Louvain School
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Working paper

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06/05

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Academic Year 2005 - 2006

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How Does the Retail Environment Influence Shoppers' Emotional Experience? Evidence from Two Retail Settings

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Abstract

This study examines the relationships that exist among shoppers' perceptions of a retail environment and their emotions, satisfaction, and behavioural intentions with respect to that shopping setting. A model of these relationships is developed and then tested in two distinct retail settings—shopping centres and traditional retailing areas. The results show that, in general, positive perceptions of a retail environment have a positive influence on positive emotions, on repatronage intentions, and on desire to remain longer in the shopping area in both retail settings. However, some interesting differences emerge between shopping centres and traditional retailing areas: (i) there is a stronger effect of internal environment on emotions in shopping centres than in traditional retailing areas; and (ii) there is a negative effect of internal environment in shopping centres on disposition to pay more.

Keywords

Shopping centres, traditional retailing, physical environment, emotions, satisfaction, repatronage intentions.

Introduction

The increasing competition among various retail formats encourages managers to take account of consumer experience in the shopping environment as a potential tool of differentiation (Arnold *et al*., 2005). The creation of a pleasant environment for shopping has become a competitive retailing strategy to enhance consumer experience in the store and to attract consumers to the retail setting (Frasquet *et al*., 2002). In recent decades, the term 'retail theatre' has emerged to describe the use of intended effects to improve customer satisfaction and loyalty (and hence retail performance) by creating pleasant experiences for consumers (Baron *et al*., 2001). Knowledge of the retail atmospherics that enhance positive feelings among shoppers can assist managers in their efforts to develop appropriate marketing strategies that create and maintain positive shopping experiences (D'Astous, 2000).

The influence of the retail physical environment on consumer behaviour has received significant attention from researchers (Gilboa and Rafaeli, 2003; Luomala, 2003; Mattila and Wirtz, 2001; Wakefield and Baker, 1998; Warren and Burns, 2002). Although this effect is widely accepted (Foxall and Greenley 1999; Turley and Milliman 2000), there are still questions that remain unanswered. In particular, there is uncertainty regarding: (i) the retail atmospherics that are most important in consumers' minds when forming their behavioural responses; and (ii) the role of emotions in determining these behavioural responses (Wakefield and Baker, 1998; Arnold *et al*., 2005). For example, although previous studies have examined the effects of individual pleasant stimuli such as *music* (Yalch and Spangenberg, 1990), *colour* (Bellici and Hite, 1992), and *scent* (Spangenberg *et al*., 1996) on consumer behaviour, most studies have failed to examine how these stimuli interact with each other (the exceptions being: Baker *et al*., 1992; Wakefield and Baker, 1998). The present study therefore evaluates perceptions of specific retail atmospherics within shopping centres and traditional retailing areas (internal retail atmospherics such as lighting, design, and temperature and external retail atmospherics such as parking and accessibility) and analyses their relationship to shoppers' emotions.

The first objective of this paper is to examine how the retail atmospherics influence the emotional experiences and behavioural intentions of consumers. The study proposes a comprehensive

model of the relationships that exist among: (i) retail atmospherics; (ii) emotions; (iii) satisfaction; and (iv) behavioural intentions. In particular, an assessment is made of the effects of the retail atmospherics on three shoppers' intentions—desire to remain in the store, repatronage intentions, and disposition to pay more.

The second objective of this paper is to test the robustness of the proposed model across two distinct retail formats— traditional retailing areas and shopping centres. We refer to traditional retailing areas as stores located on residential streets or in shopping streets with little or no houses, while shopping centre[1] is a building that contains stores and have interconnecting walkways that make it easy for people to walk from store to store. In Europe and Australia these are called shopping centres, but in North America the term 'mall' is preferred (Wikipedia contributors, 2006).

To achieve these objectives, the study utilises an international survey administrated to 600 real consumers (no students). This real sampling process increases the validity of the present research.

This paper contributes to the literature in two respects. *First*, it presents and tests a comprehensive model linking the retail atmospherics to emotions, levels of satisfaction, and behavioural intentions among consumers. Most of the hypothesised relationships have already been verified in previous research, but they have not been integrated and tested in a single model. *Secondly*, the study tests this integrated model in two types of retail areas to analyse the robustness of the model in distinct retail formats. To the present authors' knowledge, such a model has never been tested in this manner. In this regard, from both the managerial perspective and the academic perspective, there is a perceived need to study the emotional experience in retailing by means of comparative analyses between shopping centres and independent stores in urban areas (Klemz and Boshoff, 2001). Taking into account these two original contributions, the results of the present study provide academics and practitioners alike with a better understanding of the importance of the retail environment from the consumer's perspective.

This paper is organised in the following way. The first section of the paper presents a theoretical framework for the various concepts of interest to the study—retail atmospherics, emotions, satisfaction, disposition to pay more, repatronage intentions, and desire to remain. This section of the

paper also develops research hypotheses. The second section of the paper concentrates on the methodology of the empirical research, which consists of an international survey of female shoppers in two retail settings (shopping centres and traditional retailing). The third section of the paper reports the empirical findings of this study. Finally, the paper discusses the theoretical and managerial implications and outlines some suggestions for further research.

Conceptual background and model development

The retail environment includes such elements as interior design, décor, lighting, music, and cleanliness (Baker, 1986). Several studies of retailing have explored the effects of the retail environment on induced emotional states and the resulting influence on purchasing behaviour (Donovan and Rossiter, 1982; Baker *et al*. 1992; Mattila and Wirtz, 2001; Gilboa and Rafaeli, 2003).

The importance of shoppers' emotions in determining consumer behaviour has been well established in both the retail domain and the services domain (Machleit and Mantel, 2001). Emotions associated with consumption are affective variables that are formed in response to a specific referent or appraisal made by the consumer (Bagozzi *et al.*, 1999). Baker *et al*. (1992) established associations between store environment and the affective states of pleasure and arousal. Focusing on the mall environment, Wakefield and Baker (1998) suggested that the overall architectural design and décor of the mall are the key environmental elements in generating excitement among customers.

In view of the preceding discussion, the following hypothesis is proposed:

H1. A positive (negative) relationship exists between shoppers' perceptions of retail atmospherics and the positive (negative) emotions of those shoppers.

The retail environment has been found to influence shoppers' behavioural intentions; however, various researchers have identified different dimensions in the construct of behavioural intention. For example, environmental psychologists have identified two general forms of behaviour: (i) 'approach' (that is, a desire to remain, explore, and affiliate); and (ii) 'avoidance' (the opposite behaviours)

(Mehrabian and Russell, 1974). Boulding *et al.* (1993) identified 'intention to repurchase' and 'willingness to recommend' as being two behavioural intentions. Zeithaml *et al.* (1996) identified five dimensions in the construct of behavioural intention: (i) intention to remain loyal; (ii) propensity to switch; (iii) disposition to pay more; (iv) external response to problem; and (v) internal response to problem.

By integrating the findings of previous research, the present study posits 'behavioural intentions' as a three-dimensional construct: (i) repatronage intentions—expressing a preference for a particular retail setting over others, continuing to purchase from that retail setting, and increasing business with that retail setting in future (Zeithaml *et al.*, 1996); (ii) disposition to pay more at a retail setting (Rust and Zahorik, 1993); and (iii) desire to remain at the retail setting —akin to the 'approach' behaviour identified in environmental psychology (Wakefield and Baker, 1998).

Studies in environmental psychology have consistently shown that the perceived physical environment influences approach–avoidance behaviour (Donovan and Rossiter, 1982; Hui and Bateson, 1991). The appraisal of both internal retail atmospherics (such as lighting, design, and temperature) and external retail atmospherics (such as accessibility of the shopping environment and parking facilities) can affect consumers' attraction to the shopping environment (Bitner, 1992; Babin and Attaway, 2000). Wakefield and Baker (1998) found that retail atmospherics plays an important role in determining a shopper's desire to remain at a shopping area. Research also supports an association between retail atmospherics and patronage behaviour (McGoldrick and Thompson, 1992). Finally, Tai and Fung (1997) suggested that environmental stimuli are positively related to the level of pleasure experienced in the store which, in turn, positively influences in-store shopping behaviours—such as extra money spent, extra time spent, and desire to explore the store.

In view of the preceding discussion, the following hypothesis is proposed:

H2. Shoppers' perceptions of retail atmospherics have a positive effect on: (i) shoppers' repatronage intentions; (ii) shoppers' disposition to pay more at the shopping area; and (iii) shoppers' desire to remain at the shopping area.

The concept of ‘consumer satisfaction’ has been widely debated in the literature (Oliver, 1997; Wirtz and Bateson, 1999). Satisfaction has traditionally been considered to be a relative cognitive state—that is, satisfaction has traditionally been posited as being influenced by cognitive antecedents and derived from a relative comparison between a subjective experience and a prior base of reference (Oliver, 1980). More recently, satisfaction has been understood from a more affective (emotional) perspective (Oliver *et al.*, 1997; Phillips and Baumgartner, 2002; Wirtz and Bateson, 1999). The current ‘experiential view’ offers an integrated framework for understanding consumer satisfaction—a framework that takes into consideration both cognitive antecedents and affective antecedents. According to this view, consumer satisfaction can be understood as a cognitive-affective state resulting from cognitive evaluations and from the emotions evoked by such cognitive evaluations (Bigné *et al*., 2005).

It is thus apparent that satisfaction models now take account of the role of *affect* in satisfaction assessment (Westbrook and Oliver 1991; Erevelles 1998), especially the positive emotions that are provoked by the product and consumption (Mano and Oliver, 1993; Oliver *et al*. 1997; Babin *et al*., 1998; Smith and Bolton 2002). More specifically, in a recent study of perceived retail crowding and shopping satisfaction, Eroglu *et al.* (2005) noted a positive direct effect of joy on satisfaction, and a negative direct effect of contempt and disgust on satisfaction.

In view of the preceding discussion, the following hypothesis is proposed:

H3. Positive (negative) emotions elicited by the shopping experience have a positive (negative) relationship with consumer satisfaction.

Research in environmental psychology has shown that consumption emotions influence approach–avoidance behaviours (Hui *et al.,* 1997; Lemmink and Mattson 1998; Kumar and Karande 2000). When shoppers experience positive emotions in a shopping area, they are more likely to adopt ‘approach behaviour’; conversely, negative emotions are more likely to produce ‘avoidance’

behaviour (Yalch and Spangenberg, 2000). According to 'affect control theory', the emotions of consumers lead them to choose a type of behaviour (loyalty or exit) that allows them to regain their self-identity (Chebat and Slusarczyk, 2005). The feelings of consumers during a shopping experience can stimulate short-term positive intentions (for example, to remain longer in the store) and/or medium-term or long-term positive intentions (for example, repatronage intentions) (Donovan and Rossiter, 1982; Hui *et al*., 1997; Lemmink and Mattson, 1998).

In view of the preceding discussion, the following hypothesis is proposed:

H4. Positive (negative) emotions elicited by the shopping experience have a positive (negative) relationship with: (i) shoppers' repatronage intentions with respect to the shopping area; and (ii) shoppers' desire to remain at the shopping area.

Consumer behaviour that indicates bonding with a particular provider includes: (i) an expressed preference for a particular provider; (ii) increased volume of purchases with that provider; and (iii) agreeable willingness to pay a price premium to that provider (Zeithaml *et al*., 1996). In this context, two relationships have been extensively investigated in the literature: that between satisfaction and repurchase intentions (Bloemer and Kasper, 1995; Cronin and Taylor, 1992; Fornell, 1992; Yu and Dean, 2001) and that between satisfaction and disposition to pay more (Bigné *et al.*, 2005).

In addition to these relationships, the present study also analyses the effect of satisfaction on short-term positive intention—that is, a consumer's desire to remain at the shopping area. It is presumed that consumers' short-term behavioural intentions are consistent with their levels of satisfaction (Bolton, 1998). Even though there are no quantitative studies about the association between satisfaction and desire to remain, a desire to remain longer could be categorised as a favourable behavioural intention—an indication that customers are forging bonds with a provider.

In view of the preceding discussion, the following hypothesis is proposed:

H5. Shoppers' satisfaction has a positive effect on: (i) shoppers' repatronage intentions; (ii) shoppers' disposition to pay more at the shopping area; and (iii) shoppers' desire to remain at the shopping area.

Behavioural intention is a complex construct (Bloemer and de Ruyter, 1999; Yu and Dean, 2001). As previously noted, Zeithaml *et al*. (1996) referred to certain behaviours that indicate the forging of bonds with a provider. In the shopping context, these behaviours might include the expression of a preference for a particular shopping area or exhibiting a willingness to remain longer and intensify the shopping experience. Moreover, during a shopping experience, consumers can experience positive short-term service encounters that build friendships and enhance the likelihood of favourable long-term outcomes, such as loyalty (Lemmink and Mattson, 2002).

On the basis of the above discussion, the following hypothesis is proposed:

*H6. **S**hoppers' desire to remain at the shopping area has a positive effect on repatronage intentions with respect to that shopping area.*

Figure 1 illustrates our integrative model of relationships among retail atmospherics, shoppers' emotions, shoppers' satisfaction, and three shoppers' behavioural intentions (desire to remain at the shopping area, repatronage intentions, and disposition to pay more).

**** Insert Figure 1 about here ****

Research methodology

Field setting

To test the hypotheses and to assess the robustness of the proposed model in various settings, two empirical studies were conducted in three European countries (Belgium, France, and Spain). The first study was carried out in selected shopping centres, and the second in traditional retailing areas.

Perfume–cosmetics stores were chosen in both settings for two reasons: (i) this type of establishment can be found in both shopping centres and traditional retailing areas; and (ii) such establishments use similar merchandising methods in the above-mentioned European countries. A field study was chosen to gain information directly from individuals in a shopping environment because their perceptions and feelings about that environment were likely to be clearly in mind at the time of the data collection (Wakefield and Baker, 1998).

Data were collected during May 2002 from female shoppers who were selected at random by surveyors located near the shopping areas. Women were chosen as subjects to control for the effect of gender in the model. Gender has been shown to be a potential variable in this setting in at least three respects: (i) perfume–cosmetics products have a feminine connotation and perfume–cosmetics clients are mainly women (Otnes and McGrath, 2001); (ii) gender has an influence on the relationship between perceived store atmosphere and shopping behaviour (Otnes and McGrath, 2001; Chebat *et al.*, 2005); and (iii) emotions have been found to vary with gender (Dubé and Morgan, 1996). By limiting the subjects to women, these potential gender effects were eliminated from the present study.

Overall, 299 useable surveys were collected near traditional retailing areas (one-third in each country) and 301 useable surveys were collected in shopping centres (one-third in each country).

Measures

A structured questionnaire was developed in English (see appendix 1) and then translated into Spanish (for data collection in Spain) and into French (for data collection in France and the French-speaking part of Belgium). The instruments were back-translated into English to ensure the quality of the translation and to ensure that the contents were equivalent.

The questionnaire measured consumers' perceptions of the shopping area environment on a five-point Likert-type scale. Following Turley and Milliman's (2000) study, the present study considered: (i) external atmospherics—two items (parking facilities and accessibility to the shopping area); (ii) internal atmospherics—four items (lighting, temperature, cleanliness, and décor); and (iii)

human variables—two items (employee characteristics and crowding). These retail atmospherics were applied to both retail settings considered in the study.

With regard to consumption emotions[2], consumers were asked to assess the intensity to which they experienced joy, interest, contentment, anger, fear, and disgust on a five-point Likert-type scale (in which '1' = 'very low intensity' and '5' = 'very high intensity'). These six emotions were chosen for this study because they were considered applicable in the retailing context (Machleit and Eroglu 2000).

In accordance with Dubé and Morgan (1998) and Mittal *et al.* (1998), consumer satisfaction was measured directly on a five-point Likert-type scale (in which '1' = 'very low satisfaction' and '5' = 'very high satisfaction').

The items measuring repatronage intentions (four items) and disposition to pay more (two items) were adapted from Zeithaml *et al.* (1996). The item measuring desire to remain was adapted from Wakefield and Blodgett (1994).

Socio-demographic variables (age and occupation) as well as buying motivations and frequency of visits to the shopping area were also measured.

Results and discussion

Sample characteristics

The sample demographics indicated that no differences existed in the age distribution (Pearson chi-square test, p= 0.367) and in the occupation distribution (Pearson chi-square test, p= 0.209) of shoppers surveyed in the two studies (shopping centres as opposed to traditional retailing). The age profile of the overall sample (n=600) was distributed as follows: 23–32 years (36.7% of respondents), 33–42 years (25.8%), 43–52 years (20.0%), 53–64 years (10.7%), and older than 65 years (6.8%). With regard to occupations, housewives represented 20.2% of the respondents, students 15.5%, workers 10.3%, employees 29.2%, and retired women 6.2%; the remainder (11.7%) were classified as 'other'.

Some differences were detected among the three national sub-samples (Belgium, France, and Spain). Compared with Belgian consumers and French consumers, Spanish consumers gave a higher score for internal atmospherics ($\mu_{Spain} = 4.67$; $\mu_{Belgium} = 4.16$; $\mu_{France} = 3.98$; $p = 0.0001$) and for external atmospherics ($\mu_{Spain} = 4.43$; $\mu_{Belgium} = 3.83$; $\mu_{France} = 3.39$; $p = 0.0001$). However, Spanish consumers were less prepared to pay a price premium to a retailer than were French consumers and Belgian consumers ($\mu_{Spain} = 1.52$; $\mu_{France} = 1.97$; $\mu_{Belgium} = 2.52$; $p = 0.0001$). These results can be interpreted in various ways. First, Spanish retailers might take greater care of their physical environment than do Belgian and French retailers. The Spanish retail sector has undergone fundamental changes in recent years, and now offers shopping and leisure activities that satisfy modern consumer shopping expectations (Frasquet *et al.*, 2002). Secondly, the difference between Spanish consumers and French and Belgian consumers with respect to atmospheric elements could reflect a higher sensitivity among Spanish consumers to such retail atmospheric elements. Thirdly, Spanish consumers might consider retail atmospheric elements to be a necessary part of the retailers' activity; consequently, they might refuse to spend more money to benefit from such atmospheric elements. Finally, these results could be due to differences in response styles (for instance, in acquiescence response style and in extreme response style) across countries. Response styles can indeed lead to contamination of observed scores (Baumgartner and Steenkamp, 2001). Further research is needed to explore the cause(s) of these observed differences between Belgian, French, and Spanish shoppers.

Reliability, validity and measurement models

The objective was to test the robustness of the proposed integrated model (see Figure 1) in both shopping centres and traditional retailing. For this purpose, it was necessary to use the same indicators for all concepts in both settings.

Reliability analyses in the early states of data analysis revealed that three items relating to perceived physical environment should be deleted. These items were 'employee characteristics', 'cleanliness', and 'crowding'. Exploratory factor analyses (with VARIMAX rotation) of the remaining five items used to measure perceived physical environment highlighted two factors in both retail

environments. The first factor concerned the internal atmospherics, and included the following items: 'lighting', 'temperature', and 'décor'. The second factor concerned the external atmospherics of the shopping areas, and included the following items: 'parking' and 'accessibility'. Table 1 shows the final results of the exploratory factor analyses.

**** Insert Table 1 about here ****

Table 2 summarises the descriptive analyses of all the concepts involved. Most items were shown to be reasonably reliable—with Cronbach alphas greater than 0.6, which is relatively adequate according to Peter (1979). The exceptions were two items used in the traditional retailing study, in which Cronbach's alphas for 'negative emotions' and 'external atmospherics' were less than 0.6; these items need to be improved in later research.

Table 2 also shows low means for negative emotions items and low observed variance in the experienced negative emotions. Because atmospheric elements are specifically designed to create positive feelings, it is perhaps not surprising that shoppers do not usually experience negative emotions at the point of sale. It was therefore decided not to include negative emotions in further analysis.

**** Insert Table 2 about here ****

Confirmatory factor analyses were conducted to test for configural variance across the two samples (Steenkamp and Baumgartner, 1998). Configural invariance can be said to be present across study contexts if evidence is provided by confirmatory factor analyses in both contexts for: (i) the overall fit of the specified model; (ii) the significance of salient, nonzero factor loadings; and (iii) the discriminant validity of the constructs under investigation.

Measurement models were run on each data sample using EQS 5.7b (Bentler 1995; Byrne 1994). The resulting confirmatory factor analyses are shown in Table 3. In summary, the data fitted the measurement models reasonably well. The χ^2 test becomes more sensitive as the number of

indicators rises. In addition, sample sizes greater than 200 also tend to produce significant χ^2 statistics—even when the data set is not well fitted to the hypothesised model structure (Hair *et al.*, 1992). In such cases, the Tucker-Lewis Index (TLI_{SC} = 0.93; TLI_{TR} = 0.91) and the Normed Fit Index (NFI_{SC} =0.92; NFI_{TR} =0.90) provide relatively unbiased estimations of incremental fit of the proposed structural model (Wakefield and Baker, 1998).

Construct reliability estimates (see Table 3) showed good levels of reliability (ρ_η>0.70; Fornell and Larcker, 1981) for all measures—with the exception of: (i) 'internal atmospherics' in the shopping-centre sample; and (ii) 'external atmospherics' and 'positive emotions' in the traditional retailing sample. Discriminant validity was assessed on the basis of confidence intervals (Anderson and Gerbing, 1988). All possible correlations between the five multi-items factors were calculated, as well as the confidence interval ±2 standard errors. The condition that there should be no values of 1 within the interval was met in both samples—thus confirming the discriminant validity of the scales used.

**** Insert Table 3 about here ****

Finally, multi-item scales were collapsed into composite scores (sums of scores divided by the number of items) reflecting the constructs (Bagozzi and Edwards, 1998). These composite scores were used for estimating the structural model. According to Landis *et al.* (2000), the use of composite scores generally results in improved overall model fit (compared with treating all items as individual indicators). Correlations, means, and standard deviations of the composite measures of the constructs are presented in Table 4.

**** Insert Table 4 about here ****

Multi-group structural model analyses

After confirming the measurement models, a full theoretical model was tested in which all estimated structural path coefficients were constrained to be invariant across the two retail settings

(Singh, 2000). In addition to the structural path coefficients, the model considered a correlation between the two shopping 'atmospherics' (internal and external). The theoretical multi-group structural model fitted the data well. The fit indices for the model were $\chi^2(26, =301, N=299) = 85.84$, $p<0.01$, GFI = 0.96; NFI = 0.91; AGFI = 0.92; CFI = 0.94; TLI = 0.90; RMSEA = 0.06. All paths of the theoretical model were significant at $\alpha = 0.05$, with the exception of the path from external atmospherics to disposition to pay more. Because subsequent tests indicated that this path did not differ significantly across samples, this path was dropped from the model.

The equality of structural coefficients across samples was then tested (Byrne, 1994). This analysis revealed that four paths were significantly different ($p<0.05$) in the shopping centre study and the traditional retailing study. The invariance constraints were therefore relaxed with respect to these four paths. This final multi-group structural model fitted the data well ($\chi^2_{22, N=301, N=299} = 55.14$, $p<0.01$, GFI = 0.97; AGFI = 0.94; CFI = 0.96; NFI = 0.94; TLI = 0.93; RMSEA = 0.05). Table 5 shows the standardised estimates corresponding to each of the hypothesised effects. The structural estimates reported in the table are from the multi-group analysis in which the structural model was estimated simultaneously for the shopping-centre sample and the traditional retailing sample using EQS 5.7b. Most of the model estimates were consistent with the hypothesised directions suggested in the proposed theoretical model (see Figure 2).

**** Insert Table 5 about here ****

**** Insert Figure 2 about here ****

As can be seen in Table 5, most of the hypothesised paths were supported ($p < 0.05$). The first two hypotheses concerned the effects of perceived retail environment on emotions and behavioural intentions. These hypotheses contained a double set of relationships because the 'retail environment' refers to both internal atmospheric elements and external atmospheric elements. As shown in Table 5, both internal perceived environment and external perceived environment had a positive effect on positive emotions (supporting H1) and on repatronage intentions (supporting H2(i)). In addition, the

positive effect of external atmospherics on desire to remain at the shopping area was significant in both studies. In contrast, in the traditional retailing sample, internal atmospherics had an insignificant effect on desire to remain. H2(iii) was thus partially supported.

As proposed by H3, H4(i), and H4(ii), positive emotions had a positive effect in both samples on satisfaction, repatronage intentions, and short-term behavioural intention to remain longer at the shopping area. Consumers' satisfaction had a positive effect on repatronage intentions, disposition to pay more, and desire to remain—which confirmed H5. The positive effect of a desire to remain on repatronage intentions was also significant in both studies—thus supporting H6.

H2(ii), which proposed that perceived retail environment (internal atmospherics and external atmospherics) has a positive effect on consumers' disposition to pay more, was not supported by the data. The relationship between external atmospherics and disposition to pay more was insignificant in both samples, as was the relationship between internal atmospherics and disposition to pay more in the traditional retailing sample (see Table 5).

Differences between retail settings

Four interesting differences between shopping centre and traditional retailing were revealed.

First, the positive effect of positive emotions on consumers' satisfaction was significantly higher in traditional retailing than in shopping centres. It is possible that other (unobserved) elements in the shopping experience (for example, interactions between salespeople and shoppers) might be more significant in the traditional retailing environment. This 'soft' side of the retail experience (Lemmink and Mattsson, 1998) could be taken into account in further research.

Secondly, the positive effect of internal atmospherics on shoppers' emotions was significantly stronger in shopping centres than in traditional retailing. This finding might be explained by management in the two settings (shopping centres and traditional retailing) having differing views on the importance of atmospherics. Managers of shopping centres tend to devote more attention to the

atmosphere and aesthetics of the surroundings than do managers in other commercial environments (Luomala, 2003).

Thirdly, as noted above, perceived internal atmospherics had a significant positive effect on the desire to remain longer at the point of sale in the shopping-centre study, whereas these atmospherics had no significant effect on this short-term behavioural intention in the traditional retailing model.

Fourthly, only in the shopping-centre setting did internal atmospherics have a significant negative influence on disposition to pay more (see Table 5). A possible explanation for this result might be that there is an optimum level of internal atmospherics beyond which consumers are not induced to pay more—perhaps because they consider that the investments in atmosphere are already reflected in the price level of the stores located at shopping centres. Further research is needed to replicate this result and to understand the reasons for consumers reacting in this way.

Conclusions, implications and limitations

The results support the general contention of this study—that there are positive relationships among shoppers' perceptions about the retail atmospherics, shoppers' emotions, shoppers' satisfaction, and shoppers' behavioural intentions with respect to a shopping area, and that these relationships are consistent in two different retail settings. This represents the most important contribution of the present paper. The real-life sampling process followed in the study increases the validity of the research, and reliability was carefully tested in the process of model estimation.

The positive relationships among positive emotions, satisfaction, and behavioural intentions are unsurprising—as is their robustness in the two settings. Similar findings have been reported in research in banks (Wirtz and Bateson, 1999) and in entertainment (Bigné *et al*., 2005). The present findings confirm the importance of emotions in the formation of consumer satisfaction and in the formation of consumer responses to retail settings.

With respect to the effects of the perceived retail environment on consumers' affective and behavioural reactions, the present research shows the consistent positive effects of retail atmospherics

on: (i) the positive emotions experienced by consumers during their shopping trips; (ii) their repatronage intentions; and (iii) their desire to remain longer at the point of sale. These results show the importance of the physical retail environment in retaining customers. It is clearly in the retailer's interest to encourage positive emotions among customers by means of appropriate atmospherics—such as lighting, décor, and good temperature. It is also important to consider the external atmospherics—such as parking and accessibility. A positive evaluation of these external atmospherics by consumers has a direct positive effect on consumers' emotions, repatronage intentions, and desire to remain longer at the shopping area. It is essential for retailers to understand the shopping experience delivered by their retail environments if they wish to design and position their channel options as value-rich packages.

However, a more complex relationship was found between consumers' perceptions of the physical retail environment and their disposition to pay more. Although internal atmospherics were found to have no significant effect on a disposition to pay in the traditional retailing setting, such internal atmospherics had a negative effect on the disposition to pay in the shopping-centre setting. It appears that consumers might not be willing to pay more for a pleasant atmosphere or that they might consider a pleasant atmosphere to be characteristic of high-price stores. In the latter scenario, it is possible that specially designed internal atmospherics could constitute an entry barrier for consumers who are reluctant to pay high prices. This finding needs to be replicated in further research. The present findings also revealed that consumers' perceptions about internal atmospherics (temperature, lighting, décor) had a stronger positive effect on positive emotions in shopping centres than in traditional retailing areas. Managers of shopping centres should be aware of these elements if they wish to maximise their effect on emotions.

Finally, some limitations of the study should be noted, together with suggestions for future research. First, although European national borders are becoming increasingly porous for retail chains, and although consumer tastes are converging (Mander, 2003), data collected in three different countries might be affected by the way in which consumers in each country answer a questionnaire.

Future research could thus focus on how cultural differences influence the main constructs analysed in this study.

Secondly, all dependent and independent variables were measured within one questionnaire. It is possible that the testing of hypotheses might have been influenced by this measurement procedure—because consumers are likely to be aware of their conscious reactions and try to answer a standardised questionnaire in a consistent manner.

Thirdly, with respect to the measures, there is a need to refine the measurement scale used in the present study for emotions and atmosphere. Similarly, the one-item measures of satisfaction and desire to remain could be improved. Moreover, because consumers did not report much in the way of negative emotions, it was not possible to take these variables into account in the model and to test the hypothesised model completely.

Fourthly, the absence of measure of actual buying behaviour is another limitation. However, to obtain the approval of management in shopping centres and traditional retailing areas to conduct this study, the present researchers were required to ensure that customers were not significantly disturbed by the survey. In particular, management was concerned that shoppers did not feel obliged to reveal specific personal information regarding what they had bought or how much money they had spent inside a given store. In subsequent studies, an endeavour will be made to include some empirical measures of consumer behaviour in terms of specific buying patterns.

Finally, with respect to external validity, the fact that the results are based on only one specific shopping centre and one specific traditional retailing area per country is also an important limitation. Moreover, this research considered the perceptions of women about stores selling perfume products, what potentially increases the importance attached to emotions in the shopping experience. Replication of our results is particularly welcomed.

The present study has emphasised the importance of atmospherics in the formation of emotions, satisfaction, and repatronage intentions among consumers. However, an important unresolved issue for management is the level of investment that is required if benefit is to be gained

from the apparent positive effects of atmospherics. In a qualitative study, Arnold *et al*. (2005) revealed that, although the generation of a delightful shopping experience results in many positive outcomes, it also has the effect of 'raising the bar' in the customer's mind regarding the future performance of the retailer. In this regard, it is of interest that the present research has demonstrated that consumers who found the perceived internal atmosphere of the shopping environment to be pleasant were not necessarily willing to pay more to benefit from that atmosphere. Further research is required to analyse the optimal level of investment in atmospheric elements to avoid negative influences on consumer perceptions—that is, to avoid consumers thinking that too much 'luxury' in atmospheric elements might be associated with excessive prices. Another avenue for future research could be to assess the potential benefits—in terms of consumer satisfaction and retention—of carrying out regular changes in the atmospherics of a shopping area to surprise consumers continuously. It would also be interesting to compare the benefits of any such policy with the costs of the policy.

[1] For the International Council for Shopping Centres, 'a shopping centre is a group of retail and other commercial establishments that is planned, developed, owned and managed as a single property'.

[2] A number of researchers have adopted different approaches in studying consumer-based emotions (Richins, 1997). Environmental psychology proposed that three PAD dimensions –pleasure, arousal, and dominance- represent the emotional experience (Mehrabian and Russell, 1974). However, other researchers, using frameworks based on Izard's (1977) work, have proposed that separate positive and negative affect dimensions are useful in understanding consumer reactions (Mano and Oliver, 1993; Oliver, 1993; Babin and Attaway, 2000; Eroglu *et al*., 2005). According to these conflicting results, we pre-tested two versions of the questionnaire: one using discrete positive and negative emotions and the other using the PAD scale. In order to achieve psychometric properties, we decided to use the measure of discrete emotions.

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Figure 1. Conceptual model.

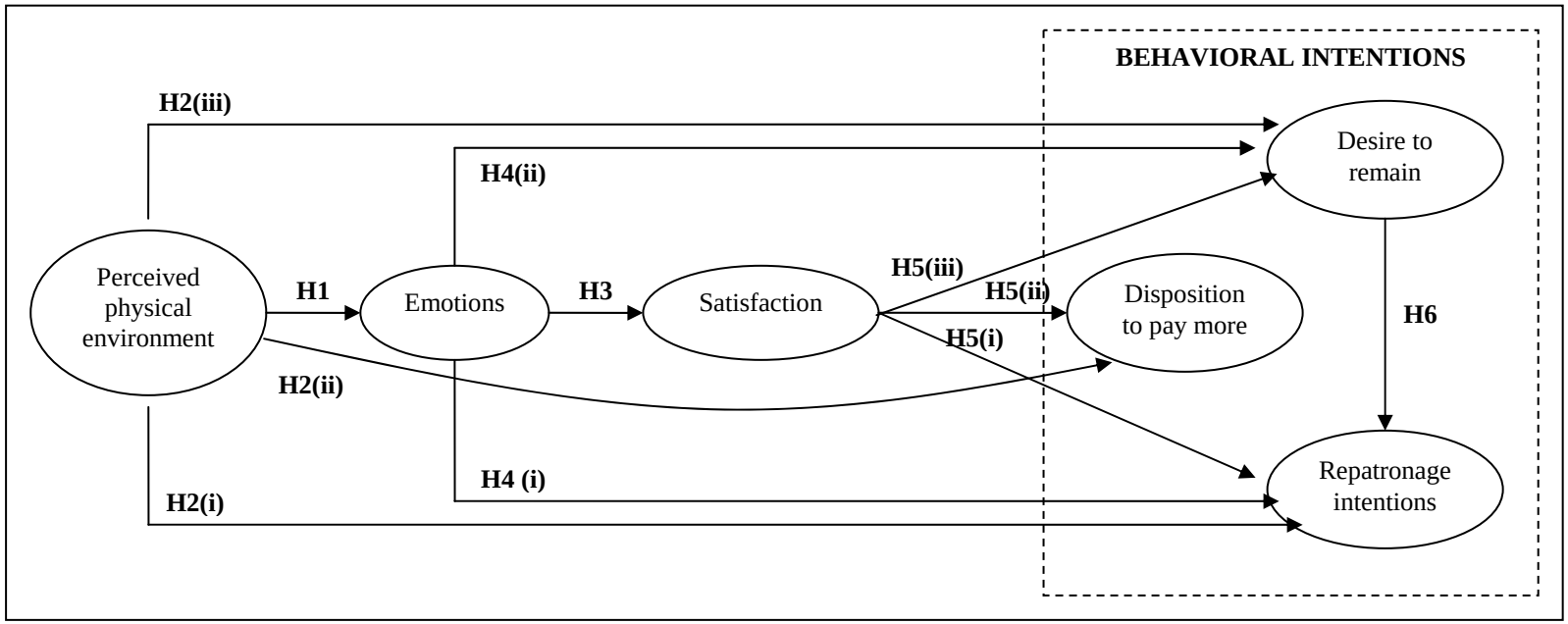

Figure 2. Diagram of multi-group structural models.
Multi-group fit indices: $\chi^2(22, N=301, N=299) = 55.14$, $p<0.01$; GFI = 0.97; AGFI = 0.94; CFI = 0.96; NFI = 0.94; TLI=0.93; RMSEA = 0.05

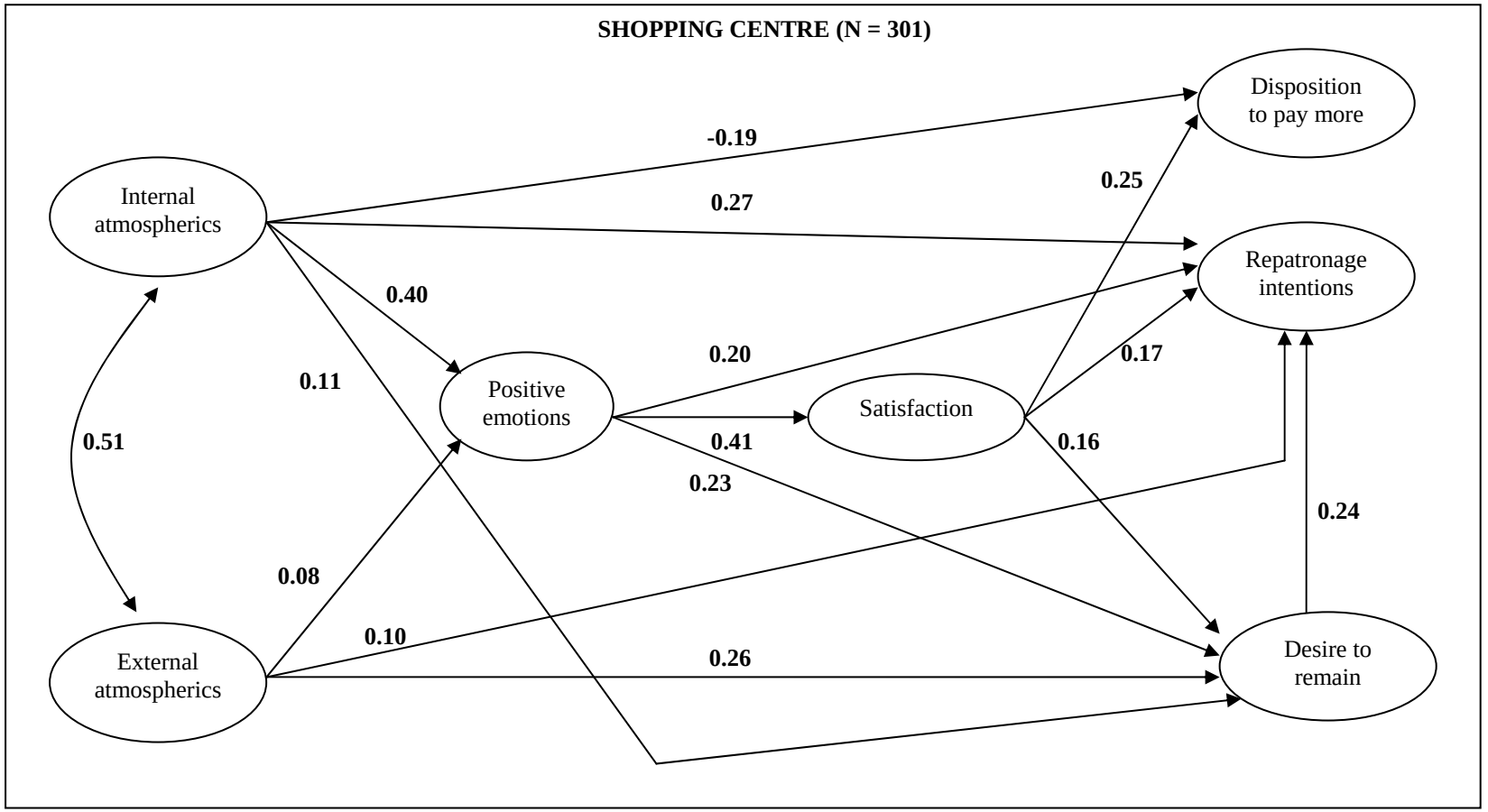

Figure 2 (Continued). Diagram of multi-group structural models.

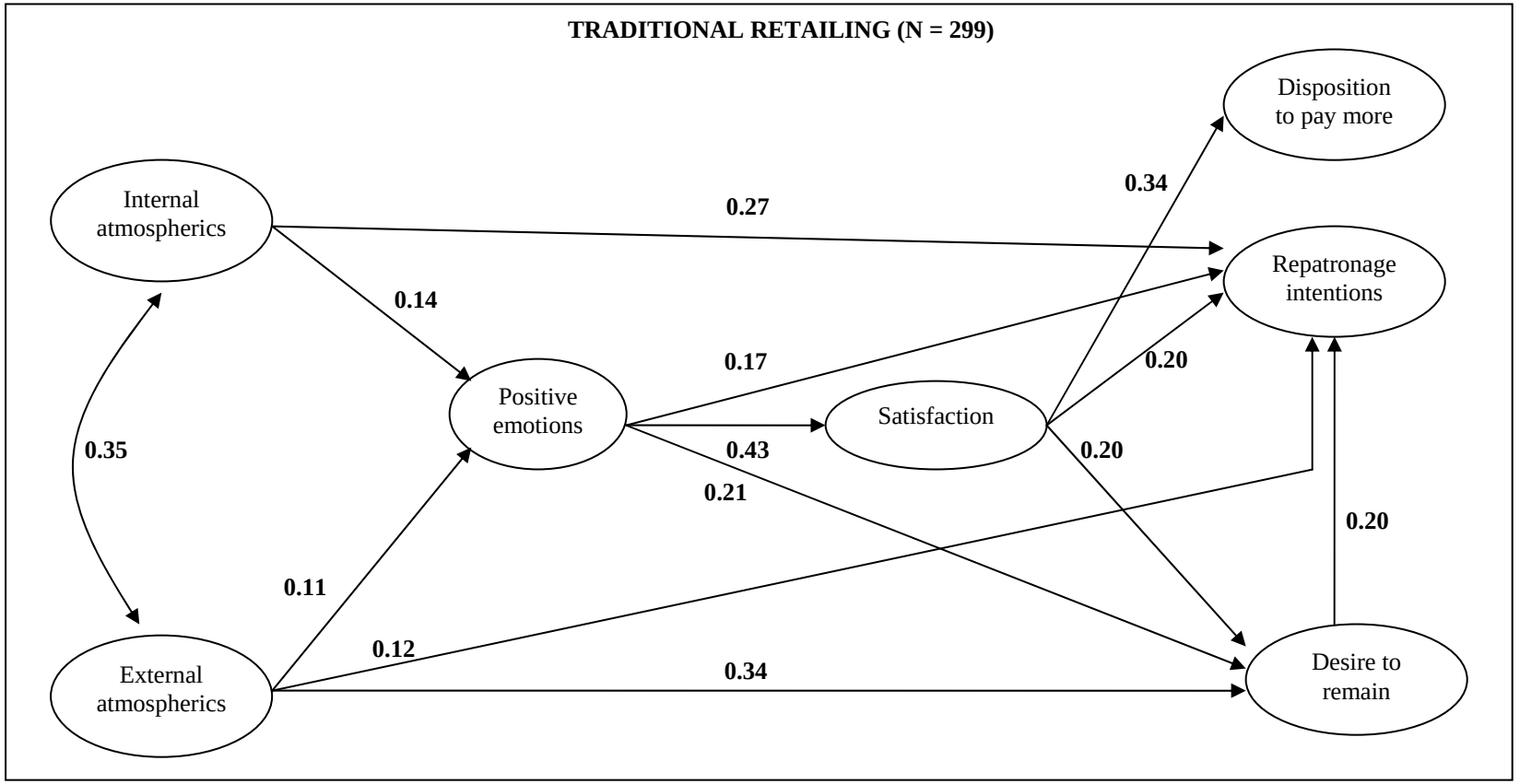

Table 1. Exploratory factor analyses: Perceived physical environment.

	Total sample[a] (n=600)		*Shopping centre[b] (n=301)*		*Traditional retailing[c] (n=299)*	
Variables	*Factor 1*	*Factor 2*	*Factor 1*	*Factor 2*	*Factor 1*	*Factor 2*
Temperature	0.82		0.81		0.80	
Lighting	0.79		0.74		0.86	
Décor	0.71		0.69		0.76	
Parking		0.89		0.89		0.88
Accessibility		0.78		0.88		0.75
% of variance	37.7%	31.1%	35.6%	34.5%	40.9%	28.5%

Notes:
[a] KMO = 0.74; Barlett Test: 659.33, p<0.01; [b] KMO = 0.75; Barlett Test: 422.01, p<0.01; [b] KMO = 0.73; Barlett Test: 342.30, p<0.01.

Table 2. Descriptive analyses: means, standard deviations, and Cronbach alpha.

Constructs and measured items	*Shopping centre (SC)*		*Traditional retailing (TR)*	
	Mean	SD	Mean	SD
Internal atmospherics (α_{SC} = 0.66; α_{TR}= 0.76)				
Lighting	4.50	0.74	4.28	0.86
Temperature	4.14	1.02	4.24	0.83
Décor	4.33	0.82	4.14	0.95
External atmospherics (α_{SC} = 0.80; α_{TR}= 0.54)				
Parking	4.31	1.05	2.61	1.65
Accessibility	4.46	0.83	4.17	1.09
Positive emotions (α_{SC} = 0.75; α_{TR}= 0.64)				
Joy	3.40	1.20	3.46	1.14
Interest	3.75	1.03	3.61	1.04
Contentment	3.67	1.00	3.60	1.01
Negative emotions (α_{SC} = 0.81; α_{TR}=0.57)				
Anger	1.12	0.49	1.08	0.37
Sadness	1.07	0.46	1.08	0.37
Disgust	1.08	0.45	1.08	0.35
Satisfaction				
Satisfaction evaluation	4.07	0.66	3.98	0.85
Repatronage intentions (α_{SC} = 0.84; α_{TR}= 0.85)				
Say positive things about this shopping area	4.26	0.84	4.18	0.96
Recommend this shopping area	4.19	0.97	4.08	1.07
Encourage friends and relatives to visit	4.16	0.99	4.02	1.10
Do more business with this shopping area in the next few years	3.57	1.24	3.39	1.33
Disposition to pay more (α_{SC} = 0.73; α_{TR}= 0.70)				
Continue to use this shopping area even if prices increase	2.24	1.34	2.23	1.35
Pay a higher price than competitors charge	1.85	1.16	1.71	1.18
Desire to remain				
Desire to remain longer	3.24	1.40	2.91	1.41

Table 3. Standard loadings and composite reliabilities.

Constructs and measured items	*Shopping centre* [a] *(SC)*	*Traditional retailing* [b] *(TR)*
Internal atmospherics (ρ_{SC} = 0.67; ρ_{TR}= 0.77)		
Lighting	0.67	0.80
Temperature	0.57	0.62
Décor	0.66	0.74
External atmospherics (ρ_{SC} = 0.82; ρ_{TR}= 0.60)		
Parking	0.84	0.59
Accessibility	0.82	0.68
Positive emotions (ρ_{SC} = 0.76; ρ_{TR}=0.66)		
Joy	0.81	0.54
Interest	0.58	0.57
Contented	0.75	0.76
Repatronage intentions (ρ_{SC} = 0.88; ρ_{TR}= 0.89)		
Say positive things about this shopping area	0.77	0.82
Recommend this shopping area	0.97	0.96
Encourage friends and relatives to visit	0.95	0.93
Do more business with this shopping area in the next few years	0.46	0.48
Disposition to pay more (ρ_{SC} = 0.74; ρ_{TR}=0.70)		
Continue to use this shopping area even if prices increase	0.66	0.74
Pay a higher price than competitors charge	0.87	0.73

Notes:
All measurement loading estimates are significant at α = 0.01
[a] χ^2 (68, N=301) =173.91, p< 0.01, GFI= 0.93, NFI = 0.92, AGFI=0.89, CFI = 0.94, TLI = 0.93; RMSEA = 0.07.
[b] χ^2 (68, N=299) =174.21, p< 0.01, GFI=0.93, NFI=0.90, AGFI=0.89, CFI = 0.93, TLI = 0.91, RMSEA = 0.07.

Table 4. Means (M), standard deviation (SD), and correlations of the composite measures of the constructs.

Shopping centre (n=301)									
Construct	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
1 Internal atmospherics	4.32	0.67	1.00						
2 External atmospherics	4.38	0.86	0.51*	1.00					
3 Positive emotions	3.61	0.88	0.44*	0.29*	1.00				
4 Satisfaction	4.07	0.66	0.26*	0.15*	0.41*	1.00			
5 Repatronage intentions	4.05	0.84	0.52*	0.38*	0.50*	0.41*	1.00		
6 Disposition to pay more	2.05	1.11	-0.14*	-0.07	-0.07	0.16*	-0.01	1.00	
7 Desire to remain	3.24	1.40	0.38*	0.35*	0.43*	0.35*	0.55*	-0.01	1.00
Traditional retailing (n=299)									
Construct	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
1 Internal atmospherics	4.22	0.73	1.00						
2 External atmospherics	3.39	1.16	0.36*	1.00					
3 Positive emotions	3.56	0.81	0.18*	0.16*	1.00				
4 Satisfaction	3.98	0.85	0.35*	0.04	0.43*	1.00			
5 Repatronage intentions	3.92	0.94	0.48*	0.36*	0.42*	0.43*	1.00		
6 Disposition to pay more	1.97	1.12	0.09	-0.06	0.24*	0.36*	0.17*	1.00	
7 Desire to remain	2.91	1.41	0.19*	0.41*	0.33*	0.27*	0.39*	0.05	1.00

Note:

* Correlations are significant at $\alpha = 0.05$.

Table 5. Structural equation models results.

Structural path[b]	*Shopping centre (SC) Coefficient (t-value)*	*Traditional retailing (TR) Coefficient (t-value)*	*Hypotheses*
H1: Internal atmospherics ➔ Positive emotions	**0.40 (7.36)**	**0.14 (2.44)**	
H1: External atmospherics ➔ Positive emotions	0.08 (2.21)	0.11 (2.21)	**Supported**
H2(i): Internal atmospherics ➔ Repatronage intentions	0.27 (7.65)	0.27 (7.65)	
H2(i): External atmospherics ➔ Repatronage intentions	0.10 (3.09)	0.12 (3.09)	Supported
H2(ii): Internal atmospherics ➔ Disposition to pay more	**-0.19 (-3.29)**	**-0.01 (n.s.)**	
H2(ii): External atmospherics ➔ Disposition to pay more	-0.03 (n.s.)	-0.05 (n.s.)	**Not supported**
H2(iii): Internal atmospherics ➔ Desire to remain	**0.11 (2.06)**	**-0.04 (n.s.)**	
H2(iii): External atmospherics ➔ Desire to remain	0.26 (7.76)	0.34 (7.76)	**Partially supported**
H3: Positive emotions ➔ Satisfaction	**0.41 (7.71)**	**0.43 (8.32)**	**Supported**
H4(i): Positive emotions ➔ Repatronage intentions	0.20 (5.18)	0.17 (5.18)	Supported
H4(ii): Positive emotions ➔ Desire to remain	0.23 (5.45)	0.21 (5.45)	Supported
H5(i): Satisfaction ➔ Repatronage intentions	0.17 (5.39)	0.20 (5.39)	Supported
H5(ii): Satisfaction ➔ Disposition to pay more	0.25 (7.65)	0.34 (7.65)	Supported
H5(iii): Satisfaction ➔ Desire to remain	0.16 (4.67)	0.20 (4.67)	Supported
H6: Desire to remain ➔ Repatronage intentions	0.24 (6.59)	0.20 (6.59)	Supported
MULTI-GROUP FIT INDICES: χ^2(22, N=301, N=299) = 55.14, p<0.01; GFI = 0.97; AGFI = 0.94; CFI = 0.96; NFI = 0.94; TLI=0.93; RMSEA = 0.05			

Notes:

- n.s. = non significative
- Coefficients that differed significantly (at $\alpha = 0.05$) across the two samples are represented in **bold**.
- The structural analysis considered a correlation between internal and external atmospherics. Results showed that this correlation is significantly higher (at $\alpha = 0.05$) in the shopping centre model (correlation = 0.51) than in the traditional retailing model (correlation = 0.35).

APPENDIX 1: QUESTIONNAIRE USED

1. Have you ever been to this shopping area in the last month? ☐ Yes ☐ No

If yes, how many times?

☐ Once ☐ 2-3 times ☐ 4-10 times ☐ Over 10 times

2. Please indicate reasons for visiting this shopping area (a shopping area like this) today.

1		4	
2		5	
3		6	

3. You can buy cosmetic products in shopping center and traditional areas, what do you prefer?

☐ Shopping center ☐ Shops in urban/traditional areas ☐ No opinion

4. In comparison to what you expected, your shopping experience today was...

Worse than expected		Exactly as expected		Better than expected
1	2	3	4	5

5. Please indicate below your degree of satisfaction with this shopping area.

Very low satisfaction				Very high satisfaction
1	2	3	4	5

6. Please indicate below the intensity to which each word describes your feelings when visiting this shopping area.

		Very low				*Very high*
1	Joy	1	2	3	4	5
2	Interest	1	2	3	4	5
3	Anger	1	2	3	4	5
4	Disgust	1	2	3	4	5
5	Contentment	1	2	3	4	5
6	Fear	1	2	3	4	5

7. To what extent the time you spent in this shopping area was worth?

Not at all worthwhile				Totally worthwhile
1	2	3	4	5

8. Please, evaluate your experience in the shopping area based on theses attributes:

		Strongly disagree				Strongly agree
1	Lighting is fine	1	2	3	4	5
2	Temperature is fine	1	2	3	4	5
3	Overall décor is fine	1	2	3	4	5
4	Parking is fine	1	2	3	4	5
5	Accessibility is fine	1	2	3	4	5
6	The shopping area is clean	1	2	3	4	5

9. Based on your experience in this shopping area, could you please evaluate to what extent would you follow these actions?

		Not at all				*Very probable*
1	Say positive things about this shopping area	1	2	3	4	5
2	Recommend this shopping area	1	2	3	4	5
3	Encourage friends and relatives to do business with this shopping area	1	2	3	4	5
4	Do more business with this shopping area in the next few years.	1	2	3	4	5
5	Continue to do business with this shopping area even if its prices increase somewhat.	1	2	3	4	5
6	Pay a higher price in this shopping area instead of going to competitors	1	2	3	4	5
7	Stay longer in this shopping area	1	2	3	4	5

10. Did you buy anything in this (the) shopping area? ☐ Yes ☐ No

11. What is your age group?

☐ 23-32 years ☐ 33-42 years ☐ 43-52 years ☐ 53-64 years ☐ more than 65 years

12. What is your occupation?

☐Housewife ☐Female worker ☐Employees ☐Manager ☐Retired ☐Other: _____