit indices: χ^2= 6.783, df = 2, χ^2/df = 3.392, p = < 0.001, GFI = 0.996, TLI = 0.992, CFI = 0.997, RMSEA = 0.054			

R^2 represents squares of factor loadings, C.R. represents critical ratios
**Critical C.R values = 1.96 (p = <0.05)*

6.6 Measurement model CFA

The next step was to enter all the image variables and their measurement scales for analysis into the full measurement model, taking into account the information gained from examination of the correlation indices and the CFAs of the individual constructs.

The first 42 items in Table 6. represent the manifest indicators measuring the eight exogenous variables hypothesised to reflect the image construct as depicted in the conceptual framework in Chapter Three. However, following the poor results in the CFA of the Place Attachment variable, this variable was considered as having poor reliability and was eliminated from further analysis. Therefore the measurement model contained 39 observed or manifest indicators. The size of the sample necessary to produce valid results using SEM was calculated according to Bentler and Chou (1987)'s recommendation of a minimum of 15 cases per item measured. Following this recommendation, with 39 manifest indicators in the model, a minimum of 585 cases was required. The available sample size of 816 cases was considered more than adequate, meaning that all items could be entered into the analysis simultaneously.

The fit of the measurement model was assessed. The results show the initial measurement model did not fit the data well, with $\chi^2 = 3076.833$ and $df = 681$ ($p < .001$), the χ^2 / df ratio was unsatisfactory at 4.518, exceeding the recommended level of 2. For a good fit GFI should exceed 0.90, and TLI and CFI should exceed 0.95. However in this model measures of fit were below acceptable levels, with GFI = 0.820, TLI = 0.874 and CFI = 0.884. RMSEA at 0.066 was however reasonable (Hu and Bentler, 1999).

Where model fit indices indicate that the measurement model is poorly specified, model modification is indicated, always primarily bearing in mind theoretical considerations (Anderson and Gerbing, 1988; Hair, Black, Babin, Anderson and Tatham, 2006). The measurement model was thus subjected to increasingly stringent procedures of modification and scale purification.

Accordingly, the factor loadings, residual statistics and modification indices for this model were examined. Items which were indicated as causing problems were deleted from the model, following the guidelines described above in Section 5.4.6. Problem items were identified as having estimated factor loadings below 0.71, or modification indices showing that parameters would be improved by a considerable amount. Items were removed individually from the model in an iterative process, to ensure that removing an item did not cause problems elsewhere in the model. This process was carried out until no improvement could be discerned. The scale purification process was carried out with theoretical considerations at the forefront of the decision process, so that items were only deleted if substantive theoretical reasoning indicated it was necessary to do so (Byrne, 2010; Diamantopoulos and Siguaw, 2000). The results and model fit indices of each iteration of item deletion are shown in Appendix 4.

After eliminating the problematic items from the measurement model, the goodness-of-fit indices improved to $\chi^2 = 330.925$ and $df = 168$ ($p < .001$), the χ^2 / df ratio at 1.970 was below the recommended level of 2. In this revised measurement model GFI = 0.963, TLI = 0.980, CFI = 0.984, and RMSEA = 0.034. All were well within acceptable levels. The composite reliability (CR) and average variance extracted (AVE) calculations were then performed, when it was observed that the Non Retail items only reached a Composite Reliability level of 0.67, failing to meet the required level of 0.7.

A decision was made to eliminate the remaining Non Retail items from the measurement model. The substantive reasoning for this is that it appears from these results that the Non Retail provision in a town centre may not be a construct which respondents associate with shopping in a town centre. Poor composite reliability suggests that respondents find it difficult to perceive the non retailing functions as a construct related to town centre image. Shoppers may focus entirely on their shopping motives in visiting a town centre, with the more diverse elements of town centre provision appearing less relevant in their image perceptions of the town centre.

Removing the Non Retail construct from the measurement model improved the goodness of fit statistics even further to $\chi^2 = 239.312$ and $df = 137$ ($p < .001$). In the final measurement model the χ^2 / df ratio at 1.747 satisfied the condition of falling below the recommended level of 2. The GFI, TLI and CFI measures were all above 0.95, with GFI = 0.970, TLI = 0.986, CFI = 0.989, and RMSEA = 0.030 was well below 0.06. These results give confidence in the validity of the measurement model in representing consumers' perceptions of town centre image. In addition, the parsimonious fit indices were noted for comparison with subsequent models. PNFI was calculated as 0.781 and PCFI was 0.792. Although parsimonious fit indices have no absolute value, they are useful for comparison when appropriate.

Table 6.10 Reliability and validity statistics after measurement model purification

Composite Reliability		Average Variance Extracted	
Assortment	**0.92**	Assortment	**0.80**
Accessibility	**0.86**	Accessibility	**0.67**
Layout	**0.75**	Layout	**0.60**
Atmosphere	**0.84**	Atmosphere	**0.64**
Affect	**0.87**	Affect	**0.63**
Self Image	**0.85**	Self Image	**0.59**

Once the model was assessed as having good fit, construct validity was again recalculated using CR and AVE. Both CR and AVE scores for the remaining constructs in the model remained good, exceeding their minimum values of 0.7 and 0.5 respectively. Discriminant validity was also assessed at this point. Discriminant validity can be assumed when the variance extracted of any construct exceeds the square of the correlation between that construct and any other in the model, confirming that the constructs each have more variance than variance shared with other constructs (Churchill, 1979; Ping, 2004). Table 6.11 below shows the squared correlations between constructs and AVEs. Bold diagonal elements are AVE. Below diagonal elements are squared correlations at dimensional level. The Table shows that all AVEs exceed all squared correlations for each construct, confirming that discriminant validity exists between the latent constructs in the model.

Table 6.11 Discriminant validity for measurement model

	Assortment	Accessibility	Layout	Atmosphere	Affect	Self Image
Assortment	**0.802**	0.29	0.62	0.557	0.592	0.705
Accessibility	0.084	**0.675**	0.571	0.336	0.308	0.397
Layout	0.384	0.326	**0.604**	0.53	0.562	0.751
Atmosphere	0.310	0.113	0.281	**0.640**	0.559	0.631
Affect	0.350	0.095	0.316	0.312	**0.626**	0.659
Self Image	0.497	0.158	0.564	0.398	0.434	**0.592**

NB. Bold diagonal elements are AVE. Above diagonal are correlations at dimensional level. Below diagonal elements are squared correlations at dimensional level. AVE for a construct should be higher than the squared correlations between that construct and all other constructs.

As a further check as to the validity of the measurement model, multivariate normality was assessed using the Mahalanobis distance test. This test measures each observation's distance from the mean centre of all observations across all variables, and identifies cases which are outliers which could affect normality (Hair, Black, Babin, Anderson and Tatham, 2006). Only eight cases which were significant outliers were found in the entire dataset, representing less than 1% of the data. Together with the benefits of a large sample size, it was concluded that these outliers would have a negligible effect and multivariate normality could be assumed. In addition, the estimation technique adopted for SEM analysis was Maximum Likelihood estimation which is reasonably robust to violations of normality (Hair, Black, Babin, Anderson and Tatham, 2006). Therefore all the remaining variables in the measurement model were demonstrated as reliable and valid.

6.7 Items and constructs in the modified measurement model

The Town Centre Image model, as originally hypothesised, has now been modified to consist of the town centre image construct (Overall Town Centre Image) as a higher order latent construct composed of the six remaining latent constructs of Assortment, Accessibility, Layout, Atmosphere, Affect and Self Image. Apart from Accessibility, the remaining constructs have all been modified by the deletion of items. The latent constructs which were eliminated in full are Non Retail and Place Attachment.

The remaining six latent constructs between them represent the three original dimensions of Functional, Experiential and Symbolic. The functional dimension is now represented by Assortment, Accessibility and Layout. The Experiential dimension is represented by Atmosphere and Affect. The Symbolic dimension is represented by Self Image. One structural path, from Overall Town Centre Image to Loyalty, represents the hypothesised relationship that image has a positive relationship with patronage as represented in this study by Loyalty.

6.7.1 Assortment

The most substantive change has been to Assortment where all items relating to products and brands were deleted, leaving only store-related items. The results from the CFA of Assortment as an individual construct (Table 6. 1) indicated that the Assortment construct had poor fit statistics, (χ^2 = 307.204, df = 14, χ^2 /df = 21.943, p = < 0.001, GFI = 0.886, TLI = 0.904, CFI = 0.936, RMSEA = 0.160). These results predicted that the Assortment scale would need modification in the measurement model. In addition, Table 6.1. shows that factor loadings of two items in the Assortment scale, ASSORT 4 and ASSORT7, barely reached a level of 0.71, suggesting that these items may be poor measures of this construct. A further two items in the Assortment scale, ASSORT5 and ASSORT6, were deleted from the scale when modification indices showed that they both cross-loaded on to items on the Self Image scale.

Assortment as originally hypothesised was defined as the range, type and quality of stores together with the range and quality of products, echoing that used in many retail centre studies (e.g. Bell, 1999; Nevin and Houston, 1980). However, following scale purification, the Assortment scale in the final image model now contains three items, which represent the choice, variety and quality of stores only. The items eliminated from the Assortment construct related to the goods and products which are retailed within the town centre. The reduced scale demonstrated good composite reliability and average variance extracted levels of 0.92 and 0.80 respectively for the remaining items in the Assortment construct (see Table 6.1).

6.7.2 Accessibility

Table 6.2 indicated the Accessibility construct performed well in terms of composite reliability (0.862) and average variance extracted (0.675) in the initial construct CFA. All three Accessibility items were successful in representing the construct throughout model modification, and the Assortment scale remained in the analysis of the structural model as originally hypothesised.

6.7.3 Layout

Layout refers to the ease with which shoppers can move within the town centre itself, as opposed to Accessibility which refers to travel towards the town centre. This construct has been previously identified as an important part of consumer perceptions of a town centre. However, the Layout construct did not perform well in the CFA of the individual Layout construct (Table 6.3). Although measures of fit were satisfactory (GFI = 0.994, TLI = 0.979, CFI = 0.993, RMSEA = 0.067), the χ^2 /df ratio at 4.649 (p = < 0.001) exceeded the recommended level of 2 by a considerable amount.

In addition, two items, LAYOUT3 and LAYOUT4, had factor loadings which were below 0.71 (see Table 6.3). These two items relate to accessing non-retail services in the town centre and an overall Layout measure. However they performed poorly in the measurement model and were eliminated. This suggests that respondents found it difficult to perceive the layout of a town centre as originally conceptualised. Layout was hypothesised as referring to accessing the entire range of town centre provision. However, the required modifications to the Layout scale imply that accessing the various disparate functions of a town centre may reduce perceptions of the unidimensional coherence of the construct. The items remaining in the Layout scale relate to accessing the stores and places to eat and drink. These aspects represent activities which are more closely related to the shopping experience, as opposed to the wider non-retail provision. The validity of the remaining Layout construct is indicated by composite reliability of 0.75 and average variance extracted of 0.60 for the final two-item scale (see Table 6.10).

6.7.4 Non Retail

The elimination of the entire Non Retail construct as a result of model modification suggests that non retail facilities may not be important for shoppers when they form their image perceptions of a town centre as a place for shopping. Poor results from the CFA of the individual Non Retail construct (Table 6.4) included three items (NONRETAIL1, NONRETAIL3 and NONRETAIL4) which failed to reach factor loadings of 0.71, indicating that they loaded more highly on other constructs, and less than half of their variance could be explained by the Non Retail construct as intended. Although fit indices implied good model fit for the Non Retail construct (GFI = 0.996, TLI = 0.984, CFI = 0.995, RMSEA = 0.050), the low AVE result of 0.453 suggests that respondents found it difficult to perceive the non retailing functions as a unidimensional construct as evidenced by these results.

6.7.5 Atmosphere

The Atmosphere scale, as originally developed for this study, did not perform well in the CFA analysis of the individual constructs (Table 6.5), with poor measures of fit (χ^2 /df = 18.555, p = < 0.001, GFI = 0.908, TLI = 0.875, CFI = 0.917, RMSEA = 0.147). Hence, several measures of atmosphere in a town centre commonly included in the literature were eliminated from the final model.

Two items, ATMOS3 at 0.534 and ATMOS7 at 0.439, failed to achieve factor loadings of 0.71, meaning that less than half of their variance could be explained by the Atmosphere construct and more than half explained by other constructs in the model. The inter-item correlation matrix also indicated significantly problematic correlations between these two items (see Section 6.3). As a result of theoretical reasoning, these two items which related to “busy” and “crowding” were deleted from the Atmosphere scale. Previous research suggests that levels of crowding vary at different times of the day and week, and it is unclear what the optimum levels of busyness and crowding may be (Eroglu, Machleit and Barr, 2005; Oppewal and Timmermans, 1999). Respondents may have perceived these items inconsistently, indicating they may be unreliable measures in this scale.

A third item in the Atmosphere scale, ATMOS1, which was intended to capture the visual aspect of attractiveness of the town centre atmosphere, was also eliminated during model modification. Modification indices indicated that this item was subject to cross-loadings on to several other items which were not hypothesised to be related, most notably one Assortment item (ASSORT1). This suggests that the assumption of unidimensionality was violated in this case. Respondents may associate attractiveness less with the sensory aspects of a town centre's atmosphere and more with the attractiveness of its physical retail provision in terms of store choice. A further item eliminated from the Atmosphere scale was ATMOS6 referring to the town centre as "personal". Although included by Downs (1970) as a measure of shopping centre atmosphere, "personal" in this study appeared to be confused by respondents with the Self Image construct, as modification indices indicated that it cross-loaded on to SELFIMAGE2. Hence ATMOS6 again appeared to violate the unidimensionality assumption.

The items remaining in the purified Atmosphere scale were ATMOS2, ATMOS4 and ATMOS5. These refer to the town centre as "safe", "relaxed" and "friendly" and since they returned good measures for composite reliability at 0.84 and average variance extracted of 0.64 (see Table 6.10), they were retained as representing the atmosphere of a town centre for respondents in this study.

6.7.6 Affect

The scale hypothesised to measure the Affect construct was composed originally of nine items drawn from the store image domain (Babin and Attaway, 2000). This scale did not perform well in the CFA of the individual Affect construct (see Table 6.6). Four items (EMOTION1, EMOTION2, EMOTION5 and EMOTION6) failed to achieve factor loadings of 0.71 (at 0.542, 0.531, 0.490, 0.641 respectively). Fit measures were poor (χ^2 /df = 16.797, p = < 0.001, GFI = 0.0.871, TLI = 0.848, CFI = 0.886, RMSEA = 0.139). Accordingly the Affect scale was substantially modified with the elimination of five items. Three of the eliminated items (EMOTION1, EMOTION2 and EMOTION5) were deleted due to poor factor loadings, supported by evidence from modification indices, while two further items (EMOTION3 and EMOTION4) were also deleted due to modification indices which

indicated high cross-loadings with other items. Despite its slightly lower factor loading of 0.641, EMOTION6 was retained in the scale since although modification indices demonstrated cross-loadings with several other items, there was limited support for its elimination from the goodness of fit indices. Items relating to happy/unhappy and satisfied/dissatisfied (EMOTION3 and EMOTION4) were also eliminated from the Affect scale following evidence from the modification indices. These are more diffuse and unspecific global evaluations rather than emotional responses and their elimination improved goodness of fit measures during model modification.

The remaining items (EMOTION6, EMOTION7, EMOTION8 and EMOTION9) appear to modify the tone of emotional responses which respondents relate to town centres from those encountered in the original store image research (Babin and Attaway, 2000). The deleted items EMOTION 2, EMOTION2 and EMOTION5 refer to reactions such as sleepy/awake, bold/timid and excited/calm which appear to be responses towards the more extreme end of the affective spectrum. The poor performance of these items in the CFA implies that the experience of shopping in a town centres is not such an intense experience as may be encountered in a store. Instead, in a town centre, the modified Affect scale contains items referring to energy/lethargy, pleasure/annoyance, delight/disgust and stimulation/boredom which appear to be less extreme reactions to shopping.

6.7.7 Self Image

Self Image was not altered substantively by the deletion of one item (SELFIMAGE3). The Self Image scale has been used extensively in retail image studies, although not in town centre studies to date. Although one item was removed from this scale, examination of the remaining items indicated that their substantive meaning had not changed, so face validity was retained as originally hypothesised. Good levels of composite reliability at 0.85 and average variance extracted at 0.59 (see Table 6.10) support the validity of this reduced scale in representing Self Image in town centres.

6.7.8 Place Attachment

As with Non Retail, the Place Attachment construct was eliminated from the town centre image model in its entirety, due to extremely poor composite reliability at 0.554 and average variance extracted at 0.297, together with factor loadings which failed to reach 0.71 (see Table 6.8). The inter-item correlation matrix (see Section 6.3) also indicated a problematic pattern of correlations. Although hypothesised as forming part of the Town Centre Image model, it appears that Place Attachment may not be a construct which respondents associate with shopping specifically in a town centre.

6.8 Higher Order Town Centre Image Model

Having successfully assessed and purified the measurement model, a second CFA was performed by constructing a higher order model of town centre image. The six variables remaining in the model and their remaining items were drawn as reflecting the Overall Town Centre Image construct. This model was designed to test the fit of a model comprising the higher order Overall Town Centre Image latent construct and its relationships with the variables of Assortment, Accessibility, Layout, Atmosphere, Affect and Self Image. The resulting model showed fit indices of $\chi^2 = 313.442$, $df = 146$, $\chi^2/df = 2.147$, $p < .001$, GFI = 0.962, TLI = 0.979, CFI = 0.982, RMSEA = 0.038.

Nevertheless, a check of the modification indices showed that χ^2 could be improved by further purification of the Layout scale. However, this would mean reducing it to a single item measure, making it subject to increased error and therefore potentially unreliable (Diamantopoulos and Siguaw, 2000). Instead, the standardised error covariance matrix for this model was examined for candidates for elimination where item correlations exceeded 2.58, indicating statistically significant discrepancy with these items in the model (Byrne, 2010). Examination of the standardised error covariance matrix for this model revealed a surprisingly large and statistically significant correlation of -2.630 between SELFIMAGE4 and ACCESS1 (Byrne, 2010), implying that SELFIMAGE4 could be causing problems with model fit.

Eliminating SELFIMAGE4 from the Higher Order Overall Town Centre Image model in Figure 6.10 confirmed this observation, as improved fit statistics were obtained on all measures. The resulting higher order Overall Town Centre Image model showed good fit indices of χ^2 = 251.594, *df* = 129, χ^2/df = 1.950, p < .001, GFI = 0.967, TLI = 0.983, CFI = 0.986, RMSEA = 0.034.

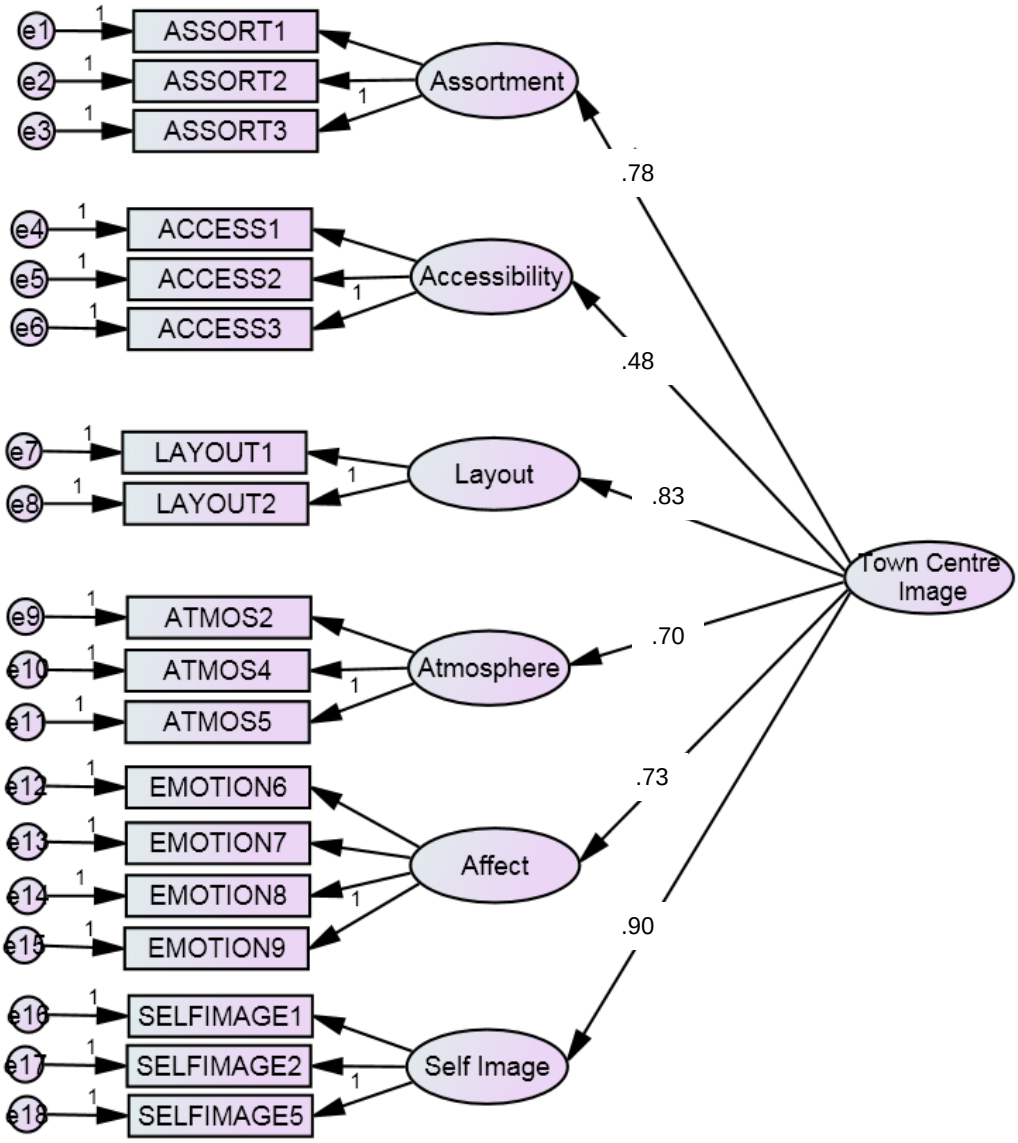
The fit of this model was assessed and compared with the fit of the modified measurement model. Although the fit indices were good, the fit of the higher order model was poorer than that of the measurement model (see Table 6.12).

Table 6.12 Comparison of fit indices for Measurement and Higher Order models

	Measurement Model	Higher Order Model
χ^2 /df	**1.747**	**1.950**
GFI	**0.970**	**0.967**
TLI	**0.986**	**0.983**
CFI	**0.989**	**0.986**
RMSEA	**0.030**	**0.034**
PNFI	**0.781**	**0.819**
PCFI	**0.792**	**0.838**

However, the fit of lower order models will be better than that of higher order models because more paths are specified to capture the covariance in the model. Conversely higher order models are more parsimonious, having fewer degrees of freedom. Therefore higher order models should perform better on parsimonious fit indices, as demonstrated by the higher levels of PNFI and PCFI indices in the higher order model (Hair, Black, Babin, Anderson and Tatham, 2006). In addition, five of the six paths in the model were above 0.7, supporting the validity of the higher order model (Chin, 1998). Therefore the fit of the higher order model was considered acceptable, confirming that Overall Town Centre Image is a higher order construct reflected by the Functional variables of Assortment, Accessibility and Layout, Experiential variables of Atmosphere and Affect, and a Symbolic dimension consisting of Self Image.

Figure 6.10 Higher Order Model Overall Town Centre Image



Fit indices: χ^2= 251.594, df = 129, χ^2 /df = 1.950, p = < 0.001,
GFI = 0.967, TLI = 0.983, CFI = 0.986, RMSEA = 0.034

Table 6.13 Retained items and constructs in Structural Town Centre Image model

Construct	Item label	Item wording	Factor Loading	CR	AVE	Mean	SD
Assortment		How would you rate …?					
1=extremely poor	ASSORT1	The choice of major stores	0.900				
7=extremely good	ASSORT2	The variety of stores	0.885				
	ASSORT3	The quality of stores	0.902	**0.92**	**0.80**	**5.02**	**1.36**
Accessibility							
1=very strongly disagree	ACCESS1	I can get to the town centre easily	0.804				
7=very strongly agree	ACCESS2	I can get to the town centre reasonably quickly from my home	0.799				
	ACCESS3	It is convenient to get to the town centre	0.860	**0.86**	**0.67**	**5.54**	**1.35**
Layout							
1=very strongly disagree	LAYOUT1	The layout makes it easy to get to the stores I want	0.765				
7=very strongly agree	LAYOUT2	The layout makes it easy to get to places to eat or drink	0.790	**0.75**	**0.60**	**5.27**	**1.26**
Atmosphere							
1=very strongly disagree	ATMOS2	The town centre is a safe place	0.752				
7=very strongly agree	ATMOS4	The town centre is relaxed	0.773				
	ATMOS5	The town centre is friendly	0.872	**0.84**	**0.64**	**4.72**	**1.33**
Affect		How do you feel when shopping in this town centre?					
to what extent do you	EMOTION6	Energetic/lethargic	0.561				
feel? scale of 1 to 7	EMOTION7	Disgusted/delighted	0.828				
	EMOTION8	Bored/stimulated	0.858				
	EMOTION9	Annoyed/pleased	0.876	**0.87**	**0.63**	**4.68**	**1.22**
Self Image							
1=very strongly disagree	SELFIMAGE1	This town centre is consistent with how I see myself	0.826				
7=very strongly agree	SELFIMAGE2	This town centre reflects who I am	0.773				
	SELFIMAGE5	I can identify with the typical person who shops here	0.748	**0.83**	**0.61**	**4.60**	**1.34**
Loyalty							
1=very strongly disagree	LOYALTY1	I would say positive things about this town centre	0.802				
7=very strongly agree	LOYALTY2	I would recommend this town centre	0.918				
	LOYALTY3	I would encourage friends and relatives to visit	0.899	**0.91**	**0.76**	**5.06**	**1.45**

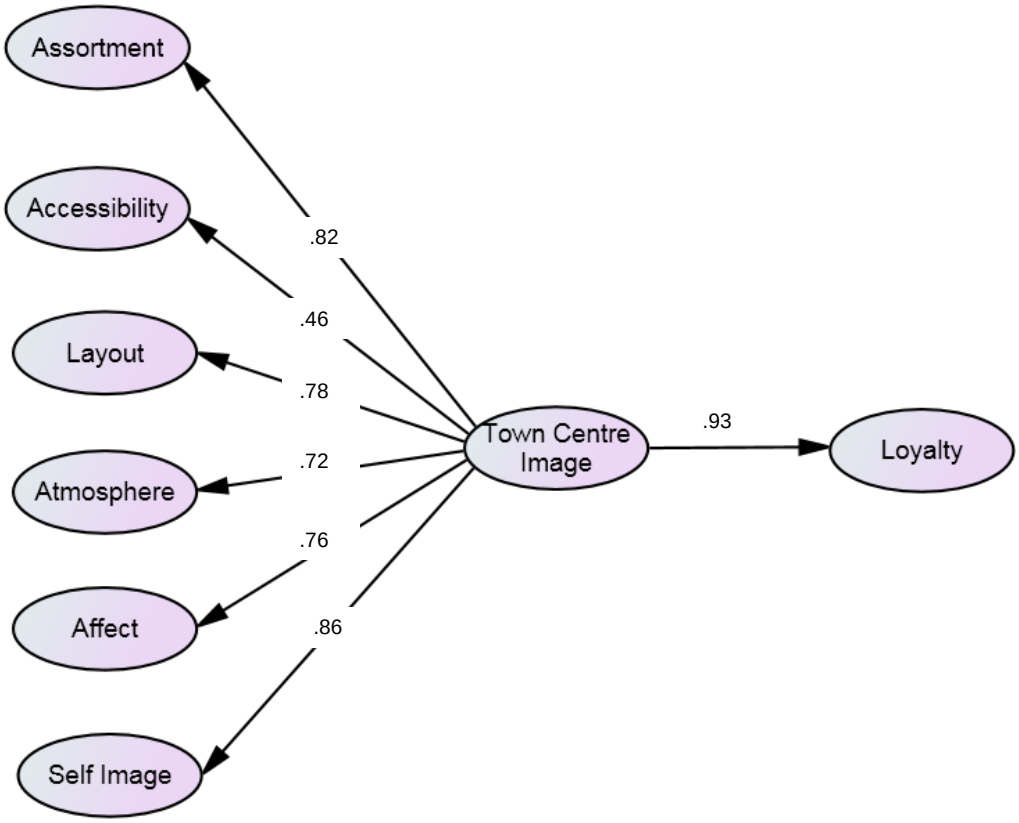
6.9 Structural model of Town Centre Image

The higher order model should be tested within a nomological network of hypothesised relationships in order to verify its validity (Chin, 1998). Hence the higher order model was entered into the structural model in the next phase of SEM.

Having been modified as a result of CFA, the higher order Overall Town Centre Image model, as reflected by the six remaining latent constructs of Assortment, Accessibility, Layout, Atmosphere, Affect and Self Image, was next entered into the structural modelling phase of the analysis, together with a path to the dependent variable of Loyalty. The structural model (Figure 6.11) depicted all relationships between the constructs remaining in the analysis as hypothesised. The six latent constructs of Assortment, Accessibility, Layout, Atmosphere, Affect and Self Image between them represent the three original dimensions of Functional, Experiential and Symbolic. The functional dimension is now represented by Assortment, Accessibility and Layout. The Experiential dimension is represented by Atmosphere and Affect. The Symbolic dimension is represented by Self Image. One structural path, from Overall Town Centre Image to Loyalty, represents the hypothesised relationship that image has a positive relationship with the dependent variable as represented in this study by Loyalty.

Initial testing of the structural model suggested that model fit could be improved by the elimination of a further item, LOYALTY4. The resulting model fit showed good fit indices ($\chi^2 =$ 403.781, df = 182, χ^2/df = 2.219, $p < .001$, GFI = 0.955, TLI = 0.978, CFI = 0.981, RMSEA = 0.039). An assessment of the structural paths showed that all were in the expected direction, and within the expected range. The path indicating the relationship between the higher order Overall Town Centre Image construct and the endogenous variable, Loyalty, was 0.928, so that Overall Town Centre Image model explained 92.8% of the variance in Loyalty. Hence nomological validity was achieved, supporting the validity of the model.

Figure 6.11 Structural model of Town Centre Image



Fit indices: χ^2= 403.781, df = 182, χ^2 /df = 2.219, p = < 0.001,
GFI = 0.955, TLI = 0.978, CFI = 0.981, RMSEA = 0.039

Composite Reliability and Average Variance Extracted scores were all above the expected values of 0.7 and 0.5 respectively (see Table 6.13).

Table 6.14 Reliability and validity statistics for Structural Town Centre Image model

Composite Reliability		Average Variance Extracted	
Assortment	**0.92**	Assortment	**0.80**
Accessibility	**0.86**	Accessibility	**0.67**
Layout	**0.75**	Layout	**0.60**
Atmosphere	**0.84**	Atmosphere	**0.64**
Affect	**0.87**	Affect	**0.63**
Self Image	**0.85**	Self Image	**0.59**
Loyalty	**0.91**	Loyalty	**0.76**

Discriminant validity was again assessed for the structural model. Table 6.14 demonstrates that all AVEs exceed all squared correlations for each construct, confirming that discriminant validity between the latent constructs in the model was not affected by the final model modification.

Table 6.15 Discriminant validity for Structural Town Centre Image model

	Assortment	Accessibility	Layout	Atmosphere	Affect	Self Image	Loyalty
Assortment	**0.802**	0.29	0.619	0.558	0.592	0.71	0.79
Accesibility	0.084	**0.675**	0.571	0.336	0.308	0.413	0.415
Layout	0.383	0.326	**0.605**	0.531	0.562	0.765	0.674
Atmos	0.311	0.113	0.282	**0.641**	0.559	0.617	0.689
Affect	0.350	0.095	0.316	0.312	**0.626**	0.644	0.728
SelfIm	0.504	0.171	0.585	0.381	0.415	**0.613**	0.759
Loyalty	0.624	0.172	0.454	0.475	0.530	0.576	**0.765**

NB. Bold diagonal elements are AVE. Above diagonal are correlations at dimensional level. Below diagonal elements are squared correlations at dimensional level. AVE for a construct should be higher than the squared correlations between that construct and all other constructs.

A final test for the validity of the structural model was to assess for bias due to common method variance (CMV). Harman's single-factor test was initially adopted in SPSS v. 18. This test loads all variables on to a single factor, and calculates the covariance among measures. If the single factor represents less than half of the variance in the model, it can be assumed that CMV does not affect the results to any great extent (Chang, van Witteloostuijn and Eden, 2010; Podsakoff, MacKenzie, Lee and Podsakoff, 2003). The single factor accounted for 45% of the

variance in the data. The results of Harman's test suggest that CMV is not an issue for this analysis. An alternative method is to use the marker variable technique (Lindell and Whitney, 2001). A marker variable is not theoretically related to the other variables in the study, and any relationships observed between the marker and the other variables are assumed to be due to CMV (Podsakoff, MacKenzie, Lee and Podsakoff, 2003). In the town centre image study, the marker variable was the image of a shopping mall within each of the town centres, which was not hypothesised as related to the variables in the town centre image model. This test indicated that the relationships between mall image and the town centre image variables were somewhat high (average correlations of 0.39) and significant ($p < .001$). However, since these results conflicted with the Harman test, and given the strength of the relationship between Overall Town Centre Image and Loyalty, CMV was not considered to be a problem for this analysis.

The results support the three-dimension image structure as hypothesised in Chapter Three, albeit with a reduced number of constructs (see Table 6.16). The paths from the three Functional constructs, Assortment, Accessibility and Layout all loaded satisfactorily and in the expected direction on Overall Town Centre Image, with Assortment loading more strongly (0.817) than either Layout (0.773) or Accessibility (0.455). The two Experiential construct paths, Atmosphere (0.725) and Affect (0.761), also loaded strongly and in the expected direction. The Symbolic dimension, represented by Self Image (0.858), had the highest loading path to Overall Town Centre Image, suggesting that the Symbolic dimension of image plays a key role in image formation. The path from Overall Town Centre Image to Loyalty was also as hypothesised and demonstrated the expected strong relationship between these two constructs (0.928). Critical ratio. values were all above the recommended value of 1.96 demonstrating that all parameters are significantly different from zero. All paths were significant at $p < .001$. The remaining hypotheses, H4 and H8, linking Overall Town Centre Image with Non Retail and Place Attachment listed in Chapter Three were unable to be tested due to their deletion from the measurement model as poorly fitting constructs.

Therefore the hypotheses between Overall Town Centre Image (Overall image) and the remaining variables were all supported at $p < .001$ as follows:

Table 6.16 Tests of hypotheses in Structural Town Centre Image model

Hypothesis	Loading	Std error	C.R.	P
H2. Overall image → Assortment	0.819	0.046	24.411	0.000
H3. Overall image → Accessibility	0.459	0.048	11.267	0.000
H4. Overall image → Layout	0.776	0.047	16.699	0.000
H6. Overall image → Atmosphere	0.722	0.049	16.112	0.000
H7. Overall image → Affect	0.758	0.047	19.359	0.000
H8. Overall image → Self Image	0.855	0.045	18.946	0.000
H10. Overall image → Loyalty	0.928	0.05	24.396	0.000

6.10 Multigroup invariance testing

Since the measurement model had been modified, it was no longer considered confirmatory but exploratory; therefore multigroup invariance tests were carried out to validate the revised model (Byrne, 2010). Multigroup invariance is determined by applying progressively more rigorous tests across samples following the process described above in Chapter Five, Section 5.4.8 (Hair, Black, Babin, Anderson and Tatham, 2006).

6.10.1 Multigroup invariance testing of measurement model

Accordingly, the measurement model, having been substantially revised and now consisting of the purified item scales measuring the six image variables and the dependent variable of Loyalty, was created (following Table 6.15) and assessed for multigroup invariance.

A baseline model was established in which the measurement model resulting from model modification was tested on the data from all three cities, Cambridge, Nottingham and Wakefield, simultaneously with all parameters unconstrained and freely estimated. The unconstrained baseline model provided the basis for comparison for progressively more stringent tests. Initially the factor loadings (called measurement weights in AMOS), then loadings and covariances (structural covariances), and finally the error variances (measurement residuals) were constrained in turn and their results compared. Equivalence across samples

provides good evidence of cross-validation (Byrne, 2010; Hair, Black, Babin, Anderson and Tatham, 2006).

Table 6.17 Results of multigroup invariance tests for measurement model

Constrained	χ^2	df	P	χ^2/df	$\Delta\chi^2$	Δ df	Sig.	CFI	ΔCFI
Baseline	730.176	504	0.000	1.449				0.978	
Measurement weights	796.033	532	0.000	1.496	65.857	28	< .001	0.974	0.004
Structural covariances	965.539	588	0.000	1.642	235.363	84	< .001	0.963	0.015
Measurement residuals	1119.822	630	0.000	1.777	389.646	126	< .001	0.952	0.026

NB. Δ χ^2 = difference in χ^2values between levels constrained;
Δ df = difference in number of degrees of freedom between levels constrained;
ΔCFI = difference in CFI values between levels constrained

Taking the difference in χ^2 ($\Delta\chi^2$**)** into consideration showed the differences between the three cities were significant ($p < .01$) at all three levels of constraint (see Table 6.17). The results imply that neither the factor loadings, nor the covariances, nor the residual error measurements were invariant across the groups, so that the modified model could not be said to be generalised across the three cities. However, using the ΔCFI measure shows that constraining the factor loadings does not result in a difference in CFI (ΔCFI) of greater than 0.01, and constraining the covariances as well only changes CFI by 0.015, which is slightly above the recommended limit of 0.01 (Cheung and Rensvold, 2002). Although constraining the measurement residual error variances did result in a ΔCFI considerably greater than 0.01, this test is considered excessively stringent (Byrne, 2010). Therefore results using ΔCFI based on constraining the factor loadings and the covariances provide acceptable evidence of invariance in the town centre image measurement model across all three cities, giving confidence that the measurement model adequately represents the image construct in all three cities and could potentially be generalised to other samples.

6.10.2 Multigroup invariance testing of structural model

Once the equivalence of the measurement model across all three cities was established according to the ΔCFI measure, the structural model (as in Figure

6.11) was similarly assessed for multigroup invariance. In the case of a structural model, invariance is additionally assessed for structural weights and residuals.

Table 6.18 Results of multigroup invariance tests for Town Centre Image structural model

Constrained	χ^2	df	P	χ^2/df	$\Delta\chi^2$	Δ df	Sig.	CFI	ΔCFI
Baseline	905.827	546	0.000	1.659				0.965	
Measurement weights	977.213	574	0.000	1.702	71.386	28	< .001	0.961	0.004
Structural weights	994.926	586	0.000	1.698	89.099	40	< .001	0.96	0.005
Structural residuals	1083.149	602	0.000	1.799	177.322	56	< .001	0.953	0.012
Measurement residuals	1239.464	644	0.000	1.925	333.637	98	< .001	0.942	0.023

Similar to the measurement model multigroup invariance test, the results for the structural model showed that, using the $\Delta\chi^2$ test, noninvariance could be determined across all levels of constraint. However when invariance across levels was assessed using the ΔCFI, invariance could be claimed across all levels of constraint except again for the final most stringent test comparing measurement residual error variances. Hence the structural model was accepted as measuring the structure of image perceptions invariantly across all three cities, giving confidence that the structural model adequately represents the image construct in all three cities and could potentially be generalised to other samples.

6.11 Comparison of the images of the three cities

A simple analysis was carried out to demonstrate how the Town Centre Image scale could be used to measure respondents' perceptions of the three cities across the six latent constructs (Assortment, Accessibility, Layout, Atmosphere, Affect and Self Image) reflecting the overall town centre construct and across the individual items. Means for the items and constructs were calculated, and are presented in Table 6.19 below.

Table 6.19. shows that across five of the constructs (Assortment, Accessibility, Layout, Affect and Self Image) and on Loyalty, Nottingham received the highest scores out of the three cities, highlighting the popularity of Nottingham as a retail destination. The only construct where Cambridge outperformed the other two cities

was Atmosphere. Wakefield consistently scored lowest on all six constructs and also on Loyalty. The item means showed an identical pattern to that shown by the latent constructs.

These findings are consistent with the Venuescore rankings (see Chapter Four), where Nottingham was classified as a Major City, Cambridge was a Major Regional centre and Wakefield was a Regional centre. The Venuescore rankings measure the market position and attractiveness of the three cities to shoppers, and the town centre image scale appears to reflect these measures, while adding depth of detail as to how consumers actually rank them. Therefore it is not surprising that Wakefield scores lower than the other two cities, since its market position is lower and less attractive to shoppers, and this is also reflected in the lowest Loyalty rankings of the three cities. Nottingham's market position is reflected in the relatively high scores given. The highest mean score achieved on any construct was in Nottingham for Layout (5.81): it was reported by interviewers that at the time of the survey there was extensive construction occurring in the other two centres, possibly reducing their scores because of this. The range between scores on the Access construct (at only 0.29) shows that all three cities scored relatively strongly in terms of access to these locations. This may be explained by the fact that all respondents were surveyed in the town centres and hence had already successfully achieved access: presumably shoppers with difficulties accessing these town centres would not normally travel there as frequently. The Atmosphere ranking for Cambridge which received the highest scores on this construct for all three cities (5.13) could be explained as reflecting the traditional historic character of the city evoking more positive levels of atmosphere responses.

Table 6.19. Comparison across cities of mean Town Centre Image scores (items and constructs)

Construct		Item wording	Cambridge n = 273	Nottingham n = 271	Wakefield n = 272	All n = 816
Assortment		How would you rate ...?	**5.42**	**5.56**	**4.07**	**5.02**
1=extremely poor	ASSORT1	The choice of major stores	5.44	5.62	3.95	5.00
7=extremely good	ASSORT2	The variety of stores	5.26	5.47	4.03	4.92
	ASSORT3	The quality of stores	5.56	5.60	4.24	5.13
Accessibility			**5.63**	**5.64**	**5.35**	**5.54**
1=very strongly disagree	ACCESS1	I can get to the town centre easily	5.79	5.80	5.50	5.70
7=very strongly agree	ACCESS2	I can get to the town centre reasonably quickly from my home	5.61	5.52	5.25	5.46
	ACCESS3	It is convenient to get to the town centre	5.48	5.61	5.29	5.46
Layout			**5.18**	**5.81**	**4.81**	**5.27**
1=very strongly disagree	LAYOUT1	The layout makes it easy to get to the stores I want	5.01	5.78	4.68	5.16
7=very strongly agree	LAYOUT2	The layout makes it easy to get to places to eat or drink	5.36	5.85	4.93	5.38
Atmosphere			**5.13**	**4.68**	**4.35**	**4.72**
1=very strongly disagree	ATMOS2	The town centre is a safe place	5.36	4.55	4.17	4.69
7=very strongly agree	ATMOS4	The town centre is relaxed	4.85	4.68	4.29	4.61
	ATMOS5	The town centre is friendly	5.17	4.79	4.58	4.85
Affect		How do you feel when shopping in this town centre?	**4.96**	**5.00**	**4.08**	**4.68**
to what extent do you	EMOTION6	Energetic/lethargic	4.80	4.84	4.08	4.57
feel? scale of 1 to 7	EMOTION7	Disgusted/delighted	5.15	5.08	4.24	4.82
	EMOTION8	Bored/stimulated	4.90	4.98	3.90	4.60
	EMOTION9	Annoyed/pleased	5.00	5.11	4.10	4.74
Self Image			**4.65**	**5.01**	**4.15**	**4.60**
1=very strongly disagree	SELFIMAGE1	This town centre is consistent with how I see myself	4.70	5.15	4.19	4.68
7=very strongly agree	SELFIMAGE2	This town centre reflects who I am	4.23	4.49	3.85	4.19
	SELFIMAGE5	I can identify with the typical person who shops here	5.02	5.39	4.42	4.94
Loyalty			**5.49**	**5.54**	**4.16**	**5.06**
1=very strongly disagree	LOYALTY1	I would say positive things about this town centre	5.41	5.44	4.29	5.04
7=very strongly agree	LOYALTY2	I would recommend this town centre	5.57	5.59	4.15	5.10
	LOYALTY3	I would encourage friends and relatives to visit	5.49	5.59	4.05	5.04

To statistically test the ability of the Town Centre Image scale to discriminate between the three town centres on these constructs, and to compare the scores across the three centres for significance of difference, further analysis was performed using MANOVA. MANOVA is the multivariate analysis of variance, where groups are compared on several variables simultaneously to test whether differences in means between groups on the combined variables are likely to have occurred by chance. Testing the variables, in this case the six image constructs of Assortment, Accessibility, Layout, Atmosphere, Affect and Self Image, simultaneously rather than individually increases the reliability of the test and reduces the risk of finding significant differences where in reality there are none (Type 1 error).

The results of the MANOVA analysis indicated these differences between cities were significant on the test of combined image variables ($F = 33.37$, $p = < 0.001$, Wilks' Lambda =0.642, partial eta squared = 0.199). Examination of constructs separately revealed that all differences were significant except for Accessibility. When alpha levels for significance were revised using Bonferroni adjustment, significance for Accessibility exceeded the new value of $p = 0.008$, casting doubt as to whether this construct was significantly different ($F = 4.163$, $p = 0.016$, partial eta squared = 0.010) for the reasons outlined above.

The results from the MANOVA give confidence in the reliability of the Town Centre Image instrument in assessing the relative attractiveness of different town centres more generally.

6.12 Chapter summary

This chapter has presented the results of the data analysis of the Town Centre Image model using Structural Equation Modelling. The original model as hypothesised in the conceptual framework in Chapter Three was tested and found not to fit the data well. Subsequently modification and scale purification procedures were carried out to

improve the fit of both the measurement model and then the structural model. A model of good fit was obtained. This model was subjected to cross-validation using multigroup invariance testing, which demonstrated that the model structure performed equally well across the three cities where the data were collected. This gives further confidence in the validity of the modified model and the measures employed. The ability of the model and the measurement instrument to discriminate between consumers' image perceptions of the three cities surveyed was analysed by comparing significance of means of scores for each construct in the Town Centre Image model (MANOVA).

The results presented in this chapter and their significance for town centre image in particular and retail image theory in general will be discussed in more detail in the following chapter.

Chapter Seven: Discussion

> *"People adjust to their surroundings and extract structure and identity out of the material at hand" (Lynch, 1960, p. 43)*

The objectives of the research were to investigate how consumers perceive town centre image from a theoretical perspective. Definitions of image from the wider retail image literature were reviewed and a definition was developed for the town centre as a symbolic representation of reality consisting of salient factual cues and psychological elements. Since there has to date been limited research into town centre image from a theoretical perspective, conceptual explanations as to how consumers perceive image, consistent with the definition adopted, were sought in the wider retail and marketing literature. Two theories were identified as representing image formation. The first of these, based on attitude theory where image is seen as a combination of cognitive, affective and behavioural components, has been proposed in relation to store image (Mazursky and Jacoby, 1986; Oxenfeldt, 1974) and shopping mall image (Blawatt, 1995), and has been empirically tested in tourist destination image research (Baloglu and McCleary, 1999; Beerli and Martin, 2004; Gartner, 1993).

However, this theory did not appear to sufficiently explain town centre image as defined. Town centre image was defined as:

> *A symbolic representation of reality which consists of salient factual cues from the total environment, and psychological elements such as attitudes, feelings and values.*

To research town centre image consistent with this definition, theory was adopted from brand image literature, based on the brand concept developed by Park, Jaworski and MacInnis (1986) and extended by Keller (1993). The brand concept is based on satisfying a consumer's needs from the consumption experience and "reflects a

general meaning associated with the brand" (Park, Jaworski and MacInnis, 1986, p. 136). The brand image concept theory is based on the satisfaction of consumer needs and proposes that brand image is formed from an integration of three dimensions: Functional, Experiential and Symbolic. The Functional image dimension is defined as fulfilling externally-generated consumption needs, which have physical characteristics. The Experiential dimension relates to consumer experiences which provide sensory pleasure and stimulation, or "what it feels like to use the product or service" (Keller, 1993, p. 4). The Symbolic dimension fulfils internally-generated needs for meaning and value through identification with a desired group, represented by consumer self-concept (Park, Jaworski and MacInnis, 1986; Keller, 1993). The brand image concept theory builds on attitude theory, with parallels identified between the functional and cognitive dimensions, and the experiential and affective dimensions. However, the brand image concept theory augments attitude theory with the addition of the symbolic dimension. It is argued that the addition of a symbolic dimension more closely reflects the definition of image developed for the town centre image study. The brand image concept theory based on functional, experiential and symbolic dimensions was adopted as a framework through which to investigate the town centre image concept.

As far as can be ascertained, the brand image concept theory has not to date been tested empirically in any retail or marketing study. Therefore in order to test this theory for the town centre image study a model was created, and constructs underlying each of the three dimensions were generated from the literature. Hypotheses were developed to test the relationships between each of the constructs underlying the three dimensions and the overall town centre image construct. Image has been associated in numerous retail and marketing studies with patronage behaviour, hence a dependent variable, Loyalty, was added to the model to test for nomological validity (see Figure 3.1, Chapter Three).

It was hypothesised that town centre image is an overall construct consisting of the integration of the three dimensions, operationalized between them as eight

constructs, which are integrated to form an overall perception of town centre image. Image was hypothesised as a symbolic representation through which consumers simplify reality (Mitchell, 2001). This process is based on consumers selecting cues from the environment which are salient (Boulding, 1956), therefore constructs were selected on the basis of evidence in the literature as to which constructs are identified as meaningful in the town centre context. Image has also been referred to as holistic. A holistic image was hypothesised as formed from the totality of the environment (Dichter, 1985), hence measures of perceptions of the wider urban environment were included.

Following a review of the literature, the Functional dimension was hypothesised as consisting of four constructs, Assortment, Accessibility, Layout and Non Retail. The Experiential dimension was hypothesised as consisting of two constructs, Atmosphere and Affect. The Symbolic dimension was hypothesised as consisting of two constructs, Self Image and Place Attachment. Each of these eight constructs was expected to have a positive relationship with the Overall Image construct. Furthermore, if a positive relationship with the dependent variable, Loyalty, could be demonstrated, it would support the nomological validity of the Overall Image construct and the Town Centre Image model developed for this study.

7.1 Overall Image structure

The initial investigation aimed to test the overall town centre model. In particular, the research aimed to determine whether consumers perceive town centre image as a distinct construct, and to investigate whether the three-dimensional model could be assumed to represent town centre image. Exploratory research conducted through focus groups supported the proposition that consumers perceive the town centre in terms of three distinct dimensions. A cognitive dimension was identified, consisting of store assortment, both in terms of type and variety of stores and the products they stock, accessibility to the town centre and layout within the centre. Various non-retail functions supporting the retail provision in a town centre were also identified. A

sensory dimension emerged which centred on the feelings and emotions generated by the town centre experience. A further dimension captured consumers' self-images compared to perceptions of other shoppers. This was linked to a symbolic element based on a sense of belonging or attachment to the wider place image. These dimensions supported the formation of the three-dimensional town centre image model as hypothesised. Constructs representing each of these dimensions were defined and measures developed to empirically test the model.

In the original town centre image model as hypothesised in Chapter Three, the Overall Image construct was reflected by eight latent constructs which between them make up the three Functional, Experiential and Symbolic dimensions. As a result of confirmatory factor analysis and scale purification as described in Chapter Six, the Overall Town Centre Image model was modified. The six remaining constructs in the model, Assortment, Accessibility, Layout, Atmosphere, Affect and Self Image, between them continue to represent the three dimensions hypothesised. Assortment, Accessibility and Layout reflect the Functional dimension, Atmosphere and Affect reflect the Experiential dimension, while Self Image reflects the Symbolic dimension. Two constructs Non-Retail and Place Attachment were entirely deleted from the model, as will be discussed later in this chapter.

Hypothesis 1 states that:
Overall Image is a latent construct comprising three dimensions: functional, experiential and symbolic.

The fit statistics reported in Chapter Six for the higher order Overall Town Centre Image model lend support for the hypothesis that the image model adopted from Park, Jaworski and MacInnis (1986) satisfactorily represents town centre image as hypothesised. Therefore Hypothesis 1 is supported. The pattern of relationships revealed in the analysis of the structural model indicates the relative importance of each construct to the Overall Image construct. The six constructs associated with the three hypothesised dimensions load positively and significantly onto Overall Image.

Within each of the three dimensions, the constructs as originally proposed have been modified as a result of CFA, with resulting implications for the theoretical conceptualisation of image. The results for each dimension will be discussed in the following sections.

Table 7.1 Results of hypothesis testing

H1.	*Overall town centre image is a three dimensional construct represented by functional, experiential and symbolic dimensions*	Supported
H2.	*Retail Assortment is positively related to the overall town centre image*	Supported
H3.	*Accessibility is positively related to the overall town centre image*	Supported
H4.	*Layout is positively related to the overall town centre image*	Supported
H5.	*Non Retail is positively related to the overall town centre image*	Not tested
H6.	*Atmosphere is positively related to the overall town centre image*	Supported
H7.	*Affect is positively related to the overall town centre image*	Supported
H8.	*Self Image is positively related to the overall town centre image*	Supported
H9.	*Place Attachment is positively related to the overall town centre image*	Not tested
H10.	*Overall town centre image is positively related to Loyalty*	Supported

7.2 Functional dimension

The functional image dimension was hypothesised as representing the physical characteristics of a town centre which fulfil externally-generated consumption needs (Keller, 1993; Park, Jaworski and MacInnis, 1986). Four constructs of Assortment, Accessibility, Layout and Non-Retail were originally proposed as reflecting the Functional dimension. As a result of the data analysis, three constructs, Assortment, Accessibility and Layout remained following scale purification and model modification. Non-Retail was deleted from the model due to poor scale reliability and validity.

7.2.1 Assortment

Hypothesis 2.

Retail assortment is positively related to overall town centre image

Within the functional dimension, Assortment had the highest loading on to Overall Image (0.82, $p < .001$) in the structural model. The results of the analysis confirmed that the Assortment construct was significantly related to Overall Image in a town centre. Therefore Hypothesis 2. was supported.

Assortment, or retail tenant mix, is frequently cited as an element in town centre image studies (e.g. Bell, 1999; Leo and Philippe, 2002; Nevin and Houston, 1980; Teller and Elms, 2010; Timmermans, van der Heijden and Westerveldt, 1982; Wee, 1986). However, the literature has to date been unclear what Assortment consists of in town centre image, with Downs (1970) questioning if "one speak[s] of individual goods or stores or the total number of stores" (p. 18). In many town centre image studies, assortment has previously been researched as a composite construct consisting of both the retail tenant mix and the assortment of goods. For example, Nevin and Houston (1980) and Wee (1986) found that quality and variety of stores, together with the quality of the merchandise and product selection, were contained within the same factor. Bell (1999) also successfully measured the image of shopping centres, including the town centre, using an assortment scale comprising both quality and choice of products, and quality and range of shops, finding that the assortment scale significantly correlated with other image variables. In contrast, more recent work by Teller (2008) and Teller and Elms (2010) has measured assortment in a town centre based on the store assortment or retail tenant mix only.

Consistent with the town centre image studies referred to above (e.g. Bell, 1999; Nevin and Houston, 1980; Wee, 1986) , the Assortment construct in the original Town Centre Image model was defined as a composite scale measuring the choice, variety and quality of stores, together with the range and quality of products. In the original model, seven items were adopted for the Assortment scale. Store assortment referred

to the choice, variety and quality of stores in the town centre. The remaining four items related to product assortment, in which respondents were asked to rate the range, quality and fashionability of the products available in the town centre, together with their perceptions of branded goods. The scale was adapted from the study by Bell (1999), although items were slightly modified to remove emphasis from product assortment and increase the emphasis on store assortment as suggested by the exploratory research. Following data analysis and scale purification using Confirmatory Factor Analysis, Assortment in the final Town Centre Image model is now reflected by the three store-related items, which represent the choice, variety and quality of stores. The four product assortment items were eliminated from the Town Centre Image model, after identifying that problematic factor loadings and cross-loadings with other constructs in the model reduced construct validity in the original construct. The resulting Assortment construct demonstrates good unidimensionality and face validity, in that it consists of a single underlying construct which is captured solely by perceptions of the range of stores in the town centre. Therefore, unlike the operationalizing of assortment in previous town centre image studies as both product assortment and store assortment, the composition of assortment in this study appears to support that of Teller (2008) in focussing solely on items relating to the store assortment, or retail tenant mix, in a town centre.

Image theory suggests that image is an overall impression containing elements which are most relevant or salient to the consumer (Doyle and Fenwick, 1974; James, Durand and Dreves, 1976; Steenkamp and Wedel, 1991), or "a summary of what [consumers] consider meaningful about the environment" (Downs, 1970, p. 20). The elimination of the product assortment items with the resulting focus on the store assortment suggests that, in forming image in a town centre, consumers perceive some cues to be more salient than others. In this case, what is salient for consumers' perceptions of assortment in the town centre appears to be the retail tenant mix. Within shopping malls, it has been shown that the image of individual stores strongly influences consumers' images of the mall itself (Chebat, Sirgy and St James, 2006; Finn and Louviere, 1996). The results of this study appear to confirm that a similar

process also operates in town centres, and that the image of the range, quality and variety of stores is significantly associated with the overall town centre image.

The Assortment construct returned the second highest factor loading on to the Overall Image construct (at 0.82, $p < .001$), indicating that perceptions of the store assortment play a major role in the formation of town centre image. This finding partly supports the gravity model approach to measuring the attraction of a town centre for shoppers. Reilly (1931)'s law of retail gravitation proposed that shoppers are willing to travel further to a centre which offers a greater range of goods and services. Bucklin (1967) found that the mass of a shopping centre, in terms of the size of its store assortment, was the most significant factor in determining shopping behaviour. The results of the data analysis of the Town Centre Image survey appear to support the advantage to town centres of providing a retail tenant mix which is perceived positively by shoppers.

The focus of image perceptions of assortment on retail tenant mix rather than on the product assortment suggests that consumers' image formation processes in a town centre operate at a higher level than previously researched in the literature. The focus on store assortment at the expense of product assortment suggests that consumers ignore the detail in terms of goods and products in forming image, because it complicates their deliberations and requires effort (Keaveney and Hunt, 1992). It may be that perceptions of goods are too detailed as they vary according to each store and hence product assortment increases complexity of perception (Mitchell, 2001). Even small town centres encompass a variety of stores selling a wide range of goods, ranging from expensive to cheap, and from fashionable brands to more mundane products. If the product assortment varies between stores, it may be perceived as too disparate to be contained within an overall perception of the town centre.

Image has been defined as "a simplification of a large number of associations and pieces of information connected with the place. [It is] a product of the mind trying to process and 'essentialise' huge amounts of data" (Kotler, Haider and Rein, 1993, p.

141). The finding that the Assortment construct was perceived by respondents in the town centre on the basis of a higher-level store assortment, ignoring the detail of the product assortment, reinforces image as "a consumer construction which simplifies complex information because consumers have limited motivation and cognitive capacity" (Mitchell, 2001, p. 167). Consumers appear to take a broader and less detailed approach to image formation. This supports the hypothesis that the value of image to consumers is in simplifying shopping decisions by creating symbolic representations and focussing on what is salient (Keaveney and Hunt, 1992; Mitchell, 2001; Poiesz, 1989; Stern, Zinkhan and Jaju, 2001). The findings suggest that the salient cues for consumers in a town centre operate on a broad, top-level view of stores, ignoring more detailed perceptions of goods. This finding lends support to the theory that image formation results in an image which is a gestalt (Blawatt, 1995; Keaveney and Hunt, 1992). The notion of a gestalt image is based on "a couple of ideas rather than an array of individual, specifically focussed attributes" (Zimmer and Golden, 1988, p. 287), suggesting that respondents integrate or abstract information to reduce and simplify image to a gestalt perception.

7.2.2 Accessibility

Hypothesis 3.

Accessibility is positively related to overall town centre image

The second functional construct which respondents included in their perceptions of town centre image was Accessibility. In this research Accessibility is operationalised as a functional construct reflecting Overall Image. Accessibility refers to aspects of travel to the town centre to shop and was originally conceptualised as the convenience of travel to the town centre in terms of transport links and ease of access, together with availability of suitable car parking provision at reasonable cost. Accessibility in terms of distance travelled, together with the time and effort expended, has formed the basis of many studies in determining shoppers' propensity to patronise a retail centre (Bucklin, 1967). The spatial and temporal distance consumers must overcome to travel to shop has long been included in consumer

decision making as a factor in gravity models (Teller and Reutterer, 2008). Hackett and Foxall (1994) also found accessibility, in terms of good road links, to be a factor in town centre image, as opposed to that of a purpose-built shopping mall. Accessibility has been identified as an important element in image perceptions when consumers are asked to provide unprompted responses (Timmermans, van der Heijden and Westerveld, 1982). The availability, cost and ease of parking is also an important consideration for town centre shoppers (Leo and Philippe, 2002). Gentry and Burns (1978) and Hauser and Koppelman (1979) both found that availability and cost of parking were the second most important factor in shopping centre image, after assortment.

The Accessibility construct had a significant relationship with Overall Image, and Hypothesis 3. was therefore supported. However, it was noted that Accessibility had the least strong relationship with Overall Image (with a loading of 0.46, $p < .001$), suggesting that this construct is less important for consumers' images of a town centre than the other constructs in the model.

Despite considerable evidence of the impact of accessibility on patronage in both town centres and other shopping destinations (e.g. Gautschi, 1981; Gentry and Burns, 1978; Hauser and Koppelman, 1979; Howell and Rogers, 1980; Ruiz, Chebat and Hansen, 2004; Stoel, Wickliffe and Lee, 2004), other more recent studies have found that accessibility has a less significant impact on consumers' perceptions of town centres. Teller (2008) and Teller and Elms (2010) found that neither accessibility nor parking were significant in a town centre's attractiveness when compared to assortment. Similarly Bell (1999) found that convenience of access had little influence on predicting shopping behaviour. Bell (1999) speculated that, as consumers become more mobile, accessibility becomes a low involvement construct. Accessibility may be accepted as a physical and psychological cost, and only receives attention if it becomes unexpectedly unpleasant or detrimental to the shopping trip.

Accessibility may be less important to image perceptions because greater mobility means that convenience of access becomes less of an issue for consumers. Choice of shopping destinations may be determined less by accessibility and more in terms of more subjective image perceptions, echoing the original argument for the inclusion of image factors in gravity models by Bucklin (1967). A further explanation for the weaker factor loading of Accessibility on to the Overall Image construct may be that issues of accessibility are objectively related to individuals' own circumstances rather than to subjective perceptions of the town centre itself as defined in the image construct (Downs, 1970).

The issue of parking is also commonly included in measures of shopping centres (e.g. Bell, 1999; Teller and Elms, 2010). Although measures relating to parking had been included in the original conceptualisation of the Accessibility construct, these were eliminated during the pilot phase due to poor inter-item correlations of the scale. The elimination of parking from the Accessibility construct suggests that parking may also be processed objectively as a reality of the shopping trip, rather than as a subjective image perception. Consumers may thus perceive parking problems as an issue they take for granted when shopping. Parking may involve a low level of involvement in image processing (Bell, 1999) so that consumers may place less emphasis on parking than other accessibility factors when considering the image of a town centre. Similar to product assortment, town centre parking may increase the detail involved in processing to an overly complex level in forming image of a town centre.

7.2.3 Layout

Hypothesis 4.
Layout is positively related to overall town centre image

Layout refers to the ease with which shoppers can move within the town centre itself, as opposed to Accessibility which refers to travel towards the town centre. Studies distinguish between "macro" accessibility, which refers to transport links from the home location to the shopping centre, and "micro" accessibility, which refers to layout,

orientation or ease of internal movement within the centre (Downs, 1970; Oppewal and Timmermans, 1999; Sit, Merrilees and Birch, 2005; Teller and Elms, 2010).

Layout was represented in the town centre image study by four items. LAYOUT1 asked whether the layout of the town centre makes it easy to access the stores within it. LAYOUT2 captured ease of access to places to eat and drink. LAYOUT3 asked about ease of access to the other town centre services, and finally LAYOUT4 measured overall ease of movement around the town centre. As a result of the CFA process, the final two items were removed from the Layout scale. The deleted items refer to access to town centre services and overall ease of movement around the town centre, whereas the two items which were retained refer to the ease of movement in the town centre when accessing stores, and places to eat and drink. After deletion of the two items referring to the wider non-retail provision, the Layout construct loaded strongly on to the Overall Image construct (with a factor loading of 0.78, $p < .001$) in the structural model. Hence Hypothesis 4. was supported.

Similar to the modification of the Assortment scale, the remaining two items in the Layout scale again suggest that consumers focus on the salient image elements when perceiving the layout of a town centre for shopping. Layout was orignally hypothesised as referring to the overall town centre area, which was assumed to include both retail and non-retail services. The focus of the modified Layout scale is now firmly on the retail provision as indicated by the store-related item, together with the item referring to accessing places to eat and drink. Since it could be argued that refreshments are offered within the town centre in support of the retail activities, it appears that the salient elements which shoppers consider are those which are focussed on the shopping trip. Visiting stores and stopping for refreshments are both activities which specifically involve the retail related aspects of town centre provision.

The elimination of the two Layout items referring to non-retail provision and the overall town centre layout appears to support the argument that image is a simplification of the complexity of detail in the environment (Mitchell, 2001). It may be

that access to the wider non-retailing functions and hence overall throughout the entirety of the town centre area adds to the complexity of image perceptions and hence is less relevant to shoppers when they form image.

Layout has previously been identified as an important part of consumer's perceptions of a shopping centre in some studies. Van Raaij (1983) demonstrated that efficiency of movement played an important role in consumers' perceptions. Teller and Elms (2010) found that layout factors, measured as ease of movement and orientation, significantly influenced perceptions of the attractiveness of a town centre. However, these studies referred to layout in terms of the shopping centre overall. In contrast, Oppewal and Timmermans (1999) found that compactness of layout, more specifically in terms of accessing stores and the space reserved for pedestrian access, was perceived favourably by consumers, while Wee (1986) also found that stores which were not too spread out contributed to image perceptions to a greater extent than did general planning and landscaping. The resulting Layout scale as formed from the remaining two items appears to echo the findings of the work of Oppewal and Timmermans (1999) and Wee (1986) in their similar focus on store- and retail activity-related layout.

However, apart from more recent work by Teller and Elms (2010), the town centre literature is lacking in validated scales for Layout, and hence the measures for the Layout construct were adapted from shopping mall research conducted by Wakefield and Baker, 1998. Similar to town centres, shopping malls contain a wide range of retail and non-retail provision such as anchor stores, smaller stores and facilities, including places to eat and drink, finance, leisure and entertainment (Warnaby, Bennison, Davies and Hughes, 2002). Within shopping malls, the layout is carefully planned to direct consumers to progress through the mall and visit its provision in an optimum way. Therefore ease of orientation within a shopping mall can be measured against its planned design (Brown, 1992). In contrast, the layout of a town centre reflects its organic historical evolution (Borchert 1998; Foxall and Hackett, 1992; Guy, 1998). Its unplanned nature often results in the town centre having a layout which is

not coherent, with some areas having better designed spaces and other areas not as conducive to movement around the centre. Indeed, in the absence in the town centre of a planned and coherent layout design such as is found in a shopping mall, Foxall and Hackett (1992) found that shoppers' cues regarding negotiating the layouts of these two different types of centres differed. In the shopping mall, shoppers used cues relating to both stores and non-retail services such as banks and travel agencies. In the town centre they focussed overwhelmingly on a wider range of retail stores and less on the non-retail cues. Similar to Foxall and Hackett (1992)'s findings, the town centre image study has found that it is likely that shoppers take their image cues regarding town centre layout from the retail-related aspects of the town centre, rather than broaden their perspectives more widely to accessing the broader non-retail provision and the overall town centre layout.

7.2.4 Non Retail

Hypothesis 5.

Non Retailing facilities are positively related to overall town centre image

It was hypothesised that perceptions of the entire urban area would be responsible for establishing the identity of the town centre and thus creating its image (Warnaby, Bennison, Davies and Hughes, 2002). Town centre image includes a wider domain of attributes originating in the urban environment than is captured in existing studies (Gautschi, 1981; Wee, 1986). Town centres are complex environments with extensive retail and non-retail functions including housing, education, health, employment, leisure and entertainment, and public services (Ravenscroft, 2000; Warnaby, Bennison, Davies and Hughes, 2002). Elements of non-retail provision in a town centre are commonly included in studies which measure perceptions, although not explicitly image, of town centres or downtowns (Arentze, Oppewal and Timmermans, 2005; Teller and Elms, 2010; Warnaby, Bennison, Davies and Hughes, 2002). In their study which elicited responses from consumers themselves, Timmermans, van der Heijden and Westerveldt (1982) identified that consumers perceive the non-retailing functions in addition to retail mix.

Following the argument in the retail literature that image is a holistic construct, it was hypothesised that, when perceived holistically, town centre image would encompass the whole environment because it "is the configuration of the whole field of the object" (Dichter, 1985, p. 75). A holistic image has been considered by some researchers as the sum of all perceptions of the environment (Birtwistle, Clarke and Freathy, 1999; Wong and Yu, 2003), or "the totality of [all] experiences when shopping there" (Berry, 1969, p. 5). It was therefore hypothesised that the holistic image of a town centre would be perceived as the entirety of the retailing provision, plus the totality of the other place elements from the wider non-retail environment (Warnaby, Bennison and Davies, 2005). Non Retail, referring to aspects of the town centre which support the shopping trip, such as cafes and restaurants, banks and financial services, entertainment venues and other leisure facilities, was proposed as extending the town centre image construct to include a holistic element. However, Non Retail as operationalised in this research did not reach sufficient composite reliability and was eliminated from the model. Therefore Hypothesis 5 was not supported.

The Non Retail scale was assembled from two separate studies. The first two items, NONRETAIL1 and NONRETAIL2, referred to the availability of places to eat and drink, and places of entertainment such as bars, clubs and theatres, and were adapted from the study by Teller and Reutterer (2008). The second two items referred to banking and financial services, and other administrative and leisure services such as travel agents, museums, gyms and libraries, and were based on Bellenger, Robertson and Greenberg (1977).

Poor composite reliability for the Non Retail construct suggests that respondents found it difficult to perceive the Non Retail scale as a uniform construct. It is possible that, in combining in one overall Non Retail construct the features of non-retailing provision from two separate studies, the resulting construct may have been too disparate and lacking unidimensionality. Respondents may have been confused by the number and variety of services included in the construct, so that they were unable

to respond consistently to all the items included in the scale. It may be that each of the services included in the scale, such as food and drink, entertainment, banking and financial services, and so on, could have been perceived with varying levels of favourability. Therefore, they could have individual and distinct images of their own which do not necessary form a coherent image within the overall town centre, implying that the various Non Retail functions may be too disparate to be contained within a single construct.

The elimination of Non Retail as a result of model modification could therefore suggest that non retail facilities may not be important for shoppers when they form their image perceptions of a town centre as a place for shopping. Although non retail facilities perform important functions within the town centre, these functions fulfil different purposes to retailing. It may be that these functions are perceived as separate and distinct from consumers' perceptions of the shopping functions of a town centre, and have distinct images of their own. This finding echoes those of Foxall and Hackett (1992) and Teller and Elms (2010), who similarly found that non-retailing functions were not significant in perceptions of town centres, in contrast to shopping malls where services supporting the shopping trip appeared more important to shoppers. The elimination from the model of the Place Attachment construct due to poor reliability (see Section 6.6) would also seem to suggest that extraneous information from the wider urban environment is not included in shoppers' town centre image perceptions.

The results of the data analysis, and the elimination of the Non Retail construct, suggest that these additional services included in the Non Retail construct may be too complex to play a role in consumers' image perceptions. Image is hypothesised as a simplification of the complex detail of an environment into a subjective impression (Kasulis and Lusch, 1981; Mitchell, 2001). The addition of non-retailing functions, thereby extending consumers' perceptions of the town centre, increases complexity rather than creating an image which acts as a simplification of reality. Hence Non Retail may not be considered as a salient cue in image perceptions. Furthermore,

respondents to the questionnaire survey were requested to respond to the town centre as a place for shopping. Placing the emphasis of the research on to the shopping related aspects of the town centre may have unintentionally caused respondents to be distracted from the wider purposes of the town centre environment, and to focus instead purely on the retail purposes of the town centre.

In addition, the inclusion of the Non Retail construct aimed to test the suggestion that the holistic perception of image is formed "on the basis of the totality of [all] experiences when shopping there" (Berry, 1969, p. 5). Although to date researchers have not clarified the nature of a holistic image, it was hypothesised in this thesis that a holistic image is the sum of all attributes (Birtwistle, Clarke and Freathy, 1999; Wong and Yu, 2003), and hence the entirety of the retailing provision, plus the totality of the other place elements from the wider non-retail environment (Warnaby, Bennison and Davies, 2005). The elimination of the Non Retail construct from the model appears to suggest that the hypothesis that a holistic image is formed from the totality of the environment was not supported.

7.3 Experiential dimension

The experiential dimension relates to consumer experiences which provide sensory pleasure and stimulation (Park, Jaworski and MacInnis, 1986), referring to "what it feels like to use the product or service" (Keller 1993, p. 4). The addition of the experiential dimension to the town centre image model was originally influenced by store image literature, suggesting that a more complete and richer conceptualisation of image has a cognitive dimension which consists of perceptions of the physical environment, and also an affective dimension consisting of feelings, emotions and sensory responses (Keaveney and Hunt, 1992; Mazursky and Jacoby, 1986; Oxenfeldt, 1974). In the model of town centre image, the experiential dimension is conceptualised by two constructs, Atmosphere and Affect. Both Atmosphere and Affect loaded positively and significantly on to Overall Image in the structural model,

with loadings of 0.72 and 0.76 ($p < .001$) respectively, thus supporting the addition of the Experiential dimension in the Town Centre Image model.

7.3.1 Atmosphere

Hypothesis 6.

Atmosphere is positively related to overall town centre image

The definition of atmosphere in the town centre image study is the quality of the environment perceived through the senses. Atmosphere was proposed as a unidimensional construct consisting of seven items hypothesised to represent aspects of a town centre's atmosphere. Respondents were asked to rate the town centre on whether it was attractive, safe, busy, relaxed, friendly, personal and not too crowded.

Although less extensively in town centres than in shopping malls and stores, within the town centre image literature atmosphere has been researched in terms of visual attractiveness (Bell, 1999; Downs, 1970; Wee, 1986), friendliness (Downs, 1970; Nevin and Houston, 1980; Hunter, 2006; van Raaij, 1983), safety (Wee, 1986; Hackett and Foxall, 1994), cleanliness (Downs, 1970; Wee, 1986; Hackett and Foxall, 1994), lighting and warmth (Wee, 1986; Hackett and Foxall, 1994). Items referring to "busy" and "crowded" have also been included in measures of atmosphere in town centre studies (e.g. Downs, 1970; Oppewal and Timmermans, 1999; Leo and Philippe, 2002; van Raaij, 1983). Downs (1970) investigated atmosphere in a town centre in terms of friendly, personal and relaxed. Other researchers (Dennis, Murphy, Marsland, Cockett and Patel, 2002; Gorter, Nijkamp and Klamer, 2003; Schmidt, Jones and Oldfield, 2005) have also associated friendly, personal and relaxed items with town centres and shopping centres. The items were assembled into a single scale, following Hackett, Foxall and van Raaij (1993) who recommend that atmosphere should be researched as a multi-dimensional construct.

Following CFA and model modification, three items only (ATMOS2, ATMOS4 and ATMOS5) remained in the Atmosphere scale. The Atmosphere scale in town centre

image is now represented by “safe”, “relaxed” and “friendly”. Four items in the Atmosphere scale did not feature in the final model. These were “busy”, “not too crowded”, “attractive” and “personal”. The remaining items in the Atmosphere scale confirm the conceptualisation of Atmosphere as “what it feels like”, and therefore demonstrate face validity, since these three items refer to sensations generated by experiencing the town centre.

The items measuring “safe”, “relaxed” and “friendly” relate to the internal feelings generated in consumers when shopping in the town centre. Perceptions of crime and safety have been suggested as contributing to the atmosphere of a shopping centre by several authors (Bennison, Warnaby and Pal, 2010; Burns, Manolis and Keep, 2010; Thomas and Bromley, 2000). The inclusion of “safe” in the Atmosphere scale confirms that perceptions of safety contribute to the atmosphere of the town centre, and echoes results by Hackett and Foxall (1994) and Wee (1986) who both found this item relevant to town centre image perceptions. Burns, Manolis and Keep (2010, p. 53) suggest that “fear of crime … cleanliness, sufficient lighting and the absence of vagrancy”, which form part of an overall impression of a town centre, are more influential in choice of shopping destination than actual crime rates. The results of the town centre image study also support the inclusion of safety in consumers’ image perceptions.

Items relating to “relaxed” and “friendly” were included in the town centre image study following Downs (1970) who also assembled an Atmosphere scale using these items. Although in Downs’ study these atmospheric items did not load strongly on the atmosphere construct, other researchers (Dennis, Murphy, Marsland, Cockett and Patel, 2002; Gorter, Nijkamp and Klamer, 2003; Schmidt, Jones and Oldfield, 2005) have associated these items with town centres and shopping centres. Their retention in the Atmosphere scale for measuring town centre image supports the findings of Dennis, Murphy, Marsland, Cockett and Patel (2002) in identifying “friendly” and “relaxed” as part of consumers’ shopping centre image perceptions, and the atmospheric aspect of “relaxed” found by Schmidt, Jones and Oldfield (2005).

Four items (ATMOS1, ATMOS3, ATMOS6 and ATMOS7) were eliminated from the Atmosphere scale following CFA. These four items referred to “attractive”, “busy”, “personal” and “not too crowded”. It was hypothesised that the visual appearance of a town centre will influence its character, and hence its atmosphere. According to Warnaby (2009), the character of a town centre is formed partly from the appearance of the individual stores, but also by the wider urban provision of “the variety and diversity of building types and architectural styles … and their juxtaposition” (p. 289). Visual attractiveness has also been investigated by Bell (1999) in terms of the appearance of store fronts, signage and overall appearance and found to be significant in consumers’ shopping centre image perceptions. However, the elimination of “attractive” (ATMOS1) from the Atmosphere scale suggests that this item is potentially more descriptive of physical conditions related to the town centre itself, rather than internal feelings consumers may experience, as hypothesised in the definition of the Atmosphere construct as the sensory quality of the environment. In addition, the notion of attractiveness was not clearly explained in the questionnaire as capturing the physical appearance of the town centre. As a result, respondents may have found this term to be vague and hence were unclear as to its meaning. Without a clear definition, consumers may have been confused as to the intended interpretation of attractiveness as an item in the Atmosphere scale.

ATMOS3 and ATMOS7 were items referring to “busy” and “not too crowded” which are commonly included in measures of atmosphere in shopping centre studies (e.g. Downs, 1970; Oppewal and Timmermans, 1999; Leo and Philippe, 2002; van Raaij, 1983). Previous research suggests that perceptions of levels of crowding vary and it is unclear what the optimum levels may be (Eroglu, Machleit and Barr, 2005; Oppewal and Timmermans, 1999). Crowding in retail environments is generally perceived negatively, shoppers are inconvenienced and experience discomfort, particularly task-oriented shoppers, who may feel restricted or anxious (Eroglu and Machleit, 1990; Hackett, Foxall and van Raaij, 1993; Harrell and Hurt, 1976; Turley and Milliman, 2000). However, perceptions of crowding also appear to be subjective,

as the “busyness” of a town centre is seen as evidence of its vitality (Ravenscroft, 2000, p. 2534), and in some retail situations a greater density of shoppers may offer reassurance as to the choice of location (Hackett, Foxall and van Raaij, 1993). According to Oppewal and Timmermans (1999), consumers dislike both crowded shopping centres and those with too few shoppers, with moderately busy and uncrowded centres perceived as most pleasant. In addition, town centres may experience different levels of busyness and crowding at different times of the day (Ravenscroft, Reeves and Rowley, 2000). Respondents who were interviewed at different times and in different locations within the town centres may have encountered and reported varying levels of crowding. The elimination of these two items from the Atmosphere scale suggests that in this study they gave inconsistent results and hence were unreliable indicators of the atmosphere in a town centre.

A further item eliminated from the Atmosphere scale was “personal” (ATMOS6). Although included by Downs (1970) as a measure of shopping centre atmosphere, some shopping centre studies (e.g. Sit, Merrilees and Birch, 2003) consider this item as associated with the services provided in a shopping centre in terms of behaviour of retail employees, such as knowledge, courtesy and empathy (Sit, Merrilees and Birch, 2003). As such, is it more likely to be perceived by respondents as related to cognitive functional characteristics of the individual stores, and hence it is less likely to be perceived as associated with town centre atmosphere as a sensory perception. The lack of clarification of the “personal” item in the Atmosphere scale in this study therefore created ambiguity for respondents, who may also have confused it with the Self Image construct.

Following the data analysis and scale purification process, the resulting Atmosphere scale consisting of three items relating to safe, relaxed and friendly successfully captured this construct. Composite reliability of 0.84 confirmed the unidimensionality of the scale. The Atmosphere construct as represented by three items loaded positively and significantly on to the Overall Town Centre Image construct in the structural model at 0.72 ($p < .001$). Therefore Hypothesis 6. was supported.

7.3.2 Affect

Hypothesis 7.

Affect is positively related to overall town centre image

Atmosphere and Affect are related components of the experiential dimension. Within the Experiential dimension, Affect is defined as feelings or emotions, or "a general category for mental feeling processes … a mental state of readiness that arises from cognitive appraisals of events or thoughts" (Bagozzi, Gopinath and Nyer, 1999, p. 184). Atmosphere influences consumers' emotional responses to the retail environment through arousing visceral reactions (Foxall and Greenley, 1999; Kotler, 1973; Spies, Hesse and Loesch, 1997; Turley and Milliman, 2000).

Physical environments such as stores, malls and tourist destinations are believed to have an "emotion-inducing quality that persons … attribute to that place" (Russell and Pratt, 1980, p. 312, in Darden and Babin, 1994). Donovan and Rossiter (1982) associated retail environments with three factors: pleasure, arousal and dominance. Subsequent retail research has focussed on emotions linked to pleasure and arousal, finding dominance less useful in retail settings. Dawson, Bloch and Ridgway (1990) measured Affect using items of relaxed, contented, satisfied and happy (pleasure) and surprised, excited and rewarded (arousal). Babin and Attaway (2000) found that the emotions of sleepy, bold, happy, satisfied, excited, energetic, disgusted, bored, and annoyed, were linked to the atmosphere of a store. Baloglu and McCleary (1999) used four bipolar scales measuring arousing/ sleepy, pleasant/unpleasant, exciting/gloomy and relaxing/distressing in their study of tourist destination image, finding support for the affective image dimension as measured by these items in influencing overall image. Beerli and Martin (2004) found that only exciting/boring and pleasant/unpleasant made up the affective dimension in their study of tourist destination image.

Although affect has been more frequently researched in these other retail contexts, it has not, to date, been researched as an element of town centre image. The Affect scale originally developed in store image research by Babin and Attaway, (2000) was adapted for measuring the Affect construct in the town centre image study as it contained a comprehensive set of items demonstrated to represent a retail environment, albeit one which is more tightly managed and controlled than can be achieved in a town centre. In the town centre image model, Affect was hypothesised as a unidimensional construct. Machleit and Eroglu (2000) argue that there may be sound theoretical reasons to treat the affect construct as unidimensional, recommending that "a summary factor could adequately capture the range in the emotional responses" if the scope of the study is focussed on a specific purpose (p. 110). A similar approach was followed by Hunter (2006) who adopted a seven-item unidimensional scale to measure emotions in a shopping centre, including excited, delighted, happy, glad, satisfied, proud and self-assured. Therefore the Affect scale as originally adopted for the town centre image study contained nine items (sleepy, bold, happy, satisfied, excited, energetic, disgusted, bored, and annoyed) which were measured on a bipolar semantic differential scale.

Following CFA and scale purification, the Affect scale in the final model was modified by the elimination of five items (EMOTION1, EMOTION2, EMOTION3, EMOTION4 and EMOTION5). The four items remaining in the scale represented by EMOTION6, EMOTION7, EMOTION8 and EMOTION9 were energetic/ lethargic, disgusted/ delighted, bored/ stimulated, and annoyed/ pleased. Emotions relating to more active responses such as bold/ timid, excited/ calm, sleepy/ awake, happy/ unhappy and satisfied/ dissatisfied were eliminated during scale purification. As a result of the scale purification process, it appears that town centre shoppers' emotional responses centre around more moderate emotions related to pleasure, rather than more extreme emotions related to excitement or arousal. Three emotions which were eliminated (bold/ timid, excited/ calm, sleepy/ awake) appear to be associated with arousal (Foxall and Greenley, 1999). These emotions may be experienced more intensely than the emotions which remained in the final model which are more related to

pleasure (Foxall and Greenley, 1999). Emotion items relating to happy/unhappy and satisfied/dissatisfied, also did not load well onto the Affect construct. Similar to the attractiveness item in the Atmosphere scale, these are possibly global perceptions, rather than emotional states and therefore did not load strongly on to the Affect construct (Zimmer and Golden, 1988).

The elimination of the items referring to arousal in the Affect construct appears at first sight to be surprising, given the emphasis on findings that excitement, a major component of arousal, has been found to be significant in shopping contexts such as stores, shopping malls and markets (e.g. Babin and Attaway, 2001; Babin and Babin, 2001; Ridgway, Dawson and Bloch, 1990; Wakefield and Baker, 1998). However, retailers can more easily manipulate ambient factors and deliberately introduce design features to induce desirable emotions and minimise negative emotions that may arise from undesirable design features (Machleit and Eroglu, 2000). Store and mall environments can be designed specifically to evoke more intense responses such as excitement (Baker, Parasuraman, Grewal and Voss, 2002; Ridgway, Dawson and Bloch, 1990; Wakefield and Baker, 1998). However, town centre environments may not be as easily designed and manipulated as stores and malls. Since the town centre contains a wider and more disparate variety of contextual stimuli, the emotions it generates perhaps cannot be interpreted as a coherent entity. Similar to atmospheric elements, the emotions generated in a town centre may vary according to different locations and times of the day (Ravenscroft, Reeves and Rowley, 2000). Conversely, store-related arousal may be triggered by certain stores but diluted by less intense encounters with stores or locations which are perceived as playing a more routine and utilitarian role in the shopping trip. Within a store, excitement can be created by refreshing its assortment; the town centre assortment, which has been demonstrated to be perceived by shoppers as focussed on the range and variety of stores, is less amenable to change and variation due to the investment needed. Hence, the emotional responses to the various disparate town centre locations may be perceived as fragmented according to variations in store and location, balancing each other out to result in a less intense, but still pleasurable emotional response.

This suggests that the town centre shopping experience, due to the diversity of its store and other provision, is less able than a store experience to generate emotions which are focussed on more extreme responses. Indeed, Hart, Farrell, Stachow, Reed and Cadogan (2007) suggest that shoppers are likely to experience enjoyment, and hence pleasure, rather than excitement in a town centre, due to the more routine nature of the shopping trip, particularly if they are regular shoppers.

The Affect construct was conceptualised as personal feelings relating to the consumer experience within the town centre environment. Affect refers to the emotions believed to be experienced when shopping, suggesting that personal emotional responses when shopping in a retail environment play a strong role in how consumers develop image. The Affect construct as now represented by the four remaining items loaded strongly (0.76, $p < .001$) on to the Overall Image construct, supporting Hypothesis 7.

7.4 Symbolic dimension

The Symbolic dimension was a newly-created dimension not previously associated with town centre image. The Symbolic dimension was conceptualised as fulfilling internally-generated needs for meaning and value through consumers' identification with a social group, associating the individual's self-image with a desired group, and thus representing self-concept (Park, Jaworski and MacInnis, 1986; Keller 1993). In this research, the symbolic dimension was represented by the constructs of Self Image and Place Attachment.

7.4.1 Self Image

Hypothesis 8.

Self Image is positively related to overall town centre image

Self-image congruence has been researched extensively in relation to products, brands and services, as well as shopping malls and stores. However, it has not yet

been adopted in town centre image research. The symbolic image dimension fulfils internally-generated needs for consumers' identification with a social group (Park, Jaworski and MacInnis, 1986; Keller 1993). It relates to the need for self-enhancement, personal expression, group membership and ego-identification, associating the individual's self-image with the self-concept (Park, Jaworski and MacInnis, 1986; Keller, 1993). In terms of product brands, the symbolic meaning of a purchase is "the extent to which a purchase enhances the worth of a person in his own eyes (self-esteem) and in the eyes of others (status)" (Pohlman and Mudd, 1973, p. 167).

Self-congruence, where the self-concept matches with the image of other shoppers, increases consumers' self-esteem and enhances his or her self-image by reducing the discrepancy between actual and ideal self-images (Kressman, Sirgy, Herrmann, Huber, Huber, and Lee, 2006; Onkvisit and Shaw, 1993; Park, MacInnis and Priester, 2008; Samli, 1998). Self concept has also been hypothesised as related to identification with a sense of community (Lantz and Loeb, 1998; Oppewal, Alexander and Sullivan, 2006). The self-concept suggests that a consumer's self-image is formed in relation to how consumers distinguish between themselves and others within a physical environment (Sirgy et al., 1997; Lalli, 1992; Proshansky, Ittelson and Rivlin, 1976). Purchasing and consumption are a means of expressing and communicating self-image to that affiliation group (Ogle, Hyllegard and Dunbar, 2004). A consumer who perceives his/her self-image as congruent with, or matching closely that of other shoppers in the affiliation group, is believed to view a shopping location more favourably and increases their likelihood of patronage (Sirgy et al., 1997; Sirgy and Samli, 1985). The places where experiences are meaningful to consumers, such as retail environments, are also involved in creating consumers' self concept (Belk, 1988; Sirgy, Grewal and Mangleburg, 2000). Consumers select stores and products which have an image or personality consistent with their image of themselves (Bellenger, Steinberg and Stanton, 1976; Martineau, 1958; Samli, 1998). A consumer will therefore select a retail environment which most closely matches his/her self-image (Sirgy and Samli, 1985; Zinkhan and Hong, 1991). It was therefore

hypothesised that consumers will perceive a town centre more favourably if its image and the image of other shoppers within it is consistent with their self-image.

Since self-image has not yet been researched in town centre image studies, measures were adapted from the more extensive literature in the wider retail image area. Sirgy, Grewal, Mangleburg, Park, Chon, Claiborne, Johar and Berkman (1997) reviewed and developed the self-congruity concept for brands, products and tourist destinations which captures, while Chebat, el Hedhli and Sirgy (2009) tested the self-congruity concept for a shopping mall. It was anticipated that the self-image congruence construct could similarly be adopted for the town centre context.

A five item scale was adapted to more closely capture the town centre context, based on Sirgy et al. (1997). Although two items (SELFIMAGE3 and SELFIMAGE4) were removed from this scale, examination of the remaining items in the scale indicated that their substantive meaning had not changed and face validity was retained. The results demonstrate that the Self Image construct is applicable in the town centre, in a similar way to studies in stores, shopping malls, brands, products and tourist destinations (e.g. Sirgy et al., 1997; Chebat, el Hedhli and Sirgy, 2009). The three remaining items measuring the Self Image construct refer to how respondents' personal self images are congruent both with other shoppers within the town centre, and with the image of the town centre itself. Martineau (1958) suggested that the symbolic meaning of store image reflects a shopper's "status and style of life" (p. 50). The results of the town centre image study suggest that shoppers perceive that town centre shopping reflects their own personal and social identities in a similar way to that experienced in a store.

The results from the analysis of the data show that the Self Image construct has the strongest association with Overall Image (0.84, $p < .001$) demonstrating the importance of this construct to town centre image, which has to date not been included in any town centre image studies. Hence Hypothesis 8 was supported.

7.4.2 Place Attachment

Hypothesis 9.

Place Attachment is positively related to overall town centre image

Symbolic image was also hypothesised as represented by the construct of place attachment to the town centre. The symbolic image dimension represents the consumer's identification with the retail environment, its occupants and the community, stimulating a sense of belonging and "personalising" it by enabling consumers to imagine how they interact within it (Lindquist 1974; Stern, Zinkhan and Jaju, 2001; Martineau, 1958). According to Stern, Zinkhan and Jaju (2001), a symbolic image includes "the consumer's sense of [location]-evoked 'belongingness' and [location]/person compatibility" (p. 214). Martineau (1958) considers that a symbolic image relates to how an individual consumer fits in or belongs, and whether it is "my type of place". This suggests that not only other shoppers but also the physical environment generates a sense of attachment to the location (Bell, 1999).

The notion of place attachment has as yet not been researched in town centres but has recently been demonstrated to be influential in consumers' emotional bonding with retail environments such as shopping malls (Allard, Babin and Chebat, 2009). Retailing acts as "an integral element of place, being part of the glue that binds communities together" (Bennison, Warnaby and Pal, 2010, p. 849). The consumption experience generates "bonds" or attachments that consumers form with the environment and the community (Zeithaml, Berry and Parasuraman, 1996). A consumer becomes attached to a retail location when a meaningful connection develops between self-image, location and community (Park, MacInnis and Priester, 2008). Place Attachment was conceptualised to refer to shoppers' personal relationship with the town centre. It was based on Martineau (1958)'s notion that a store "becomes a symbol to which [a shopper] can form deep attachments" (p. 54). It was hypothesised that, similar to stores and shopping malls, consumers' town centre images would be influenced by their attachment to the town centre environment as a whole.

Since Place Attachment has not yet been operationalised in any retail context, a scale was adapted from the study into shopping centres by Bell (1999). Bell (1999)'s original scale was intended to capture affective feelings of belonging. Face validity suggested that the scale could be adapted for attachment to a town centre. However, in the CFA analysis of the measurement model, Place Attachment performed poorly in composite reliability and average variance extracted calculations (see Section 6.5.8). In addition, low inter-item correlations indicated that the Place Attachment scale, as adapted for the town centre image instrument, did not appear to measure this construct adequately.

The results suggest that, when considering town centres as retail contexts, respondents' images remain focussed on its more important retail purposes and not on attachment to the entire town centre environment, which would appear to be extraneous to the shopping experience. Alternatively, in addition to feeling lower levels of excitement, shoppers may feel that attachment is too strong a sentiment to experience in relation to the town centre. It may be that shoppers, rather than feeling attachment to a town centre, could demonstrate more promiscuous behaviour in their choice of shopping destination. Of the sample employed for this study, only 72.2% shopped in the town centres surveyed at least fortnightly, while 27.6% shopped there monthly or less. This suggests that a large proportion of the sample also shop elsewhere and, in patronising multiple destinations, could be assumed to demonstrate a lower level of attachment to any shopping destination. It is also possible that each of the three town centres in the survey acts as a regional centre which attracts many shoppers from further afield in addition to its inhabitants who may be expected to show a greater attachment to their own place of residence than would visitors.

The results suggest that although shoppers may return to the town centre on a regular basis, this repatronage behaviour may be due to convenience rather than a sentiment or "bond" towards the environment and the community. It appears that consumers do not form a close attachment to the town centre in terms of "my type of

place". Hence the Place Attachment construct was eliminated from the model, and Hypothesis 9 was not supported.

7.5 Overall Image and Loyalty

Hypothesis 10.
Overall town centre image is positively related to Loyalty

It was hypothesised that Overall Image would be strongly associated with shoppers' loyalty to a town centre. Studies in retail image have consistently demonstrated that image has a strong relationship with various patronage measures. The value of image lies in its ability to predict consumer behaviour (Boulding, 1956; Bucklin, 1976; Martineau, 1958). More positive images are likely to determine preferences of destination and increased frequency of shopping visits (Bell, 1999; Hauser and Koppelman, 1976; Hunter, 2006). Within a town centre, the relationship between image and patronage behaviour has been demonstrated empirically through constructs such as attractiveness (Teller and Elms, 2010), satisfaction (Leo and Philippe, 2002), willingness to buy (Bell, 1999), and intentions to visit (Hunter, 2006; Nevin and Houston, 1980).

Loyalty was selected to measure patronage in the town centre. Loyal customers spend more money, shop more frequently and demonstrate more commitment (Chaudhuri and Holbrook, 2001; Cronin, Brady and Hult, 2000; Sirohi, McLaughlin and Wittink, 1998). Zeithaml, Berry and Parasuraman (1996) suggest that loyalty is represented by three types of behavioural intentions: intention to continue patronage; intention to spend more; and recommendation through positive word of mouth. It has been demonstrated that consumers who have a more positive image towards a retail location demonstrate greater intentions to continue to patronise that location, and hence will be more inclined to spend more time and money there (Bloemer and de Ruyter, 1998; Dick and Basu, 1994). In addition, they are likely to communicate their positive attitude through recommending the location to others through positive word of

mouth communications (Brown, Barry, Dacin and Gunst, 2005; Dick and Basu, 1994; Swan and Oliver, 1989). Loyalty as demonstrated by repatronage intentions and word of mouth communications has been associated with image perceptions of retail stores (Bloemer, de Ruyter and Wetzels, 1999; Sivadas and Baker-Prewitt, 2000; Sirohi, McLaughlin and Wittink, 1998) and a shopping mall and town centre (Andreu, Bigne, Chumpitaz and Swaen, 2006).

A multi-item scale measure was selected to measure Loyalty from the study by Andreu, Bigne, Chumpitaz and Swaen (2006). The items in this scale were originally developed by Zeithaml, Berry and Parasuraman (1996), and have been validated many times in a variety of retailing and tourist destination contexts (e.g. Cronin, Brady and Hult, 2000; Sirohi, McLaughlin and Wittink, 1998; Yuksel and Yuksel, 2007). It was hypothesised that a positive relationship between overall Town Centre Image and the patronage measure, Loyalty, would exist. Evidence of a positive and significant relationship strengthens the nomological validity of the Town Centre Image model and gives confidence in its reliability.

The Loyalty scale adopted for the Town Centre Image study consisted of four items. Similar to the scale adopted by Andreu, Bigne, Chumpitaz and Swaen (2006), LOYALTY1, LOYALTY2 and LOYALTY3 represented measures relating to likelihood to say positive things about the town centre, recommend the town centre and encourage others to visit. LOYALTY4 represented an intention to shop more frequently in the next few years. Following CFA and scale purification, LOYALTY4 was eliminated from the analysis, due to poor factor loading on to the Loyalty construct, giving a composite reliability of the remaining items of 0.91 and average variance extracted of 0.76. Although the scale was used in its entirety by Andreu, Bigne, Chumpitaz and Swaen (2006), their study also reported that the factor loading was lower (0.48) for this item, confirming the problematic nature of this item for respondents.

The three items remaining in the Loyalty scale in the Town Centre Image study therefore relate to patronage in terms of likelihood to recommend or encourage others to shop in the town centre. The resulting Loyalty construct in the Town Centre Image model more closely represents behavioural intentions in the form of word of mouth recommendation (Brown, Barry, Dacin and Gunst, 2005). The deletion of LOYALTY4 suggests that, in town centres, shoppers do not consider their likelihood to continue shopping over the next few years as an important consideration, perhaps because their choices are limited, and they take shopping in the town centre for granted. Respondents may have returned inconsistent responses due to individual circumstances. Some shoppers may make choices due to convenience (Oliver, 1999), inertia (Bloemer and Kasper, 1995), or have cost and mobility issues restricting their choice of shopping destination (Jones and Reynolds, 2006; Ogle, Hyllegard and Dunbar, 2004). This may be particularly the case in the town centre context, where the mobility of some shoppers to visit other town centre destinations may be restricted, compared to shoppers whose opportunities and choice sets of destinations are much wider (Phillips and Swaffin-Smith, 2004).

The three items remaining in the Loyalty scale suggest that word of mouth recommendation is a more realistic expectation of behavioural intentions in terms of patronage in the town centre. This finding is consistent with some authors (e.g. Bloemer and Kasper, 1995; Sivadas and Baker-Prewitt, 2000) who consider that repatronage intentions alone, based as they are on consumers' individual circumstances, do not indicate true loyalty. On the other hand, a strong link between word of mouth recommendation and commitment has been suggested (Brown, Barry, Dacin and Gunst, 2005; Sirohi, McLaughlin and Wittink, 1998), which in turn can influence repatronage and loyalty (Sivadas and Baker-Prewitt, 2000). Hence the revised Loyalty measure is better able to capture the patronage construct through behavioural intentions as expressed by word of mouth communication.

The results indicate a strong positive relationship between Overall Image and Loyalty, as was predicted (with a path estimate of 0.93, $p < .001$). Hence Hypothesis 10 was supported.

7.6 Summary of discussion

As noted above, the results support the hypothesis that town centre image is a three-dimensional construct, comprising Functional, Experiential and Symbolic dimensions. The Functional dimension of town centre image is confirmed as reflected by perceptions of store Assortment, Accessibility and retail-related Layout. These are commonly included in measures of image in other retail contexts. The Experiential dimension has, in addition, applied Atmosphere and Affect measures to the town centre context, when previously these have only been adopted in a limited way in other research contexts. The Experiential constructs have been demonstrated to strongly reflect the Overall Town Centre Image, suggesting these are important elements of consumers' subjective perceptions of the town centre. The addition of the Symbolic dimension to image conceptualisation has further enriched the conceptualisation of town centre image. The Symbolic element of image was originally suggested by Martineau (1958) in stating that a store has a "symbolic meaning" which reflects the consumer's own personality (p. 50). Self Image as a construct representing the Symbolic dimension has the highest factor loading on to Overall Image in the structural model at 0.86 ($p < .001$). The Symbolic dimension has not to date been included in retail image studies, and its inclusion in the Town Centre Image model represents an important step in conceptualising and operationalising town centre image as defined in this thesis.

In previous research, image has been measured as a list of its functional attributes (Keaveney and Hunt, 1992) which, it is argued, fails to capture the richness and detail of the image construct. Instead, a richer conceptualisation of image has taken the approach that image is "a complex construct open to various interpretations" (Burt, Johansson and Thelander, 2007, p. 448), and "more than the sum of its parts"

(Oxenfeldt, 1974). The conceptualisation of image tested in this research has demonstrated that what distinguishes town centre image from the purely functional attribute-based approaches currently adopted in the retailing literature are the Experiential and Symbolic dimensions. The results of the data analysis support this conceptualisation of image, in demonstrating the strength of the relationships between these additional constructs and the Overall Image construct.

In addition, the resulting town centre image model suggests that, by eliminating certain constructs which were hypothesised as forming part of image perceptions, and which appear less salient in a town centre context, such as goods and products, parking and some aspects of layout, image is a concept which simplifies complex reality (Mitchell, 2001, Stern, Zinkhan and Jaju, 2001). The results support the notion that consumers form images which reflect the most salient elements of the shopping experience in the town centre environment. Town centre image was also conceptualised as a holistic construct, defined as capturing perceptions of the totality of the town centre environment, as represented by the Non Retail construct. The elimination of the Non Retail construct from the model appears not to support the holistic view of town centre image as operationalized in this thesis.

Both the measurement model and the structural model had been modified as a result of CFA and scale purification, and hence were subsequently validated through cross-validation. Multigroup invariance testing using SEM was adopted. Applying successively more stringent constraints, across factor loadings, covariances, structural parameters and error variances, and assessing model fit at each stage, demonstrated that the models were invariant across all three cities, except in the case of the most stringent testing of error variances. Hence the town centre image model as developed in this study can be assumed to be invariant, and its measures to operate in an equivalent way, across all three town centres (Hair, Black, Babin, Anderson and Tatham, 2006).

On the other hand, the ability of the measurement scales developed for the town centre image research to discriminate in a meaningful way between image perceptions of the three town centres surveyed was also demonstrated and further supports the reliability of the measurement instrument. Mean scores for each of the image constructs support the characteristics of each city as expected. The favourable market position of Nottingham as a Major City shopping destination and the dominant shopping centre in its area (Venuescore, 2009) is confirmed by the highest mean scores on all constructs except Atmosphere. Cambridge received the highest score for Atmosphere, reflecting its traditional, historic character. Wakefield's position as a Regional centre is reflected in the lower mean scores it received across all constructs. The mean scores lend support for the accuracy of the instrument in measuring respondents' perceptions of town centre image.

Chapter Eight: Conclusion

> *"A vivid and integrated physical setting, capable of producing a sharp image, plays a social role as well. It can furnish the raw material for the symbols and collective memories of group communication" (Lynch, 1960, p. 4)*

8.1 Summary of the research

Retail image has received considerable attention in the academic literature over more than 50 years, its influence on consumer behaviour having been demonstrated extensively in a variety of retail contexts, including stores, brands, shopping malls, and also tourist destinations. It is therefore surprising that the study of retail image in town centres has been neglected by researchers. Town centres have since time immemorial existed as market places for the exchange of goods, and hence have been throughout history of significant social and economic importance. Currently the town centre continues to fulfil this role as the most popular UK shopping destination (Genecon, 2011). However, increasing competition from alternative shopping formats and technologies, together with the threats resulting from the economic recession, mean that maintaining the performance of town centres has become a subject of concern. Creating and managing a successful and dynamic High Street has received significant attention from governments, local authorities, planners, retailers and the media. Since the 1990s, government policy has focussed on supporting "town centres first" in an attempt to limit competition from out of town shopping mall developments (PPS4, 2009). More recently, the Portas Review (Portas, 2011) was commissioned to provide solutions to the threats facing the town centre. However, in order to target initiatives most efficiently, policy makers need to understand the underlying causes of what influences consumers to choose to shop in the town centre (Genecon, 2011).

Academic attention into the forces determining consumers' choices of town centres as shopping destinations, in other words how consumers perceive town centre image, has to date been extremely limited. Interest in town centre research was originally stimulated in response to competition arising from the development of purpose-built

out of town shopping centres. The limited research into town centre image has predominantly aimed to develop measures in order to establish comparisons between purpose-built shopping centres and town centres. The focus of such research is primarily on supplying information for developers as to the drivers of success in shopping centres, or malls, in attracting shoppers. However, town centres are a very specific type of shopping destination. Due to their historic origins, they evolved as unique and complex centres with purposes that extend beyond retailing. They provide administrative and social functions which complement the retail focus, with the combination of these activities creating a sense of place and community (Padilla and Eastlick, 2009). As a result of their historic evolution and wide breadth of provision, town centres cannot be as easily managed as can shopping malls, and research needs to be tailored specifically to identify the unique factors which make them attractive to shoppers.

In light of current government policy focus on revitalising the High Street, research into how consumers perceive the town centre is essential (Genecon, 2011). It has been the purpose of the research reported in this thesis to investigate consumers' perceptions of an area which is crucially important to local and national economies, to develop an understanding of the reasons underlying their patronage intentions. The research presented in this thesis therefore makes a significant contribution to the retail image literature in focussing on the town centre as a shopping destination in its own right, and understanding and measuring how consumers perceive town centre image as a distinct and specific shopping location. The contribution is made in four main areas of the research. Firstly, the literature relating to town centre image perceptions is synthesised and reviewed for the first time from the perspective of its application to town centres. Secondly, as a result of reviewing the literature, a lack of theoretical application to town centre image research was identified, leading to a need to carry out research into the town centre image concept which is firmly grounded in a theoretical approach. Thirdly, the validity of the town centre image model developed from theory is assessed and supported initially using exploratory research and subsequently by the analysis of data from a survey of 816 respondents in three UK

town centres. Finally, the use of Structural Equation Modelling as the analysis technique has enabled the testing and purification of an instrument to measure town centre image, based on scales of items which consumers perceive as relevant to the town centre specifically. Each of these areas of contribution is discussed in the following sections of this chapter.

8.1.1 Contribution 1. Synthesising town centre image literature

Due to the limitations of research in this area, the literature review in this thesis provides for the first time a synthesis of the extant research into town centre image. The review of the literature concludes that the town centre has been neglected as a subject of research, with only two studies (Hart, Farrell, Stachow, Reed and Cadogan, 2007; Wee, 1986) identified as specifically researching this type of shopping destination as a distinct location. Both of these studies, in common with other studies which include town centres, draw on measures and items from other contexts, notably store and shopping mall image. The remaining studies reviewed research town centres as one of a set of shopping centres, including out of town shopping malls. The literature which includes town centre image suggests neither agreement as to how consumers perceive this location, nor any consistent "taxonomy" of dimensions or attributes with which to measure it (Bell, 1999, p. 68). Researchers point out that the "inability of researchers to identify a generally accepted set of constructs ... may stem from an improperly specified [attribute] choice set" (Gautschi, 1981, p. 163), thus calling into question the practice of adapting measures from other retail contexts to the town centre without consideration for the differences between these locations. The literature review identifies that measures specific to the town centre as a distinct shopping location have not to date been developed by researchers. Thus a need was identified to develop measures of town centre image as a specific shopping location in its own right.

The review of studies which compare shopping malls and town centres finds that different measures are relevant according to the context. Leo and Philippe (2002), Nevin and Houston (1980) and Teller and Elms (2010) all discovered attributes that

are not significant in town centre image perceptions to the same extent as they are in shopping malls, notably price, service and personnel. These findings suggest that these attributes, while frequently included in studies which include town centres, may not be perceived by consumers as salient to their image perceptions in this context. On the other hand, studies which compare town centre and shopping mall image suggest some commonality as to the constructs which consumers perceive as relevant to the town centre (e.g. Timmermans, van der Heijden and Westerveldt, 1982; Teller and Elms, 2010; Wee, 1986). These are related to store assortment and related merchandise; physical infrastructure involving access to the town centre including roads, car parks and other travel elements; design and layout of the buildings and other structural components; and atmosphere. In addition, some studies identify the non-retail aspects of town centre provision as relevant to consumers' perceptions (e.g. Oppewal and Timmermans, 1999; Teller, 2008; Timmermans, van der Heijden and Westerveldt, 1982; Wee, 1986). Hence the literature review has enabled the identification of attributes which are specific to town centres, as opposed to generic measures previously adapted from other retail contexts. The review of the literature hence informed the development of the measures used to capture town centre image in the research presented in this thesis.

In addition, a further limitation in the town centre image literature is demonstrated in the limited application of theoretical approaches to the study of image in this area (Bell, 1999). Studies predominantly operationalize image as a composite of attributes and dimensions, based largely on the physical aspects of the town centre environment. There is limited attention given to the intangible psychological elements such as consumers' psychological beliefs and attitudes. Martineau (1958) defined store image as "a force operative in the determination of a store's customer body besides the obvious functional factors of location, price ranges and merchandise offerings" (p. 47). Martineau suggested that the non-functional factors include a warm atmosphere generating feelings of acceptance, comfort, friendliness, and dependability, and a symbolic meaning reflecting shoppers' own desires, expectations and self-images. Yet in town centre image studies, researchers concentrate on the

functional factors to the exclusion of the non-functional, psychological factors. It has been argued that “this attribute-based approach to operationalization fails to capture the richness of the … image construct as conceptualised” (Keaveney and Hunt, 1992, p. 165).

Consistent with Martineau’s hypothesised definition of retail image as “a force operative in the determination of a store’s customer body” (p. 47), it is necessary to measure shoppers’ complete image perceptions, both physical and psychological, if accurate prediction of their likely behaviour is to be achieved. Given that the current literature is critiqued for the omission of salient attributes and the inclusion of attributes which are not relevant to the context measured, there is a need for a robust model of town centre image to be developed in order to develop measures to research this construct with precision. A research design based on a theoretical framework from the brand image literature was therefore adopted and tested for its application in the town centre image context.

8.1.2 Contribution 2. Applying Brand Image theory to town centre image research

The theoretical framework adopted was based on the brand image concept (Park, Jaworski and MacInnis, 1986). The brand image concept is formed in response to shopper’s needs which feature functional, experiential and symbolic dimensions. The functional component of image, which has physical characteristics, is related to fulfilling externally-generated consumption needs (Keller, 1993; Park, Jaworski and MacInnis, 1986). The experiential dimension relates to consumer experiences which provide sensory pleasure and stimulation (Park, Jaworski and MacInnis, 1986), or “what it feels like to use the product or service” (Keller, 1993, p. 4). The symbolic dimension fulfils internally-generated needs for meaning and value from the consumption experience through identification with a desired group, represented by consumer self-concept (Park, Jaworski and MacInnis, 1986; Keller, 1993).

The three dimensions demonstrate parallels with Martineau's conceptualisation of store image. Whereas the functional dimension represents Martineau's factors located in the physical environment, the experiential dimension relates to the atmosphere and feelings generated by the shopping experience, and the symbolic dimension represents the sense of belonging or congruence of the location with shoppers' own self-images. While it has already been suggested that retail image contains cognitive and affective elements (e.g. Mazursky and Jacoby, 1986; Oxenfeldt, 1974), in a similar way to the functional and experiential dimensions, the symbolic dimension remained to be clarified and operationalised in the retail image literature. These parallels in the dimensions between the brand image concept and image conceptualisations in the wider retail image literature support the application of this theory to town centre image research also.

8.1.3 Contribution 3. Testing the town centre image model through empirical research

Based on the brand image concept theory, a conceptual model was developed to represent the town centre image construct. Eight constructs, four representing the Functional dimension, two representing the Experiential dimension, and two representing the Symbolic dimension, were selected from the wider retail literature and entered into the model. Hypotheses as to the relationships between each of the constructs and the overall Town Centre Image construct were generated.

Exploratory research using focus groups was carried out to initially test the brand image concept model for its relevance to town centre image. The exploratory research provided evidence for the three-dimensional model and the hypotheses developed in the conceptual framework chapter. Functional attributes were interrelated in consumers' minds with more subjective impressions, suggesting that the image of a town centre contains an affective dimension. In addition, a symbolic image dimension was identified in a town centre which related to the meaning of the location for consumers, including self-image, group membership and a sense of attachment to a place.

The town centre image model was further tested in a quantitative study using a survey methodology. A questionnaire containing scales to measure the constructs hypothesised to represent town centre image was administered to 816 respondents, evenly divided between three UK town centres. The survey research similarly supported the conceptual model, and the theoretical proposition that town centre image consists of Functional, Experiential and Symbolic dimensions. As a result of data analysis and scale purification, the Functional dimension consists of Assortment, Accessibility and Layout; the Experiential dimension contains Atmosphere and Affect; and the Symbolic dimension is represented by Self-image congruence.

To date, there has been little theoretical application to the study of image in any retail context. The research reported in this thesis has for the first time conceptualised and operationalised image as defined. Both the tangible, physical aspects and the elusive, intangible perceptions which Martineau and others have argued are contained within the image concept have been operationalized to assess how these are perceived by shoppers in a town centre.

8.1.4 Contribution 4. Developing an instrument to measure town centre image

This study has also made a significant contribution in developing a measure which can be implemented on a practical basis by managers. It is argued that the development of the town centre image instrument results in a more accurate predictor of patronage in a town centre, more specifically in terms of consumers' intentions to use word of mouth recommendation in relation to a town centre. The reliability and validity of this scale has been demonstrated to ensure that appropriate conclusions can be drawn. The perceived importance of each of the constructs can be measured using the instrument developed in this study, so that managers can ascertain which constructs are relevant for their target market and strategically manage them to attract and retain their target consumers. The Town Centre Image model developed and tested in this study identifies the three dimensions and six constructs reflecting the town centre image construct. The results give insight into the dimensions and

constructs which are most salient for consumers. The research suggests that these image dimensions and constructs should be strategically manipulated by management in order to influence the formation of favourable perceptions of the town centre, and hence increase consumers' likelihood to recommend the town centre. The perceived importance of these dimensions and constructs by consumers offer a framework for managers of town centres to develop a positive town centre image.

8.2 Implications of the town centre image research

There are also a number of implications, both theoretical and managerial, arising out of the findings presented in this thesis. The implications for the future development of the research presented in this thesis will be discussed in the following sections of this chapter.

8.2.1 Theoretical implications

This Town Centre Image study enables researchers to gain an understanding of town centre image formation based on consumers' perceptions of town centre cues which the research has identified as salient to their perspectives of that environment. For the first time a comprehensive but concise definition of the town centre image construct is provided to guide the theoretical framework and model. The Town Centre Image model is demonstrated to be an interaction of three image dimensions, Functional, Experiential and Symbolic, which act in combination with each other. Positive or negative perceptions of each of the constructs within the dimensions influence the impression of the overall town centre image. The application of the model in predicting consumers' patronage intentions has been demonstrated through the positive relationship of the Overall Town Centre Image construct with Loyalty, specifically in terms of word of mouth recommendation.

Analysis of the model can help in understanding the relative importance given by consumers to each the constructs underpinning the three image dimensions, Functional, Experiential and Symbolic, within a particular town centre shopping

destination. Although the hypotheses relating the constructs underpinning the three image dimensions and Overall Town Centre Image were mostly supported, in that the relationships between the overall image construct and Assortment, Accessibility, Layout, Atmosphere, Affect and Self-Image were all positive and significant (see Table 7.1), two hypotheses which related Non Retail and Place Attachment were not supported. Analysis of the items measuring these constructs indicated insufficient internal validity and hence these constructs were eliminated from the model. However, measures of these constructs did not previously exist in town centre image literature, and hence the scales for these constructs were adapted for the purposes of this study. These constructs could be explored further by developing alternative measures which could be more suitable for capturing these constructs in the town centre context. Hence, future academic research could further test and develop the conceptual model and hypotheses as originally proposed, modifying these scales if necessary.

Although the measures were developed to assess town centre image, the theoretical application of the conceptual model could be extended to image research in other retail contexts. The original theory was developed in the brand image literature, whereas the research in this thesis has supported its application to town centre research. It is suggested that a similar application of the Town Centre Image model to image research in stores, shopping malls and tourist destinations could similarly capture image perceptions in these locations. Such research would provide additional evidence of the reliability and validity of the instrument measures. It would also confirm the generalisability of the measures employed within the instrument.

In addition to the research design adopted to test the model and hypotheses, this study has also considered theoretical explanations of image formation from a wider perspective. Many researchers agree that the value of image to consumers is in simplifying complex information (Keaveney and Hunt, 1992; Mitchell, 2001; Poiesz, 1989; Stern, Zinkhan and Jaju, 2001), with consumers “rely[ing] heavily on cues rather than upon direct observation” (Oxenfeldt, 1974, p. 9). Image has therefore

been conceptualised as a symbol summarising a vast complexity of information into a representation of what is most relevant to each individual (Lindquist, 1974). This research into town centre image has demonstrated that consumers indeed simplify the complex town centre environment and perceive its image in terms of a smaller number of cues. Performing data analysis using SEM has enabled the purification of the original scales hypothesised to measure each construct, eliminating items which consumers do not perceive as salient to their image perceptions. For example, the resulting Assortment scale now focuses on the range and variety of stores alone, with goods-related items eliminated. Similarly the Layout scale was reduced to items representing activities relating to the shopping trip, rather than more general perceptions of the environment. These examples demonstrate that consumers in fact focus on what is most salient to them in their shopping trip in order to simplify the complexity encountered in the town centre.

Image is also frequently defined in the retail image literature as holistic (e.g. Amirani and Gates, 1993; Poiesz, 1989; Zimmer and Golden, 1988). The research into town centre image has aimed to demonstrate that town centre image has a holistic element. A holistic image has been considered by some researchers as the sum of all attributes existing in the environment (Birtwistle, Clarke and Freathy, 1999). Consistent with the argument that image is the “total impression an entity makes on the minds of others” (Dichter, 1985, p. 75), the holistic image of a town centre was conceptualised as an elaborative construct incorporating the retailing provision, plus the totality of the other place elements (Warnaby, Bennison and Davies, 2005). Thus it was hypothesised that the holistic image would consist of the overall impressions of the wider urban environment, which would influence town centre image as a shopping destination. Hence constructs relating to perceptions of the wider urban environment, Non Retail and Place Attachment, were included in the model. However, the elimination of the constructs representing the wider environment suggest that the argument that the holistic image consists of the “total impression” is not supported, suggesting that what is most salient for town centre shoppers is the shopping task. It is suggested that an alternative approach to conceptualising and measuring image as

a holistic construct should be developed by researchers in order to clarify from a theoretical perspective how a holistic image is formed.

8.2.2 Managerial Implications

The research presented in this thesis is also of significant value to managers of town centre provision and policy makers involved in current High Street revitalisation efforts. As stated in the Portas Review, “for a high street to survive and grow it must have a very clear vision of where it wants to get to” (Portas, 2011, p. 18). In order to achieve this, managers of town centres need reliable information as to their current and likely future performance. Managers of town centres frequently measure key performance indicators based on retail performance such as floor space, footfall and vacancy rates. However, information as to consumers’ perceptions is becoming a vital and necessary element in measures of town centre performance (Genecon, 2011).

As a result of carrying out the research into town centre image, a comprehensive but concise measure of consumers’ perceptions has been developed, in which the relationship between the overall image construct and shoppers’ loyalty intentions towards that town centre, in terms of word of mouth recommendation, has been demonstrated. The instrument developed to test the town centre image model could be adopted by practitioners concerned with the management of the performance of town centres. In contrast to existing measures found in academic studies which are based on store and shopping mall image, managers can focus on asking what is relevant specifically to town centre image, without placing too many demands on respondents. The instrument which was developed following scale purification resulted in a short questionnaire (18 items), which is simple to administer yet captures the elements of the town centre which are important to shoppers. The results of the analysis provide insight as to the dimensions and constructs which are most salient for consumers, and which they consider less salient in the town centre. The results suggest that consumers take a top-level approach in selecting environmental cues which are salient, such as the range and variety of stores in preference to goods,

products and brands. Similarly, consumers appear to ignore the wider non-retailing provision in their images of the shopping trip.

The measures developed in this study into town centre image therefore capture accurately but succinctly what is important for consumers in the town centre. Town centre managers should co-ordinate their efforts on creating a town centre image which promotes the most positive image of the shopping destination. Particular attention should be given to the retail tenant mix, ensuring that the range and quality of stores maximises the town centre appeal. Shoppers are also concerned about accessibility into and the layout within the town centre, especially as it supports their access to shopping activities. The experiential and symbolic aspects of the town centre should be promoted, with communications focussing on the atmospheric and emotional appeals to shoppers. In addition, the self-image aspects of consumers' perceptions should be monitored and managed to attract the desired target market. Managers should ensure as a priority that these are developed to encourage customer loyalty.

The Town Centre Image instrument developed from this research could also be adopted to measure changes to image perceptions over time. Image formation is a dynamic process (Kunkel and Berry, 1969) and managers are recommended to take image measurements periodically to monitor changes in consumers' images (Downs and Haynes, 1984). Longitudinal surveys using panel data could be used to assess changes in shopper perceptions, and by implication their patronage behaviour, following developments or modernisations in a town centre. In addition, the instrument could be adopted to compare perceptions of shopping malls with town centres to generate useful information as to likely shopping patterns within these competing shopping formats.

8.3 Limitations

As with any study, there are some limitations to be noted. The research design and sampling procedure were guided by theoretical reasoning throughout. However, given that there are at least 2000 shopping destinations in the UK (Venuescore, 2009) and that the target population consisted of all UK shoppers of adult age, practical considerations were also taken into account. The survey research was conducted in only three English cities. Cambridge, Nottingham and Wakefield were selected following an exhaustive elimination process as representing an “average” town centre. Nevertheless, each town centre has unique characteristics, and hence such a small sample cannot claim to be representative of all town centres, either in the UK or worldwide.

Within each of these cities, the survey was carried out on different days during a three week period in varying locations in each town centre. A quota sample of respondents was adopted with the aim of obtaining as wide a range of respondents as could be recruited in those cities for the survey. However, unlike a random intercept technique which would have resulted in a more representative probability sample, the quota sample means that the results can only be considered as generalisable with caution.

Furthermore, the sample was limited to respondents who were intercepted in the town centres on the days the survey was carried out. The fact these respondents had already made a choice to visit the locations surveyed suggests that they may have more favourable perceptions of these locations than other consumers who may shop elsewhere. This may account for the positive skew identified in the analysis of the responses. A different sample of respondents who do not choose to shop in the survey locations could give different results. Therefore these results can only be considered as representative of the sample intercepted in the town centres in the study.

The survey instrument was tested using a cross sectional survey, due to practical issues regarding its administration. Respondents’ image perceptions and their impact

on loyalty were measured at only one point in time. The cross-sectional survey method raises concerns regarding bias due to common method variance in the data and the results. The risk of bias is particularly likely where the same respondent provides data concurrently on both predictor and outcome variables, or due to context effects where responses may be influenced by the location in which the survey takes place. To overcome the effects of common method variance, longitudinal survey designs are recommended. However, the street intercept technique precluded a longitudinal survey, since administrative costs and time restrictions meant that contacting the same respondents in identical situations at a later date was beyond the scope of this study. These limitations imply that the results generated from the research are limited to this sample only and caution is urged in generalising any results to other town centres across the UK and elsewhere. Due to the cross-sectional survey method adopted, conclusions regarding the causal relationship between overall image and loyalty should be interpreted with caution.

In common with research into the image of shopping centres in general, in the absence of measures generated specifically for the town centre, the research reported in this thesis drew on item scales from the wider retail image literature. Although the majority of the scales performed satisfactorily in the data analysis, the two constructs which reflect perceptions of the wider town centre environment (Non Retail and Place Attachment) were eliminated from the model, due to poor performance in internal validity tests. Issues with Place Attachment, in particular, which demonstrated poor composite reliability may have been due to the negative wording of two out of the three items in the scale which may have caused respondents some confusion. Without further research it is unclear if the elimination of these two constructs indicates that the measures were poorly defined and operationalised, or whether consumers do not in reality perceive the wider town centre environment as comprising part of the town centre image. It is speculated that a different research approach based on exploratory research in which scales were developed specifically with town centre shoppers might generate measures which more closely represent these constructs in the town centre image model.

A further reason for the poor performance of the Non Retail and Place Attachment constructs may be due to respondents being presented with questionnaire items which were framed within a focus on the town centre as a place for shopping. Hence their responses to the Non Retail and Place Attachment items may have been influenced by the emphasis in their instructions on the retail purposes of the town centre, causing them to disregard the wider town centre environment. Future research is therefore needed to understand the reasons behind the elimination of these constructs.

Patronage was measured in this study by Loyalty, and operationalized as word of mouth recommendation together with intentions to repatronise the town centre. It was hypothesised that a strong positive relationship between town centre image and Loyalty as the dependent variable would demonstrate the nomological validity of the town centre image measure. Following analysis, the item measuring repatronage was eliminated from the Loyalty scale, leaving Loyalty represented by three items relating to word of mouth recommendation only. Nomological validity was therefore demonstrated by the relationship between town centre image and the resulting new construct, referring to word of mouth recommendation. Although this construct has been demonstrated as associated with loyalty and patronage intentions (Sivadas and Baker-Prewitt, 2000), it is not considered a direct measure of loyalty and therefore it would be beneficial for future research to investigate the measure of town centre image developed in this study in relation to other measures of loyalty and patronage available to retail researchers, such as frequency of visit, spend, and willingness to buy.

8.4 Future research directions

The conceptual model of town centre image developed in this research should be replicated in different samples before any generalisation is made. Since the instrument was tested in three UK town centres only, it would benefit from being

applied to a wider range of town centre locations in the UK and further afield, and with different sample populations. As already referred to above, the survey respondents were shoppers already shopping in the town centre locations. It would be interesting to speculate if non-shoppers, or those residents of the town or city who patronise other shopping destinations such as out of town shopping malls or even other neighbouring town centres, form images that differ from those reported in this research. Such respondents could be captured through other survey techniques, for example through the use of a Web-based survey.

While the research has confirmed the validity of the town centre image construct as conceptualised by the three dimensions hypothesised, it is likely that the three dimensions could be perceived differently in relative terms by different segments of shoppers. For example, the purposes behind shoppers' decisions to shop could influence their enjoyment of the town centre environment and hence their image perceptions. Shoppers with utilitarian shopping orientations, whose purposes are more likely to focus on the functional aspects of shopping, could demonstrate different image perceptions from hedonic shoppers, who shop for enjoyable aspects of shopping. Shoppers with utilitarian shopping orientations could be more closely focussed on the Functional dimension, whereas those with hedonic shopping orientations could more strongly emphasise the Experiential image dimension (Babin, Darden and Griffin, 1994; Hirschman and Holbrook, 1982). The Symbolic dimension, which represents how shoppers' believe they "fit" with the town centre environment, may be more relevant to shoppers who feel a sense of belonging to that town centre due to greater familiarity or length of residence in that location. It is possible that other shopper segments, defined for example by age or gender, could similarly demonstrate different levels of response to the constructs representing the three image dimensions. These suggestions need further testing to add to researchers' theoretical knowledge of how town centre image is perceived by consumers representing different demographic segments.

The survey could be carried out with both retailers and consumers. Given that research in other contexts (e.g. Birtwistle, Clarke and Freathy, 1999) has shown a discrepancy between retailer and consumer image perceptions, it is important to ensure that there is congruence between the perceived importance of town centre image dimensions by consumers and retailers. The need for retailer co-operation is a primary concern for town centre managers. The image of this less manageable public space is equally dependent on the image of its individual stores as is shopping mall image (Chebat, Sirgy and St-James, 2006; Finn and Louviere, 1996; Mejia and Benjamin, 2002). Likewise, the success of each independent store is related to the image of the town centre. Managers must ensure that there are incentives for each store to maintain its image in a way that is consistent with the image of the whole town centre area.

The image concept has applications to other research areas in retail and marketing. Therefore the model of town centre image developed in this thesis could be adopted by researchers involved in the wider marketing domain. For example, the concept of consumer based brand equity has been suggested as a strategy for improving marketing productivity which links consumers' awareness of a brand with their perceptions of brand image (Keller, 1993). More recently, the brand equity concept has been adopted to create the store equity construct, based on store image and awareness of the store (Hartman and Spiro, 2005), and shopping mall equity (Chebat, El Hedhli and Sirgy, 2009). Both these concepts measure the value of a shopping location from the consumer's perspective. A similar approach could be taken towards establishing the town centre equity construct, in which knowledge of a town centre together with perceptions of its image could be combined to create a measure of the value of a town centre for the consumer.

Image perceptions are linked to the customer experience (MacInnis and Price, 1987). The customer experience "encompasses the *total* experience, including the search, purchase, consumption, and after-sale phases of the experience" (Verhoef et al., 2009, p. 32) and hence, comparable to image, it is holistic in nature. The image of a

retail store is believed to be formed “on the basis of the totality of [a customer’s] experiences when shopping there” (Berry, 1969, p. 5), hence it may be assumed that the customer experience will influence the image of the town centre as a retail location. The model of town centre image could be usefully adopted to develop future research into the customer experience in a town centre.

The model and measures of town centre image developed in this thesis are also relevant to studying the attraction of the town centre for consumers. The original purpose of image research was to add greater accuracy to spatial measures, which were previously used to determine consumer’s decisions to travel to a shopping destination based on the trade-off between the size of shopping area and distances they are prepared to travel. Bucklin (1967) proposed that the addition of image measures to the size/ distance calculation would better predict the attraction of a shopping location for consumers. It is suggested that the town centre image measure developed here would enable researchers to develop more accurate measures of the attraction of a town centre, and if suitably adapted, of other shopping centres also.

The model developed for this town centre image study also adds a valuable component to research into place branding. The place brand is communicated not through the physical reality of the place but is mediated by the perceptions of its consumers, in other words, its image (Kavaratzis, 2004). The fundamental objective of place branding is to develop and communicate a place image for consumers, based on its positive values and perceptions (Hankinson, 2004). Since town centres also benefit from efforts of marketers to promote them through place branding, a more accurate understanding of how to model and measure the town centre image would enable place branding researchers to develop more effective measures of these locations.

8.5 Concluding remarks

The image of a town centre provides an important source of differentiation from competing destinations for consumers when considering where to shop. Understanding how consumers perceive town centre image empowers town centre managers, place marketers, local authorities, government bodies and other stakeholders to successfully manage their localities in the face of competition from other, neighbouring localities. This is particularly crucial in times of economic recession as currently experienced. Understanding the relative importance of each of the constructs identified as most salient in consumers' town centre image perceptions enables managers to gain insight into the complex and multidimensional nature of town centre image as well as to measure which constructs are perceived important by their target markets. This research has provided unique insight as to these matters and should enable town centres to survive and succeed in the highly competitive environment currently experienced.

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Appendices

Appendix 1. **Town Centre Image Survey Questionnaire**

Appendix 2. **Inter-Item Correlation Matrix Initial CFA**

Appendix 3. **EFA Factor Matrix of Town Centre Image items**

Appendix 4. **CFA iterations for measurement model scale purification**

Appendix 5. **Inter-item Correlation Matrix for Structural Model**

Town Centre Image Survey

Date	Time started	Location	Int No

Good morning/afternoon. We are doing some research on town centre shopping on behalf of Loughborough University. Could you spare a few minutes to answer some questions about the town centre you are shopping in today? The survey should take around 10 minutes, is totally anonymous and will be kept confidential to the researchers.

INTERVIEWER: on this page, please tick as appropriate

Screening questions:
First of all, could I ask you…

1a) are you aged ***between 18 and 65***? …… ☐ yes$_{01}$ ☐ no$_{02}$

1b) are you ***shopping*** here today? …….. ☐ yes$_{01}$ ☐ no$_{02}$

1c) is this town centre the place where you shop ***most frequently***?……..…. ☐ yes$_{01}$ ☐ no$_{02}$

2a) Which town centres do you shop at? Please name up to two others _____ _____

2b) Of these town centres you shop at, which one do you think is best? ……... _____

Which one is next best? ……..…. _____

Which one do you least prefer? ……..... _____

3. Approximately how often do you shop here ***in the TOWN CENTRE where we are today***?

Daily	☐$_{01}$	Monthly	☐$_{04}$
Weekly	☐$_{02}$	Less than monthly	☐$_{05}$
Fortnightly	☐$_{03}$	*(please state frequency)*	_____

4. Approximately how long have you been shopping here?

Less than 3 months	☐$_{01}$	Over 2 to 3 years	☐$_{05}$
Between 3 and 6 months	☐$_{02}$	Over 3 to 4 years	☐$_{06}$
Over 6 to 12 months	☐$_{03}$	Over 4 to 5 years	☐$_{07}$
Over 1 to 2 years	☐$_{04}$	More than 5 years	☐$_{08}$

5. How did you travel here today? *Please tick <u>one</u> box for <u>main</u> mode of transport*

car	☐$_{01}$	cycle	☐$_{04}$
bus	☐$_{02}$	walk	☐$_{05}$
train	☐$_{03}$	other *(please state)*	_____

6. How long does it take to get here ***from your OWN home***? ☐ hours ☐ minutes

Town Centre Image Survey

I'd like to now ask you some questions about ***the TOWN CENTRE where we are today***. Please answer the questions honestly; there are no right or wrong answers, I am only interested in your immediate impressions. Some questions may seem unusual but please answer ***all*** questions.

INTERVIEWER/RESPONDENT: Please circle each response as appropriate

On a scale of 1 to 7 where **1 = extremely poor** and **7 = extremely good,** how would you rate this town centre on the following items?
INTERVIEWER: use Show Card A

		extremely poor						*extremely good*
7	The choice of major stores	1	2	3	4	5	6	7
8	The variety of stores	1	2	3	4	5	6	7
9	The quality of stores	1	2	3	4	5	6	7

Now, please circle the number which best represents how far you agree with the following statements about ***this town centre***, *on a scale of 1 to 7 where **1 = "strongly disagree"** and **7 = "strongly agree"***
INTERVIEWER: use Show Card B

		very strongly disagree						*very strongly agree*
10	I enjoy shopping in this town centre	1	2	3	4	5	6	7
11	I like to spend a lot of time browsing here	1	2	3	4	5	6	7
12	I can get to the town centre easily	1	2	3	4	5	6	7
13	People similar to me shop here	1	2	3	4	5	6	7
14	The quality of the products in this town centre is high	1	2	3	4	5	6	7
15	I avoid talking to others when I am shopping in this town centre	1	2	3	4	5	6	7
16	The layout makes it easy to get to the stores I want	1	2	3	4	5	6	7
17	I can't always buy what I really need while shopping here	1	2	3	4	5	6	7
18	I can buy well-known brands	1	2	3	4	5	6	7
19	The range of products in this town centre is good	1	2	3	4	5	6	7
20	I can identify with the typical person who shops here	1	2	3	4	5	6	7
21	It is convenient to get to the town centre	1	2	3	4	5	6	7
22	I do not feel a sense of belonging to the town centre	1	2	3	4	5	6	7
23	The products offered in this town centre are fashionable	1	2	3	4	5	6	7
24	I can get to the town centre reasonably quickly from my home	1	2	3	4	5	6	7
25	The layout makes it easy to get to places to eat or drink	1	2	3	4	5	6	7
26	This town centre is consistent with how I see myself	1	2	3	4	5	6	7

Town Centre Image Survey

Continuing with the same scale of 1 to 7 please tell me, how far do you agree with the following statements about ***this town centre***?

*on a scale of 1 to 7 where **1 = "strongly disagree"** and **7 = "strongly agree"***

INTERVIEWER: use Show Card B

		very strongly disagree						*very strongly agree*
27	The town centre has good banking and financial services	1	2	3	4	5	6	7
28	This town centre reflects who I am	1	2	3	4	5	6	7
29	The town centre offers a large variety of entertainment (e.g. *bars, clubs, theatres, etc)*	1	2	3	4	5	6	7
30	I am often disappointed because I have to go elsewhere to complete my shopping	1	2	3	4	5	6	7
31	I would be friendly to a stranger in this town centre	1	2	3	4	5	6	7
32	I would recommend this town centre	1	2	3	4	5	6	7
33	I do not feel emotionally attached to the town centre	1	2	3	4	5	6	7
34	I only accomplish what I want to when I shop here	1	2	3	4	5	6	7
35	I spend more money than I intend to in this town centre	1	2	3	4	5	6	7
36	I would encourage friends and relatives to visit here	1	2	3	4	5	6	7
37	The town centre offers a good range of services other than shopping *(e.g. travel agents, museum, gym, library etc)*	1	2	3	4	5	6	7
38	The layout makes it easy to get to these other town centre services *(e.g. travel agents, museum, gym, library etc)*	1	2	3	4	5	6	7

INTERVIEWER: use Show Card C

Now please circle the number which best represents how far you agree that the following words describe ***this town centre as a place for shopping***,

*on a scale of 1 to 7 where **1 = "strongly disagree"** and **7 = "strongly agree"***

INTERVIEWER: use Show Card B

	The town centre is ….	*very strongly disagree*						*very strongly agree*
39	attractive	1	2	3	4	5	6	7
40	a safe place	1	2	3	4	5	6	7
41	busy	1	2	3	4	5	6	7
42	relaxed	1	2	3	4	5	6	7
43	friendly	1	2	3	4	5	6	7
44	personal	1	2	3	4	5	6	7
45	not too crowded	1	2	3	4	5	6	7

Town Centre Image Survey

Again on the same scale please circle, how far you agree with the following statements?
*on a scale of 1 to 7 where **1 = "strongly disagree"** and **7 = "strongly agree"***
INTERVIEWER: use Show Card B

		very strongly disagree						*very strongly agree*
46	The kind of person who typically shops here is very much like me	1	2	3	4	5	6	7
47	I avoid exploring in this town centre	1	2	3	4	5	6	7
48	Overall the layout makes it easy to get around this town centre	1	2	3	4	5	6	7
49	While shopping here, I buy only the item(s) I am looking for	1	2	3	4	5	6	7
50	I would say positive things about this town centre	1	2	3	4	5	6	7
51	I would avoid returning to this town centre if I could	1	2	3	4	5	6	7
52	I can find lots of places to eat or drink in the town centre	1	2	3	4	5	6	7
53	I will shop here more frequently in the next few years	1	2	3	4	5	6	7
54	The town centre has personal meaning for me	1	2	3	4	5	6	7
55	I like being in this town centre	1	2	3	4	5	6	7

To what extent do the following words describe ***HOW YOU FEEL*** while shopping in this town centre?
Please give the most appropriate number ***on the scale of 1 to 7***

56	happy	1	2	3	4	5	6	7	unhappy
57	bold	1	2	3	4	5	6	7	timid
58	sleepy	1	2	3	4	5	6	7	awake
59	satisfied	1	2	3	4	5	6	7	dissatisfied
60	excited	1	2	3	4	5	6	7	calm
61	energetic	1	2	3	4	5	6	7	lethargic
62	disgusted	1	2	3	4	5	6	7	delighted
63	bored	1	2	3	4	5	6	7	stimulated
64	annoyed	1	2	3	4	5	6	7	pleased

How ***EXPERIENCED*** would you say you are in shopping in this town centre?
Please circle the most appropriate number on the scale of 1 to 7

65	I am a novice shopper here	1	2	3	4	5	6	7	I am an expert shopper here
66	I am very inexperienced at shopping here	1	2	3	4	5	6	7	I am very experienced at shopping here
67	I know nothing at all about this town centre	1	2	3	4	5	6	7	I know a lot about this town centre
68	I am very unfamiliar with this town centre	1	2	3	4	5	6	7	I am very familiar with this town centre

Town Centre Image Survey

Loughborough University

Now think about an ***AVERAGE typical shopping trip*** here in ***this town centre***.
How far do you agree with the following statements when you make an average shopping trip here?
*on a scale of 1 to 7 where **1 = "strongly disagree"** and **7 = "strongly agree"***
INTERVIEWER: use Show Card B

		very strongly disagree						*very strongly agree*
69	The shopping trip is truly a joy	1	2	3	4	5	6	7
70	I continue to shop here, not because I have to, but because I want to	1	2	3	4	5	6	7
71	The shopping trip truly feels like an escape	1	2	3	4	5	6	7
72	Compared to other things I could do, the time spent shopping is truly enjoyable	1	2	3	4	5	6	7
73	I enjoy being immersed in exciting new products	1	2	3	4	5	6	7
74	I enjoy the shopping trip for its own sake, not just for the items I purchase	1	2	3	4	5	6	7
75	I have a good time because I am able to act on the spur-of-the-moment	1	2	3	4	5	6	7
76	During the trip, I feel the excitement of the hunt	1	2	3	4	5	6	7
77	While shopping, I am able to forget my problems	1	2	3	4	5	6	7
78	While shopping, I feel a sense of adventure	1	2	3	4	5	6	7
79	The shopping trip is not a very nice time out	1	2	3	4	5	6	7

Now how far do you agree with these statements as descriptions of yourself when you shop?
*Again on a scale of 1 to 7 where **1 = "strongly disagree"** and **7 = "strongly agree"***

80	Getting very good quality is very important to me	1	2	3	4	5	6	7
81	When it comes to purchasing products, I try to get the perfect choice	1	2	3	4	5	6	7
82	In general I usually try to buy the best overall quality	1	2	3	4	5	6	7
83	I buy as much as possible at sale prices	1	2	3	4	5	6	7
84	I usually choose lower price products	1	2	3	4	5	6	7
85	I always look carefully to find the best value for money	1	2	3	4	5	6	7

How would you rate ***your OVERALL IMAGE OF THIS TOWN CENTRE*** on the following:
circle the appropriate number on a scale of 1 – 7, where ***1 is low and 7 is high***,

86	very bad	1	2	3	4	5	6	7	very good
87	negative	1	2	3	4	5	6	7	positive
88	very unfavourable	1	2	3	4	5	6	7	very favourable
89	I dislike it a lot	1	2	3	4	5	6	7	I like it a lot

Town Centre Image Survey

Finally I'd like your opinion on a major shopping centre within the town centre.
How do you feel about ***THE GRAFTON SHOPPING CENTRE***?
Please circle the most appropriate number on the scale of 1 to 7

90	I am not particularly fond of it	1	2	3	4	5	6	7	I am very fond of it
91	I don't like it at all	1	2	3	4	5	6	7	I like it a lot

Now please hand back the questionnaire to your interviewer who will complete it with your details, which will be completely anonymous and confidential

Respondent profile

92. Male ☐01 *Female* ☐02

93. Age
- *18 – 30* ☐01
- *31 – 40* ☐02
- *41 - 50* ☐03
- *51 – 60* ☐04
- *61+* ☐05

94. Employment:
- *Full-time* ☐01
- *Part-time* ☐02
- Not in work ☐03
- Student ☐04
- Retired ☐05

95. No of adults in household ☐

96. No of children in household ☐

97. Ethnicity
- *White:* ☐01
- *Mixed:* ☐02
- *Asian / Asian British:* ☐03
- *Black / Black British:* ☐04
- *Chinese:* ☐05
- *Other* ☐06

98. Your occupation: _____

99. Occupation of main wage earner (if different): _____

100. Socio - economic group:
- A ☐01
- B ☐02
- C1 ☐03
- C2 ☐04
- D ☐05
- E ☐06

101. Education level achieved:
- *Secondary (up to 16)* ☐01
- *Further Education (post 16)* ☐02
- *Higher Education (over 21)* ☐03

102. Income (individual):
- *Less than £20k* ☐01
- *£20 - 30k* ☐02
- *£30k - £40k* ☐03
- *Over £40k* ☐04
- *declined* ☐05

103. Post Code _____ / _____

104. Your phone no: _____

Thank you very much for your time.

Interviewer's name: ……..….

Appendix 2. Inter-Item Correlation Matrix Initial CFA

	ASSORT1	ASSORT2	ASSORT3	ASSORT4	ASSORT5	ASSORT6	ASSORT7	ACCESS1	ACCESS2	ACCESS3
ASSORT1	1.000									
ASSORT2	0.802	1.000								
ASSORT3	0.815	0.790	1.000							
ASSORT4	0.562	0.575	0.604	1.000						
ASSORT5	0.703	0.740	0.694	0.652	1.000					
ASSORT6	0.711	0.676	0.729	0.650	0.742	1.000				
ASSORT7	0.565	0.531	0.556	0.560	0.686	0.616	1.000			
ACCESS1	0.214	0.179	0.210	0.262	0.230	0.278	0.229	1.000		
ACCESS2	0.198	0.173	0.210	0.301	0.235	0.271	0.252	0.650	1.000	
ACCESS3	0.239	0.221	0.248	0.340	0.331	0.329	0.317	0.692	0.682	1.000
LAYOUT1	0.450	0.438	0.460	0.459	0.506	0.542	0.450	0.320	0.331	0.382
LAYOUT2	0.401	0.419	0.427	0.511	0.502	0.512	0.460	0.341	0.381	0.414
LAYOUT3	0.469	0.443	0.464	0.439	0.551	0.544	0.424	0.304	0.341	0.349
LAYOUT4	0.388	0.370	0.391	0.392	0.434	0.461	0.384	0.301	0.287	0.346
NONRETAIL1	0.379	0.368	0.390	0.383	0.455	0.441	0.392	0.288	0.215	0.297
NONRETAIL2	0.412	0.403	0.401	0.417	0.469	0.499	0.408	0.247	0.221	0.304
NONRETAIL3	0.353	0.316	0.401	0.407	0.409	0.431	0.416	0.248	0.247	0.274
NONRETAIL4	0.526	0.505	0.518	0.476	0.570	0.579	0.450	0.230	0.301	0.286
ATMOS1	0.535	0.531	0.563	0.439	0.523	0.570	0.417	0.206	0.234	0.256
ATMOS2	0.401	0.409	0.440	0.361	0.421	0.433	0.336	0.253	0.237	0.252
ATMOS3	0.419	0.406	0.427	0.353	0.409	0.452	0.368	0.177	0.202	0.182
ATMOS4	0.358	0.384	0.415	0.341	0.411	0.422	0.289	0.170	0.150	0.201
ATMOS5	0.391	0.434	0.429	0.362	0.469	0.464	0.375	0.236	0.212	0.270
ATMOS6	0.388	0.414	0.438	0.391	0.502	0.481	0.370	0.229	0.231	0.264
ATMOS7	0.166	0.191	0.200	0.220	0.233	0.225	0.162	0.101	0.087	0.132
EMOTION1	0.237	0.246	0.279	0.273	0.277	0.275	0.234	0.137	0.174	0.179
EMOTION2	0.262	0.251	0.277	0.249	0.278	0.301	0.243	0.173	0.148	0.174
EMOTION3	0.440	0.436	0.497	0.440	0.461	0.492	0.383	0.248	0.248	0.271
EMOTION4	0.464	0.456	0.497	0.441	0.492	0.523	0.386	0.219	0.195	0.239
EMOTION5	0.337	0.315	0.317	0.276	0.298	0.346	0.276	0.134	0.109	0.150
EMOTION6	0.353	0.368	0.376	0.342	0.367	0.383	0.336	0.160	0.144	0.179
EMOTION7	0.415	0.430	0.447	0.411	0.438	0.460	0.359	0.218	0.218	0.239
EMOTION8	0.453	0.460	0.476	0.466	0.487	0.490	0.417	0.156	0.183	0.218
EMOTION9	0.433	0.440	0.475	0.449	0.488	0.488	0.394	0.209	0.210	0.261
SELFIMAGE1	0.509	0.522	0.545	0.556	0.593	0.604	0.435	0.221	0.291	0.294
SELFIMAGE2	0.460	0.472	0.488	0.500	0.551	0.552	0.437	0.252	0.269	0.299
SELFIMAGE3	0.455	0.414	0.477	0.474	0.502	0.562	0.423	0.417	0.338	0.411
SELFIMAGE4	0.449	0.411	0.466	0.435	0.488	0.535	0.375	0.153	0.192	0.223
SELFIMAGE5	0.488	0.472	0.524	0.580	0.596	0.609	0.513	0.215	0.247	0.288
PLACEATT1	0.171	0.176	0.179	0.110	0.167	0.168	0.111	0.129	0.142	0.116
PLACEATT2	0.386	0.381	0.400	0.383	0.449	0.460	0.291	0.245	0.290	0.274
PLACEATT3	0.194	0.157	0.177	0.103	0.208	0.178	0.136	0.161	0.167	0.171
LOYALTY1	0.571	0.567	0.570	0.547	0.611	0.631	0.514	0.265	0.240	0.300
LOYALTY2	0.636	0.645	0.657	0.598	0.687	*0.712*	0.566	0.314	0.297	0.349
LOYALTY3	0.631	0.639	0.651	0.584	0.679	0.699	0.518	0.277	0.301	0.311
LOYALTY4	0.352	0.398	0.412	0.400	0.421	0.419	0.295	0.187	0.191	0.219

** Non-significant
* Significant at 0.05 level
All others significant at 0.01 level
Correlations in italic higher than expected
Correlations in bold and italic lower than expected

Appendix 2. Inter-Item Correlation Matrix Initial CFA (continued)

	LAYOUT1	LAYOUT2	LAYOUT3	LAYOUT4	NONRETAIL1	NONRETAIL2	NONRETAIL3	NONRETAIL4
LAYOUT1	1.000							
LAYOUT2	0.604	1.000						
LAYOUT3	0.503	0.495	1.000					
LAYOUT4	0.535	0.499	0.504	1.000				
NONRETAIL1	0.405	0.495	0.447	0.478	1.000			
NONRETAIL2	0.382	0.440	0.482	0.393	0.448	1.000		
NONRETAIL3	0.333	0.407	0.461	0.364	0.366	0.508	1.000	
NONRETAIL4	0.421	0.460	*0.823*	0.399	0.441	0.492	0.442	1.000
ATMOS1	0.363	0.395	0.461	0.395	0.341	0.309	0.350	0.517
ATMOS2	0.298	0.340	0.423	0.386	0.336	0.244	0.283	0.416
ATMOS3	0.212	0.270	0.359	0.256	0.319	0.260	0.314	0.398
ATMOS4	0.328	0.342	0.384	0.385	0.307	0.277	0.302	0.425
ATMOS5	0.317	0.375	0.447	0.414	0.396	0.328	0.347	0.461
ATMOS6	0.371	0.421	0.499	0.415	0.389	0.386	0.406	0.491
ATMOS7	0.235	0.249	0.307	0.271	0.174	0.212	0.232	0.253
EMOTION1	0.248	0.278	0.271	0.257	0.247	0.232	0.236	0.260
EMOTION2	0.231	0.236	0.319	0.251	0.252	0.188	0.246	0.328
EMOTION3	0.368	0.412	0.424	0.407	0.378	0.306	0.332	0.454
EMOTION4	0.350	0.392	0.403	0.365	0.350	0.315	0.323	0.448
EMOTION5	0.185	0.231	0.255	0.243	0.212	0.240	0.192	0.295
EMOTION6	0.281	0.278	0.314	0.303	0.246	0.269	0.245	0.341
EMOTION7	0.329	0.362	0.342	0.315	0.281	0.269	0.254	0.388
EMOTION8	0.387	0.383	0.393	0.356	0.337	0.303	0.288	0.444
EMOTION9	0.376	0.382	0.402	0.377	0.352	0.346	0.347	0.439
SELFIMAGE1	0.491	0.517	0.467	0.415	0.361	0.402	0.398	0.479
SELFIMAGE2	0.426	0.433	0.491	0.406	0.396	0.483	0.465	0.499
SELFIMAGE3	0.458	0.443	0.411	0.417	0.414	0.406	0.398	0.386
SELFIMAGE4	0.404	0.372	0.468	0.455	0.368	0.387	0.379	0.459
SELFIMAGE5	0.458	0.463	0.446	0.394	0.370	0.426	0.442	0.447
PLACEATT1	0.128	0.135	0.130	0.091	0.151	0.151	0.127	0.158
PLACEATT2	0.344	0.339	0.407	0.338	0.368	0.342	0.310	0.412
PLACEATT3	0.100	0.107	0.167	0.071*	0.127	0.171	0.110	0.174
LOYALTY1	0.396	0.432	0.480	0.504	0.490	0.407	0.358	0.543
LOYALTY2	0.479	0.489	0.545	0.472	0.487	0.485	0.413	0.598
LOYALTY3	0.464	0.476	0.560	0.421	0.463	0.449	0.393	0.628
LOYALTY4	0.329	0.347	0.366	0.334	0.423	0.367	0.272	0.380

** Non-significant
* Significant at 0.05 level
All others significant at 0.01 level
Correlations in italic higher than expected
Correlations in bold and italic lower than expected

Appendix 2. Inter-Item Correlation Matrix Initial CFA (continued)

	ATMOS1	ATMOS2	ATMOS3	ATMOS4	ATMOS5	ATMOS6	ATMOS7	EMOTION1	EMOTION2	EMOTION3
ATMOS1	1.000									
ATMOS2	0.638	1.000								
ATMOS3	0.557	0.473	1.000							
ATMOS4	0.549	0.557	0.334	1.000						
ATMOS5	0.599	0.656	0.458	0.685	1.000					
ATMOS6	0.605	0.607	0.421	0.646	0.761	1.000				
ATMOS7	***0.241***	0.303	***0.011****	0.448	0.378	0.426	1.000			
EMOTION1	0.249	0.227	0.194	0.232	0.248	0.291	0.208	1.000		
EMOTION2	0.313	0.256	0.236	0.262	0.265	0.248	0.150	0.300	1.000	
EMOTION3	0.456	0.395	0.275	0.405	0.418	0.410	0.232	0.400	0.509	1.000
EMOTION4	0.460	0.361	0.307	0.395	0.412	0.419	0.224	0.393	0.442	0.691
EMOTION5	0.289	0.211	0.167	0.186	0.213	0.213	0.123	***0.192***	0.330	0.411
EMOTION6	0.383	0.254	0.212	0.278	0.278	0.316	0.189	0.419	0.444	0.524
EMOTION7	0.453	0.356	0.287	0.392	0.406	0.443	0.247	0.415	0.356	0.575
EMOTION8	0.478	0.353	0.324	0.379	0.388	0.423	0.226	0.452	0.393	0.580
EMOTION9	0.462	0.357	0.275	0.426	0.409	0.461	0.273	0.469	0.387	0.611
SELFIMAGE1	0.452	0.379	0.294	0.399	0.424	0.486	0.309	0.273	0.268	0.459
SELFIMAGE2	0.420	0.384	0.325	0.390	0.456	0.543	0.262	0.271	0.247	0.422
SELFIMAGE3	0.351	0.310	0.282	0.305	0.356	0.422	0.199	0.213	0.191	0.345
SELFIMAGE4	0.416	0.377	0.280	0.379	0.445	0.512	0.305	0.282	0.173	0.406
SELFIMAGE5	0.405	0.343	0.339	0.366	0.357	0.429	0.202	0.216	0.209	0.381
PLACEATT1	0.163	0.094	0.136	0.131	0.143	0.171	0.086*	0.133	0.168	0.188
PLACEATT2	0.399	0.322	0.253	0.320	0.354	0.475	0.225	0.309	0.204	0.431
PLACEATT3	0.150	0.113	0.093	0.076*	0.118	0.173	0.035**	0.083*	0.152	0.157
LOYALTY1	0.558	0.484	0.413	0.440	0.529	0.494	0.218	0.324	0.303	0.538
LOYALTY2	0.629	0.510	0.482	0.478	0.528	0.539	0.220	0.326	0.346	0.551
LOYALTY3	0.603	0.504	0.434	0.461	0.506	0.535	0.215	0.293	0.310	0.530
LOYALTY4	0.376	0.316	0.245	0.347	0.341	0.363	0.142	0.206	0.243	0.390

** Non-significant
* Significant at 0.05 level
All others significant at 0.01 level
Correlations in italic higher than expected
Correlations in bold and italic lower than expected

Appendix 2. Inter-Item Correlation Matrix Initial CFA (continued)

	EMOTION4	EMOTION5	EMOTION6	EMOTION7	EMOTION8	EMOTION9	SELFIMAGE1	SELFIMAGE2	SELFIMAGE3
EMOTION4	1.000								
EMOTION5	0.420	1.000							
EMOTION6	0.522	0.556	1.000						
EMOTION7	0.584	0.324	0.450	1.000					
EMOTION8	0.535	0.384	0.485	0.711	1.000				
EMOTION9	0.580	0.337	0.479	0.736	0.749	1.000			
SELFIMAGE1	0.458	0.254	0.303	0.444	0.454	0.459	1.000		
SELFIMAGE2	0.434	0.224	0.323	0.413	0.432	0.449	0.646	1.000	
SELFIMAGE3	0.372	0.224	0.260	0.318	0.301	0.334	0.509	0.507	1.000
SELFIMAGE4	0.426	0.261	0.317	0.400	0.449	0.476	0.557	0.586	0.553
SELFIMAGE5	0.428	0.222	0.267	0.385	0.383	0.437	0.616	0.569	0.601
PLACEATT1	0.231	0.150	0.150	0.215	0.222	0.185	0.185	0.199	0.175
PLACEATT2	0.412	0.293	0.344	0.394	0.412	0.413	0.499	0.532	0.456
PLACEATT3	0.184	0.065**	0.130	0.192	0.166	0.158	0.134	0.175	0.175
LOYALTY1	0.530	0.330	0.421	0.488	0.537	0.556	0.462	0.485	0.441
LOYALTY2	0.563	0.348	0.421	0.526	0.574	0.567	0.551	0.571	0.502
LOYALTY3	0.555	0.330	0.411	0.518	0.568	0.561	0.544	0.559	0.493
LOYALTY4	0.411	0.272	0.328	0.384	0.409	0.398	0.381	0.409	0.389

	SELFIMAGE4	SELFIMAGE5	PLACEATT1	PLACEATT2	PLACEATT3	LOYALTY1	LOYALTY2	LOYALTY3	LOYALTY4
SELFIMAGE4	1.000								
SELFIMAGE5	0.572	1.000							
PLACEATT1	0.189	0.161	1.000						
PLACEATT2	0.534	0.441	***0.275***	1.000					
PLACEATT3	0.113	0.189	0.348	***0.238***	1.000				
LOYALTY1	0.499	0.474	0.179	0.492	0.226	1.000			
LOYALTY2	0.515	0.521	0.262	0.495	0.259	0.732	1.000		
LOYALTY3	0.506	0.518	0.234	0.477	0.236	0.710	0.831	1.000	
LOYALTY4	0.415	0.391	0.113	0.449	0.115	0.458	0.477	0.457	1.000

** Non-significant
* Significant at 0.05 level
All others significant at 0.01 level
Correlations in italic higher than expected
Correlations in bold and italic lower than expected

Appendix 3. EFA Factor Matrix of Town Centre Image Items

Items	Factor Loadings						
	ASSORT	ACCESS	LAYOUT/NR	ATMOS	AFFECT	SELFIMAGE	PLACEATT
ASSORT1	.800						
ASSORT2	.792						
ASSORT3	.767						
ASSORT4	.597						
ASSORT5	.678						
ASSORT6	.647						
ASSORT7	.591						
ACCESS1		.900					
ACCESS2		.885					
ACCESS3		.883					
LAYOUT1			.306				
LAYOUT2			.384				
LAYOUT3			.663				
LAYOUT4			.430				
NONRETAIL1			.547				
NONRETAIL2			.689				
NONRETAIL3			.608				
NONRETAIL4			.577				
ATMOS1				.613			
ATMOS2				.782			
ATMOS3				.473			
ATMOS4				.768			
ATMOS5				.824			
ATMOS6				.730			
ATMOS7				.440			
EMOTION1					-.607		
EMOTION2					-.628		
EMOTION3					-.679		
EMOTION4					-.619		
EMOTION5					-.599		
EMOTION6					-.755		
EMOTION7					-.653		
EMOTION8					-.675		
EMOTION9					-.672		
SELFIMAGE1						-.418	
SELFIMAGE2						-.379	
SELFIMAGE3						-.338	
SELFIMAGE4						-.492	
SELFIMAGE5						-.385	
PLACEATT1							.750
PLACEATT2							.362
PLACEATT3							.768
KMO 0.960							
Bartlett's Test 21879.810 (sig 0.000)							
Cumulative Variance Extracted 63.314%							

Appendix 4. CFA iterations for measurement model scale purification

Item/construct deleted:	Original model	►	**NONRET4**	►	**ATMOS7**	►	**ATMOS1**	►	**EMOTION4**	►	**ASSORT7**
X^2/df	3.935		3.682		3.579		3.383		3.252		3.092
GFI	0.818	▲	0.839	▲	0.851	▲	0.866	▲	0.879	▲	0.892
TLI	0.877		0.899		0.909		0.919		0.928		0.938
CFI	0.887	▲	0.907	▲	0.917	▲	0.927	▲	0.935	▲	0.945
RMSEA	0.06		0.057		0.056		0.054		0.053		0.051
Item for deletion	**Place Att**	▲	**EMOTION5**	▲	**SELFIMAGE3**	▲	**ATMOS3**	▲	**EMOTION2**	▲	**ASSORT4**
Reason for deletion	poor CR		highest MI		highest MI		highest MI		highest MI		highest MI
Factor loading		▲	0.491	▲	0.709	▲	0.531	▲	0.5	▲	0.721
M.I.			85.371		61.917		31.246		38.603		29.352
Par Change		▲	0.247	▲	0.197	▲	0.162	▲	0.194	▲	0.13
Related item			EMOTION6		ACCESS1		ASSORT1		EMOTION3		SELFIMAGE5
	▼		▼		▼		▼		▼		▼
Item/construct deleted:	**Place Att**		**EMOTION5**		**SELFIMAGE3**		**ATMOS3**		**EMOTION2**		**ASSORT4**
X^2/df	4.141	▲	3.629	▲	3.507	▲	3.326	▲	3.207	▲	3.003
GFI	0.819		0.845		0.856		0.871		0.884		0.901
TLI	0.882	▲	0.904	▲	0.914	▲	0.924	▲	0.932	▲	0.942
CFI	0.891		0.912		0.922		0.932		0.94		0.948
RMSEA	0.062	▲	0.057	▲	0.055	▲	0.053	▲	0.052	▲	0.05
Item for deletion	**NONRET4**		**ATMOS7**		**ATMOS1**		**EMOTION4**		**ASSORT7**		**ASSORT6**
Reason for deletion	highest MI	▲	highest MI	▲	highest MI	▲	highest MI	▲	highest MI	▲	highest MI
Factor loading	0.787		0.435		0.769		0.749		0.7		0.841
M.I.	120.782	▲	63.68	▲	40.185	▲	29.286	▲	25.552	▲	30.223
Par Change	0.255		-0.22		0.165		0.127		0.106		0.106
Related item	LAYOUT3	▲	ATMOS3	▲	ASSORT1	▲	EMOTION3	▲	ASSORT5	▲	SELFIMAGE5
	►		►		►		►		►		cont over►

Appendix 4. CFA iterations for measurement model scale purification (continued)

►cont from previous page:

Item/construct deleted:	**ASSORT6**	►	**ATMOS6**	►	**LAYOUT4**	►	**EMOTION1**	►	**LAYOUT3**
X^2/df	2.821		2.498		2.346		2.232		1.896
GFI	0.912	▲	0.926	▲	0.936	▲	0.942	▲	0.959
TLI	0.947		0.957		0.965		0.971		0.98
CFI	0.954	▲	0.963	▲	0.97	▲	0.975	▲	0.984
RMSEA	0.047		0.043		0.041		0.039		0.033
Item for Deletion	**ASSORT5**	▲	**LOYALTY4**	▲	**EMOTION3**	▲	**NONRET1**	▲	
Reason for Deletion	highest MI		highest MI		highest MI		highest MI		
Factor loading	0.822	▲	0.547	▲	0.724	▲	0.653	▲	
M.I.	42.384		19.597		17.743		13.983		
Par Change	0.139	▲	0.166	▲	0.115	▲	0.094	▲	
Related item	SELFIMAGE5		NONRET1		EMOTION6		LOYALTY1		
	▼		▼		▼		▼		**END**

Item/construct deleted:	**ASSORT5**		**LOYALTY4**		**EMOTION3**		**NONRET1**	
X^2/df	2.534	▲	2.427	▲	2.222	▲	2.093	▲
GFI	0.922		0.93		0.942		0.951	
TLI	0.956	▲	0.961	▲	0.969	▲	0.975	▲
CFI	0.962		0.967		0.974		0.98	
RMSEA	0.043	▲	0.042	▲	0.039	▲	0.037	▲
Item for Deletion	**ATMOS6**		**LAYOUT4**		**EMOTION1**		**LAYOUT3**	
Reason for Deletion	highest MI	▲	highest MI	▲	highest MI	▲	giving best fit	▲
Factor loading	0.86		0.693		0.531		0.731	
M.I.	20.72	▲	20.46	▲	16.932	▲	10.324	▲
Par Change	0.086		0.108		0.115		0.073	
Related item	SELFIMAGE2	▲	LOYALTY1	▲	EMOTION6	▲	ATMOS2	▲
	►		►		►		►	

Appendix 5. Inter-item Correlation Matrix for Structural Town Centre Image Model

	ASSORT1	ASSORT2	ASSORT3	ACCESS1	ACCESS2	ACCESS3	LAYOUT1	LAYOUT2	ATMOS2	ATMOS4	ATMOS5
ASSORT1	1										
ASSORT2	0.802	1									
ASSORT3	0.815	0.79	1								
ACCESS1	0.214	0.179	0.21	1							
ACCESS2	0.198	0.173	0.21	0.65	1						
ACCESS3	0.239	0.221	0.248	0.692	0.682	1					
LAYOUT1	0.45	0.438	0.46	0.32	0.331	0.382	1				
LAYOUT2	0.401	0.419	0.427	0.341	0.381	0.414	0.604	1			
ATMOS2	0.401	0.409	0.44	0.253	0.237	0.252	0.298	0.34	1		
ATMOS4	0.358	0.384	0.415	0.17	0.15	0.201	0.328	0.342	0.557	1	
ATMOS5	0.391	0.434	0.429	0.236	0.212	0.27	0.317	0.375	0.656	0.685	1
EMOTION6	0.353	0.368	0.376	0.16	0.144	0.179	0.281	0.278	0.254	0.278	0.278
EMOTION7	0.415	0.43	0.447	0.218	0.218	0.239	0.329	0.362	0.356	0.392	0.406
EMOTION8	0.453	0.46	0.476	0.156	0.183	0.218	0.387	0.383	0.353	0.379	0.388
EMOTION9	0.433	0.44	0.475	0.209	0.21	0.261	0.376	0.382	0.357	0.426	0.409
SELFIMAGE1	0.509	0.522	0.545	0.221	0.291	0.294	0.491	0.517	0.379	0.399	0.424
SELFIMAGE2	0.46	0.472	0.488	0.252	0.269	0.299	0.426	0.433	0.384	0.39	0.456
SELFIMAGE5	0.488	0.472	0.524	0.215	0.247	0.288	0.458	0.463	0.343	0.366	0.357
LOYALTY1	0.571	0.567	0.57	0.265	0.24	0.3	0.396	0.432	0.484	0.44	0.529
LOYALTY2	0.636	0.645	0.657	0.314	0.297	0.349	0.479	0.489	0.51	0.478	0.528
LOYALTY3	0.631	0.639	0.651	0.277	0.301	0.311	0.464	0.476	0.504	0.461	0.506

	EMOTION6	EMOTION7	EMOTION8	EMOTION9	SELFIMAGE1	SELFIMAGE2	SELFIMAGE5	LOYALTY1	LOYALTY2	LOYALTY3
EMOTION6	1									
EMOTION7	0.45	1								
EMOTION8	0.485	0.711	1							
EMOTION9	0.479	0.736	0.749	1						
SELFIMAGE1	0.303	0.444	0.454	0.459	1					
SELFIMAGE2	0.323	0.413	0.432	0.449	0.646	1				
SELFIMAGE5	0.267	0.385	0.383	0.437	0.616	0.569	1			
LOYALTY1	0.421	0.488	0.537	0.556	0.462	0.485	0.474	1		
LOYALTY2	0.421	0.526	0.574	0.567	0.551	0.571	0.521	0.732	1	
LOYALTY3	0.411	0.518	0.568	0.561	0.544	0.559	0.518	0.71	0.831	1

All correlations significant at the 0.01 level