THE EFFECT OF THE STORE ATMOSPHERE ON THE CONSUMER SHOPPING BEHAVIOR IN CAMEROON

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Abstract
This article aims to understand the influence of the store atmosphere on shopping behavior. Unlike most previous studies, in this article, we addressed the subject of the influence of store atmosphere on consumer behavior in a gestalt-like, integrative manner. After a survey carried out on about 487 individuals in 20 stores in the cities of Douala, Ngaoundéré and Yaoundé, and based on two statistical tests (Chi-square and one-factor ANOVA), it emerges that the ambient environment and the social environment have an influence on the in-store shopping behavior, whereas the design environment has not.

In this research we tried to appreciate the strategic interest of the atmosphere on the behavior of visiting the points of sale. It has thus been shown that the more the consumer engages in shopping behavior in a point of sale, the more the store atmosphere directly impacts on his behavior by means of affective states.

Key words: store atmosphere, design environment, social environment, gestalt, shopping behavior.

JEL Classification: M31, L81

I. INTRODUCTION

Given the strategic interest of theoreticians and managers alike in the atmosphere of supermarkets and hypermarkets, the number of questions around this topic is far from diminishing. Therefore, many researches have focused on the influence of the point-of-purchase atmosphere on consumer behavior. It is with this in mind that managers aim to set up a framework that allows consumers to carry out shopping in a pleasant way by creating store-specific atmospherics through the combinations of the various variables of the physical environment, such as: music, colors, design, lighting, scents, etc. (Lemoine, 2003). Taking into account the strategic interest in the store atmosphere, it is necessary to undertake research on the influence of the store on the in-store consumer behavior. In addition to this, since the 1970s, the atmosphere inside the store has emerged as a marketing tool capable of influencing the affective, cognitive and behavioral responses of consumers (Kotler, 1973).

For a few decades, due to the contributions of neighboring disciplines such as social psychology, sociology, anthropology and semiotics, marketing has placed emotional states at the heart of the study of consumer behavior (Filser, 1996). This trend is part of the tradition of works based on Mehrabian and Russell’s (1974) S.O.R. model (Stimulus-Organism-Response). This approach argues that perceptions and behavior in a given environment are the result of emotional states created by that environment. Thus, environmental stimuli affect emotional states that in turn affect behavior. However, it should be noted that atmosphere can also directly impact consumer behavior (Lemoine, 2003) at the point of sale via his shopping behavior. When reflecting upon the purchasing environment, several distributors focused on their intuitions. Most practitioners and marketing researchers tend to conduct their studies on store environment in an atomic way by focusing for example on music (Ben Dahmane Mouelhi and Touzani;2003; Rieunier, 2000; Sibéri, 2000), colors (Divard and Urien, 2001), the crowd (Dion-Le Mee, 1998; Ben Dahmane Mouelhi, 2008) and many other atmospheric dimensions (Lemoine, 2003). This way of conducting research has a drawback, i.e. the fact that it does not consider atmosphere as a whole (Lemoine, 2005). In most cases, research leads to contrasting or even opposite results. All this while many researches advocate the holistic approach. According to this approach, the atmosphere is perceived as Gestalt, that is to say as a whole that does not allow to dissociate the influence of individual components. In the same vein, Ben Dahmane Mouelhi and Brée (2008, p.3) specify that “the atmospheric constituents are not isolated or considered sequentially, but simultaneously, in a so-called synesthetic perception”, which can influence shopping at the point-of-sale. During this activity, consumers seek to experience the pleasure provided by the point of sale through the products offered, the atmosphere of the store, its staging, other consumers, in short through the atmosphere that prevails at the point of sale (Bloch and
Richins, 1983; Lombart, 2004). There is no research, at least to our knowledge, that has helped to highlight the overall store atmosphere and in-store behavior.

In this article, we will first define the concept of store atmosphere. We will then present our research hypotheses relating to the influence of atmosphere on shopping behavior. Finally, we will present the methodology and the main results of a field study, before proposing, in the conclusion, some major managerial implications of this research.

II. LITERATURE REVIEW

Perceived quality of service and customer satisfaction are important concerns in the retail industry. The perception of service quality is the extent to which a service meets or exceeds customer expectations (Lewis, 2010; Parasuraman et al., 1985). In many specialized papers, perceived quality is an antecedent of perceived value, which in turn is an antecedent of customer satisfaction. The most important factor taken into account when assessing customer satisfaction is the total customer experience in the store (McLellan, 2000; Pine and Gillmore, 1998). Positive customer experience can be ensured by personalizing the shop atmosphere or servicescape.

Etymologically, the notion of atmosphere is formed from two Greek words: “atmos”, which means “vapor” and “sphaira”, which means “sphere”. It therefore means “the sphere of vapor”. Transposed to the store, the atmosphere can also guide the customer inside the point of sale. From this observation, the sphere represents the product with its intrinsic characteristics (packaging, price, etc.), and the atmosphere consists of all the intangible elements that surround the sphere. The concept of point-of-sale atmosphere was introduced in marketing by Kotler in 1973 (p. 50). He defines it as “the creation of a purchasing environment that produces specific emotional effects in the individual, such as pleasure or excitement, that may increase the probability of purchase”. The environment is the set of tangible or intangible stimuli that influence the perception and response of the individual (Bitner, 1992). The interaction between these stimuli creates a global atmosphere towards which the individual displays an emotional response. For Rieunier (2000), point-of-sale atmosphere refers to all the elements of the store that can be controlled to influence the affective, cognitive, physiological and/or behavioral responses of the occupants (both consumers and employees). More recently, Daucé and Rieunier (2002) classify the elements of atmosphere in two groups: the physical environment elements (music, smells, colors, lights) and the social elements (salesmen’s and customers’ style, crowd phenomenon) of the store.

Ogruk et al. (2018) have identified several categories of key variables that have the ability to influence the customers’ responses and create emotional ties with them: ambience, design and aesthetics, as well as social interactions. Environmental variables include ambient odor (power, type), music (tempo, type) and lighting, while design variables include different functional and aesthetic elements such as product layout and appearance or decor. Social variables include everything that could influence customers’ perception of service within a store.

Bloch and Richins (1983) are the first researchers to be interested in in-store behavior. By “in-store behavior” they mean a review of products in store, for recreational or informational purposes, without the intention to purchase. In-store behavior is thus seen as a form of leisure, but also as a form of external search for information in a point of sale. However, these two authors indicated that recreational motivations are largely preponderant within this behavior compared to informational motivations. During this act of shopping, consumers seek in the point of sale an experience of pleasure through the atmosphere, the products that are offered, as well as the other customers present in the point of sale. The atmosphere contributes to prolonging the consumer’s time spent inside the store and to increasing his sense of pleasure through his emotional state (Filser and Plichon, 2004). First of all, the environmental stimuli seem to produce an emotional state in the individual, characterized by three dimensions: pleasure, awakening and domination (Rieunier, 2000; Baker et al., 1992).

Over the course of research, the study of the influence of atmosphere on consumer behavior has been organized around two distinct perspectives: the analytic perspective and the holistic perspective. In the analytic perspective, the work was mainly concerned with consumer behavior, as a thing in itself, without taking into account its interaction effects. The holistic perspective advocates research aimed at understanding the effects of interactions between atmospheric dimensions on consumer behavior (Rieunier, 2000; Mattila and Wirtz, 2001; Daucé and Rieunier, 2002; Lemoine 2005; Baker et al, 2002). The mediating role of affective states in the relationship between atmosphere and consumer behavior was confirmed in the study conducted by Donovan and Rossiter (1982), who were able to show the existence of a positive relation between pleasure and the buying intention, as well as between stimulation and the time spent at the point of sale, the desire to consume and to exchange words with the customer contact employees. The influence of store atmosphere is an opportunity to meet the need for consumer stimulation in the point of sale. Manipulating the purchasing environment is therefore crucial for professionals, since it is a means to offer the customer hedonistic rewards that enhance the value of frequenting the store (Filser, 2001). This brings the customer to engage in a leisure activity in the store (Lombart, 2004).
By approaching atmosphere in a holistic way, Lemoine and Plichon (2000) have shown that the pleasure felt by the consumer in a point of sale and his state of stimulation are influenced by the social environment and the design environment. The work of Lombart and Labbé-Pinlon (2007) confirmed the positive effect of the three atmospheric dimensions (atmosphere, design and social environment) on the customers’ in-store reactions.

There are numerous studies in the literature that have analyzed the relationship between store environment variables and the customer’s perception. According to Baker et al. (2002), Kim and Kim (2012) and Yalch and Spangenberg (1990), environmental factors are considered as non-visual elements of the store’s ambiance, including music, lighting, smell and temperature.

In another context, Baker et al. (2002) suggest a model that takes into account the interactions that may exist between the three main dimensions of atmosphere (sensory, social and of the physical design of the point of sale). This makes it possible to evaluate the influence of these three atmospheric dimensions on the consumer’s perception of interpersonal service, as well as on the quality and value of the goods, the monetary cost and on the cost of the purchase experience. Donovan and Rossiter (1982) indicate that interactions between customers and atmospheric variables influence mood, which in turn influences the buying intention.

In addition, according to two studies by Baker et al. (1992) and Baker et al. (2002), the store atmosphere and its sensory appeal may influence the intention to return to the store and may encourage some customers to recommend the store to their circles.

Music is the most frequently studied store atmosphere variable in the literature on consumer perception (Baker et al., 1992; Chebat et al., 1993; Hui et al., 1997; Milliman, 1986; Yalch and Spangenberg, 1990). Music can have a variety of effects on consumer behavior, such as a longer period of time spent in the store, more intense traffic in the store and increased interaction with vendors, positive perception and recognition of the store image, and amplification of purchasing decisions (Morrison, 2001; Morrison et al., 2011; Puccinelli et al., 2009; Turley and Milliman, 2000).

Music plays an important role in the marketing strategy of retail stores, and they can use it to create a more enjoyable atmosphere to encourage shoppers to spend more time in the store (Reda, 1998). According to Yalch and Spangenberg (1990), music in retail stores influences customers through attributes such as tempo, type (classical music / instrumental music), song or song types. Unlike other store atmosphere elements, music can be easily managed and retailers can at times use it to control the rhythm / speed of store traffic in order to attract customers (Levy and Weitz, 2009).

Some studies have pointed out that customers’ mood and perception may be affected by music in shopping centers. Other studies, such as those of Stratton (1992) and Hui et al. (1997), pointed out that music influences the consumers’ emotional responses and reduces the stress caused by the waiting period.

Sweeney and Wyber’s (2002) study has shown that the volume, tempo, and type of music have an impact on the perceptual process and thus influence the behavioral intent of consumers in avoiding or approaching the store. Specifically, fast pace and high volume music increase levels of arousal (Holbrook and Anand, 1990). In addition, there is a relationship between music and the perception of price; for example, consumers perceive higher the price of wine when classical music plays in the background (Areni and Kim, 1994). Grewal et al. (2003) and Wilson (2003) noticed the connection between the musical genre and the duration of the stay, as well as the amount of money spent in the store.

Most studies have shown that there is a significant positive correlation between music and customer satisfaction. In addition, Theodoridis and Chatzipanagiotou (2009); Morrison et al. (2011) addressed the issue by examining the link between the positive impact of music and customer satisfaction.

In addition, smell has a great influence on the customer’s instincts, sensations and emotions, such as happiness, hunger, pleasure and satisfaction.

Numerous studies have analyzed the effect of smell on customer perception and behavior (Bone and Jantrania, 1992; Mitchell et al., 1995; Spangenberg et al., 1996; Fiore et al., 2000). According to Bone and Jantrania (1992), some researchers have argued that a pleasant smell produced significant effects on product perception and customer behavior.

As concluded by Spangenberg et al. (1996), smell has a positive impact on customer behavior because this type of environmental factor makes buyers spend more or less time in the store and influence the positive or negative appreciation of the goods.

Smell can influence the consumer’s desire to buy (Hirsch, 1995; Mitchell et al., 1995; Spangenberg et al., 1996; Turley and Milliman, 2000). Morrison et al. (2011) tested the presence and absence of vanilla smell on a sample of young buyers in the retail space itself and found that the stimulus produced by the vanilla smell improved the buyers’ well-being, thus positively influencing the behavior. Research conducted by Mattila and Wirtz (2001) indicates that it is necessary to spread ambient scents in accordance with the point-of-sale music in order to make customers evaluate a store positively and experience a sense of pleasure, to increase their satisfaction during the visit and give them the desire to return to the place of sale, as well as to multiply impulse purchases.
There are many studies that examine the relationship between lighting and its influence on consumer perception and behavior (Mehrabian and Russel, 1974; Smith, 1989; Summers and Hebert, 2001). The studies conducted have found that the brightness level perceived by the customers inside the store can positively or negatively influence their mood (Areni and Kim, 1994; Baker and Cameron, 1996; Baker et al., 1992; Butler and Bitner, 1987; Puccinelli et al., 2009; Spence and Piqueras-Fiszman, 2012). Lighting can draw the customer’s attention to the main points of sale (Smith, 1989). Summers and Hebert (2001) found that lighting makes the display of products stand out in the store, thus attracting and retaining customer attention.

Based on the conclusions of the above-mentioned studies, we formulated the first hypothesis of our research:

**H1. The perception of the store atmosphere has a direct, positive and statistically significant influence on the shopping behavior.**

Store design is an important factor in planning store atmosphere, and its main purpose is to create a distinct and memorable image of the store, and Lewy and Weitz (2009) show that another goal of store design is to influence the buyers’ behavior. Wakefield and Baker (1998) highlight the influence of retail space physical design elements on the consumer’s stimulative emotional response and on the intention to remain in the store.

While Dunne et al. (2011) believe that store design includes both the exterior and interior of the store, other authors (Lewi and Weitz, 2009) consider that it includes the location, assortment, colors, cleanliness and signage, as well as other informative and directional signage.

Baker et al. (2002) highlighted the fact that an inappropriate location reduces the efficiency of shopping, increases the sense of impatience and makes clients more furious, all of which can lead to declines in the repeat purchase rate.

Spies et al. (1997) noted that an insufficiently designed store can make time spent shopping unpleasant and charge the buying process with negative feelings. Other researchers have found that good product placement can make shopping more fun and enjoyable by reducing stress and triggering a positive effect (Yoo et al., 1998; Baker et al., 2002). Good product placement affects positively the perception of the quality of the displayed products and generates the feeling that more products are displayed than the actual ones (Morales et al., 2005). In addition, a well-designed, spacious layout is likely to trigger diversity-seeking behavior (Mohan et al., 2013). Bitner (1992) found a link between positive experiences and in-store product placement, as proper placement changes can encourage buyers to spend more time in the store. In a recent study, Martinez-Ruiz et al. (2010) concluded that in-store product placement is one of the most important determinants of customer satisfaction and behavior.

Numerous researchers have turned their attention to the customers’ perceptions and the ability of retail stores to influence them (Mantrala et al., 2008; Simonson, 1990). Simonson’s study (1990) pointed out that consumers prefer a broad range because it means there are many choices of product ranges from which they can choose. Huffman and Kahn (1998) and Iyengar and Lepper (2000) concluded that in some situations a very diverse assortment could elicit negative emotions in customers because they can create frustrations or “overload them”. More importantly, this causes customers to decide not to return to the store (Fitzsimons et al., 1997). In general, the fact that the assortment is large or small is not the main argument; the essential thing has to do with supplying excess information about product features and the way products are placed to satisfy buyers (Mantrala et al., 2008).

The assortment is also a determinant of variety-seeking behavior (Levav and Zhu, 2009; Morales et al., 2005; Krishen et al., 2010). There are two aspects of assortment structure that impact on customer perceptions: assortment management and “the relative symmetry in the frequency of assortment items” (Hoch et al., 1999).

Broniarczyk et al. (1998) showed that the assortment has a positive correlation with customer perceptions and satisfaction.

In literature we have identified studies that have addressed the influence of other elements of store design and aesthetics that influence in-store behavior. According to Spies et al. (1997), an inappropriate interior design can weaken the intensity of emotions at the moment of purchase or increase the buyer’s stress levels. Certain interior design elements such as signs and color can affect customers’ emotions and cognitive assessments in terms of perception, product quality, service, and store efficiency (Singh, 2006). Liao et al., (2011) have pointed out that shop cleanliness increases positive perception. In addition, bright colors can attract customers’ attention, while cold colors make shoppers feel much better (Crowley, 1993).

Based on these findings, we have formulated the following hypothesis:

**H2. The perception of store design has a direct, positive and statistically significant influence on the shopping behavior.**

Social factors include store crowding, the interaction between staff and customers, the interaction with other clients (Aylott and Mitchell, 1999; Baker et al., 2002; Liao et al., 2011). Mattila and Wirtz (2008) consider that perceived congestion has a negative effect on unplanned purchases. Hui and Bateson (1991); Van Dolen et
al. (2002) and Machleit et al. (2005) argued that perceived crowding seems to have a negative influence on the behavior of customers and their responses, which led to a decrease in the number of purchases made by customers. Indeed, in the study of Aylott and Mitchell (1998), perceived crowding and queuing are identified as the two main factors causing customer stress. As for the relation between aggression and satisfaction, Hui and Bateson (1991). Machleit et al. (2005) have shown that overcrowding is negatively correlated with customer satisfaction if there are too many customers in the store at a given time. Eroglu et al. (2005) found that perceived crowding has a positive impact on satisfaction. Eroglu et al. (2005) consider that if there is a sufficient number of a customer in the store, buyers seem to be more satisfied. Dickson and MacLachlan (1990) concluded that customers can avoid or turn away from stores if they perceive that there are too many differences between them and others. Machleit et al. (2000) found that the social relationship between customers inside the store, along with a high density of shoppers, can lead to unpleasant feelings or a sense of lack of privacy.

Soderlund et al. (2014) found that interacting with other customers and receiving help from them had an impact on store evaluation and customer satisfaction.

Previous studies have concluded that vendors play an indispensable role in influencing emotions, intentions and consumer satisfaction (Baker et al., 2002; Mattila and Wirtz; 2008, Jayawardhena and Farrell, 2011). Studies mention three dimensions associated with the customers’ relationship with store staff: the number of employees, the physical characteristics of employees and the behavioral characteristics of employees. The way store staff is perceived has a significant influence on the consumers’ attitudes towards service quality (Hu and Jasper, 2006). For example, the effect of negative customer perceptions will be reduced if they perceive that they are served by friendly employees (Mattila and Wirtz, 2008). Lin and Chiang (2010) state that employee communication skills and employee behavior have an impact on customer behavior not only at the time of interaction but also during the service process. Hatfield et al. (1994) found that customers will perceive employee behavioral traits such as courtesy or willingness to help customers in a positive way, and this will in turn elicit a welfare feeling in the consumers, as well as the perception of a positive experience.

Based on the literature review, we formulated the hypothesis below:

H3 The store’s social environment has a direct and positive effect on the shopping behavior.

III. Research methodology

The variables in our research were measured by scales accepted in the literature. Thus, to measure the point-of-sale atmosphere, we used the Plichon scale (1999) which measures the three ambient dimensions (environmental factors, design factors and social factors), and which was based on the work of Baker (1986), Greenland and McGoldrick (1994) and Baker et al., (1994). This scale consists of seventeen items, each of which is based on differential semantics. Indeed, the dimensions of the ambient environment are characterized by background music (pleasant / unpleasant), light (pleasant / unpleasant), acoustics (noisy store / quiet store), the number of customers in the store (adequate / not adequate). Meanwhile, the dimensions of the architectural environment (the design) relate to: the size of the store (pleasant / unpleasant), tidying (tidy store / untidy store), moving around (difficult / easy), layout (not practical / practical), access to products (easy to find / not easy to find). And finally, the components of the social environment are approached starting from the friendliness of employees (not friendly / friendly), their helpfulness (helpful / unhelpful), their availability (not available / available). The shopping behavior was borrowed from Lombart (2004), with seven items measured using a five-point Likert scale, ranging from “strongly disagree” to “strongly agree”.

We interviewed the individuals exiting stores in a non-probabilistic way. The data collection was carried out in three cities of Cameroon: Douala (240 individuals, i.e. 49.3% of the sample), Ngaoundéré (100 individuals, i.e. 20.5% of the sample) and Yaoundé (147 individuals, i.e. 30.2% of the sample). This gave a sample of 487 individuals. In order to complete the survey, a sample of 20 general-purpose stores that broadcast background music was selected, 11 in the city of Douala, 2 in Ngaoundéré and 7 in Yaoundé. It took place during the normal weeks of activity, outside any exceptional period, from 9 to 5. The Statistical Package for Social Sciences (SPSS) software will help us analyze the data.

Most clients are male (60%) as opposed to women (40%), the majority of these individuals (62%) have an median monthly income of more than F100 000 (more than €153). These points of sale are frequented by customers with a secondary (38.2%) and higher (35.1%) level of education. As for the marital status, they are for the most part single (47.4%).

IV. Presentation of the research results

After the presentation of the sample, it is necessary to discuss the quality of the measuring instruments, the degree of connection between the store atmosphere variables and the in-store shopping behavior, on the one hand, and certain sociodemographic characteristics, on the other hand, in order to better highlight the consumer profiles.
Shopping behavior has a Cronbach alpha coefficient of 0.936. Items are well represented by a single factor and have factor contributions greater than 0.5. It is important to emphasize that the relevance test of the Principal Components Analysis has been carried out. Kaiser-Meyer-Olkin (KMO) gives a value of 0.801, which is considered good and shows the relevance of the data with the Principal Component Analysis. The result corroborates well Bartlett’s test of sphericity approx. chi-square 3677.265 at the significance level of 0.000, with a degree of freedom of 21. The factor alone accounts for 73.710% of the explained variance of all items. This factor therefore materializes in a general way the axis of “in-store shopping behavior”.

At the end of the shopping behavior analysis, it is a question of highlighting the hidden dimensions of the store atmosphere. The Bartlett sphericity test gives a value of the approximate chi-square of 9289.557 at 91 degrees of freedom, the significance level of 0.000, and the Kaiser-Meyer-Olkin value is 0.608, i.e. greater than 0.5. This shows that the structure of the correlation matrix for the consumer sample data lends itself well to Principal Component Analysis. Items describing light, color, and products-are-easy-to-find have been removed from the analysis because they have commonalities below the minimum acceptable threshold (less than 0.5). All other commonalities have values greater than 0.5.

The analysis allowed us to retain three factors of the store atmosphere, which suffice to summarize the information. All the items have a very strong correlation with a single factor with Varimax rotation. The calculated Cronbach alpha coefficients are 0.932 for the first factor, 0.914 for the second factor and 0.896 for the third factor, respectively. This means that the selected items have good internal consistency, especially since the recommended minimum value of Cronbach’s alpha is 0.60 for exploratory studies (Evrard et al., 2003). The selected axes account for 78.706% of the total variance.

Although this is often a difficult exercise, these two factors should now be interpreted.

The first factor includes the items of acoustics: the store is fit with a sound system, the store is well lit, there are enough customers in the store, the ambient smell is pleasant, the store is colorful, and the background music is stimulating. This factor is interpreted as “the ambient environment of the point of sale”.

The second factor includes the variables that relate to aspects such as: the size of the store is pleasant, the layout of the store is convenient, moving into the store is easy, the products are easy to find, and the store is tidy. This factor is called: “the design environment of the point of sale”.

The third factor is related to three variables: employees seem helpful, employees seem friendly and employees seem to be available. These variables express the kindness of the store staff. This factor can be called “the social environment of the point of sale”. Summaries of the results are shown in the table below.

<table>
<thead>
<tr>
<th>Scales</th>
<th>KMO index</th>
<th>Factors</th>
<th>Values</th>
<th>% of the explained variance</th>
<th>% of cumulative explained variance</th>
<th>Alpha Cronbach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point-of-sale atmosphere</td>
<td>0.608</td>
<td>ambient environment</td>
<td>5.108</td>
<td>36.486</td>
<td>36.486</td>
<td>0.932</td>
</tr>
<tr>
<td></td>
<td></td>
<td>design environment</td>
<td>3.903</td>
<td>27.881</td>
<td>64.366</td>
<td>0.914</td>
</tr>
<tr>
<td></td>
<td></td>
<td>social environment</td>
<td>2.007</td>
<td>14.339</td>
<td>78.706</td>
<td>0.896</td>
</tr>
<tr>
<td>Shopping</td>
<td>0.801</td>
<td>Shopping</td>
<td>5.160</td>
<td>73.710</td>
<td>-</td>
<td>0.936</td>
</tr>
</tbody>
</table>

Source: our survey

In order to perform the chi-square test, the items of “ambient environment”, “social environment”, “design environment” and “shopping behavior” factors were scored depending on the average value of the sample. A division of the individuals into groups (“absence”, “presence”) was carried out. Individuals with a value less than or equal to the average are classified as individuals who have a negative attitude (“absence”) and those whose values are above average are classified as individuals with a positive attitude (“presence”).

Table 3 shows the results of the interaction between store atmosphere variables and shopping behavior, median monthly income, and gender. The results of the Chi-square tests are significant between the ambient environment, the design environment and shopping, the values of the chi-square calculated are respectively 7.939 and 388.863 (ambient environment and design environment) at a degree of freedom, higher than the theoretical chi-square of 3.841. On the other hand, the Chi-square result between the design environment and shopping is insignificant (Chi-square calculated 2.962 inferior to the theoretical chi-square 3.841, probability 0.085 above the threshold of 5%). This means that the atmosphere and the social setting created by the store staff have a significant influence on the in-store shopping behavior, contrary to the design, characterized by the aesthetic qualities of the store.

Except for the design environment, there is a significant relation between two components of the store atmosphere (ambient environment and design environment) and gender. The calculated chi-square values are 10.391 and 6.207 (higher than the chi-square calculated of 3.841, with probabilities lower than 5%) for the ambient environment and design environment respectively. The chi-square value calculated between the social environment and gender is 0.192. This value is much lower than the theoretical chi-square (3.841), with a risk
probability of 66.1% of being wrong (higher than the threshold of 5%). It can be said that, in Cameroonian context, the ambient environment and the design environment have a strong influence on the gender.

More than 58.7% of shoppers in stores are influenced by the social setting and the store atmosphere. 42.5% of women who engage in shopping in stores are more influenced by the social environment and the design of the points of sale, and have a median monthly income of more than 100,000 francs (about €152). The chi-square calculated between the gender variable and the actual time spent in-store is 16,053 at 4 degrees of freedom, with a probability of 0.3%. Concerning the level of education and the social environment, the calculated Chi-square is 11,265 (higher than the theoretical chi-square of 7,815) with 3 degrees of freedom. Finally, shopping and the median monthly income have a chi-square value of 12,666 at 3 degrees of freedom with a probability of 0.005. 60.2% of single women engaging in shopping are influenced by the social setting of stores, with almost 40% of them spending nearly one hour (50 minutes on average) inside the store. They have a secondary education level (47.4%). This means that women spend more time in stores than men, and they (women) have median monthly incomes of more than 100,000 francs. These results corroborate Monglo’s work conducted in 2016.

Table 2. Summary of the Chi-square test

<table>
<thead>
<tr>
<th></th>
<th>Calculated $\chi^2$</th>
<th>Read $\chi^2$</th>
<th>ddl</th>
<th>Sign.</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient environment and shopping</td>
<td>7.939</td>
<td>3.841</td>
<td>1</td>
<td>0.005</td>
<td>Nearly 60% of individuals who engage in shopping behavior are more influenced by the ambient environment and store design,</td>
</tr>
<tr>
<td>Ambient environment and gender</td>
<td>10.391</td>
<td>3.841</td>
<td>1</td>
<td>0.001</td>
<td>42.5% of women are more influenced by the social setting,</td>
</tr>
<tr>
<td>Social environment and shopping</td>
<td>388.863</td>
<td>3.841</td>
<td>1</td>
<td>0.000</td>
<td>singles (40%) spend almost an hour in the store (18.7%), 47.7% have a secondary education level and have an median monthly income of more than 100,000 francs (about 152 euros).</td>
</tr>
<tr>
<td>Social environment and gender</td>
<td>0.192</td>
<td>3.841</td>
<td>1</td>
<td>0.661</td>
<td></td>
</tr>
<tr>
<td>Design environment and shopping</td>
<td>2.962</td>
<td>3.841</td>
<td>1</td>
<td>0.085</td>
<td></td>
</tr>
<tr>
<td>Design environment and gender</td>
<td>6.207</td>
<td>3.841</td>
<td>1</td>
<td>0.013</td>
<td></td>
</tr>
<tr>
<td>Social environment and education level</td>
<td>11.265</td>
<td>7.815</td>
<td>3</td>
<td>0.010</td>
<td></td>
</tr>
<tr>
<td>Time effectively spent in store and gender</td>
<td>16.053</td>
<td>9.488</td>
<td>4</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td>Shopping and median monthly income</td>
<td>12.666</td>
<td>7.815</td>
<td>3</td>
<td>0.005</td>
<td></td>
</tr>
</tbody>
</table>

It will now be a question of highlighting the hidden dimensions of shopping behavior and the perception of the effect of the point-of-sale atmosphere through the main component analysis.

The analysis of variance falls within the general framework of the linear model, where a quantitative variable (or several) is explained by a qualitative variable (or several). The main objective of this analysis is to compare the empirical means of the quantitative variable observed for the qualitative (factors) or quantitative variables divided into classes (levels). The question is whether a factor or a combination of factors (interaction) influences the quantitative variable explained. The analysis of variance is used to test the hypothesis of the equality of means. This technique is an extension of the t-test for two independent samples. The null hypothesis is verified by the F test under SPSS (Carricano and Poujol, 2009). In order to identify the means that differ, we can compare the means with the contrasts. Two conditions are necessary for the conclusions of an ANOVA test to be valid: the homogeneity of the intragroup variance and the normality of the data. The Levene test (> 0.05) is used to accept the hypothesis of homogeneity of the intragroup variance (Evrard et al., 2003).

Variance analysis shows an influence of a factor on a variable of interest by using the means. It may be interesting to specify by name which groups bear these differences. Table 3 shows that the Levene statistical values are 10,219, 2,601 and 16,059 respectively for the ambient environment, the design environment and the social environment, well above the 0.05 significance level. This implies the equality of variances, except for the design environment variable whose significance is less than 0.05. Nevertheless, the ANOVA remains interpretable.
The analysis of the variance reveals a Fisher F of 137.112; probability at p = 0.000. This probability of Fisher’s F being inferior to the 0.05 significance level allows us to confirm hypothesis H1: the ambient environment of the store affects the shopping behavior. For the design environment of the store, F has a value of 1.343 at the probability of 0.119 (the probability is greater than the significance level of 5%). This leads to invalidating the second hypothesis H2, according to which the store’s design environment influences the shopping behavior. This means that the applied aesthetics of the store (design) does not have a hold on the shopping customer. As for the social environment variable, it has a Fisher F value of 249.896; significant at p = 0.000. This leads to the acceptance of the third hypothesis H3: the store’s social environment has an effect on the shopping behavior. It must be said that, overall, there are significant differences in terms of the variation of the store environment and the means for the shopping behavior. This being the case, the main research hypothesis is partially verified, i.e.: “the more a consumer engages in shopping behavior in a point of sale, the more the atmosphere impacts on consumer behavior at the same point of sale”.

V. CONCLUSION AND MANAGERIAL IMPLICATIONS

The main objective of this research was to understand the influence of the point-of-sale atmosphere on the consumer’s shopping behavior. The study was carried out in 20 general stores, all of which broadcast background music, in the cities of Douala, Ngaoundéré and Yaoundé. A sample of 487 individuals was selected in a non-probabilistic way. At the end of the two statistical tests (chi-square and ANOVA), it emerges that the ambient environment and the social environment have a significant influence on the in-store shopping behavior, contrary to the design environment. In other words, the store architecture, decor and aesthetics have no impact on the consumer’s shopping activity at the point of sale.

This research also makes it possible to appreciate the strategic interest of the atmosphere on the behavior of visiting the points of sale. It has thus been shown that the more the consumer engages in shopping behavior in a point of sale, the more the store atmosphere directly impacts on his behavior (Lemoine 2003) by means of affective states. The consumer goes through the trials of the point-of-sale atmosphere in order to make unplanned purchases (Lombart and Labbé-Pinlon, 2007). Atmospheric elements of the store could favor in-store shopping and, in so doing, could allow distributors to participate in the development of a “controlled” word-of-mouth and from there, contribute to the development of customer loyalty. The impact of the point-of-sale atmosphere could be understood from a long-term perspective based on the relationship between the customer and the point of sale, especially on its effects on consumer satisfaction and loyalty through the shopping behavior.

Finally, it is important to clarify the methodological limitations of this study and to open new avenues for research.

First, it must be remembered that this study was conducted on a convenience sample in a non-probabilistic way, which would reduce its external validity. Second, it would be relevant to replicate this first exploratory approach, in other types of outlets, such as: clothing, electronic products or computer equipment, etc.

Finally, the study is worth pursuing with other conceptualizations, samples and measurement techniques.

VI. REFERENCES


