# Shopping mall retailing: A bibliometric analysis and systematic assessment of Chebat's contributions

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## Abstract

Shopping malls are unique retail environments offering individual consumption experiences within a holistic retail ecosystem. Drawing on a bibliometric analysis and a systematic review of 31 articles, this research synthetizes Jean-Charles Chebat's contributions to the shopping mall literature. Findings highlight four core clusters of the shopping mall literature, namely spatial wayfinding, atmospherics, consumer differences across shopping mall experiences, and shopping mall consequences. The newly developed Shopping Mall Experience Framework extends Chebat's research proposing additional elements of interest for current mall retailing research. Managerial implications offer practical guidance on successfully designing and maneuvering shopping malls of the future.



**Keywords:** Bibliometric analysis, systematic review, shopping mall, mall atmospherics, value

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## 1. Introduction

Retail environments and consumption experiences have evolved over the last 30 years along with consumer demands and Internet-based technologies (Helm et al., 2020). Yet, physical stores still remain an essential shopping venue as part of customer journeys (Babin et al., 2021; Treadgold and Reynolds, 2021). In the physical retail landscape, shopping malls remain a critical format of in-store shopping (Elmashhara and Soares, 2020). Characterized by a large enclosed, designated area, shopping malls offer a mix of retail stores, restaurants, hospitality, and entertainment facilities (Gilboa et al., 2020), while acting as a "a premier habitat for consumers" (Bloch et al., 1994: p. 24). Consistent with other retail outlets, consumer motivations to frequent malls have shifted since the mid-1950s from purely shopping towards seeking additional experiences (Sanburn, 2017); therefore, a satisfactory holistic consumption experience across various mall components is essential (Elmashhara and Soares, 2020; Haytko and Baker, 2004). Since their first introduction into the consumer retail market, shopping malls have increased in size and assortment variety (Sanburn, 2017). However, while shopping malls played a central role in the North American retail landscape until the early 2000s and enjoyed continuous growth, in recent years these retail environments have struggled both to maintain their status as an integral component of consumers social life and their role in the retail ecosystem (Elmashhara and Soares, 2020; Helm et al., 2020).

In the USA, mall closures are on the rise with an increasing number of malls being identified as "dead malls" or declining malls (Calvo-Porral and Lévy-Mangin, 2019). Furthermore, vacancy rates and consumer traffic seem to have dropped over the last decade

(Harmon and Zim, 2021). These trends point towards several issues that shopping malls are dealing with including changing consumer behaviors and increased competition from different retail formats (Elmashhara and Soares, 2020). One of the biggest contributory factors is online shopping, a popular and readily available consumption alternative (Helm et al., 2020). With 24-hour availability, quick delivery, and endless variety, this new online solution matches the busy lifestyle of the modern consumer looking for convenient solutions (Calvo-Porral and Lévy-Mangin, 2019). The current COVID-19 pandemic has further accelerated these developments and also posed new challenges to shopping malls along with other traditional stores featuring an indoor environment and being associated with crowding (Pantano et al., 2020). Moreover, closures of non-essential businesses for a prolonged period of time has intensified the urgency for shopping malls to reinvent themselves to remain relevant (Pantano et al., 2020).

Considering this increasingly complex and challenging retail environment plus the uncertain future of shopping malls, a key question for mall managers is how to negate these negative developments and impacts. Research can help advance retail practices and assist mall managers, especially in the current demanding new technology era (Gauri and Grewal, 2021). As such, an assessment of prior research and the current state appears timely and appropriate to assist in the advancement of the future of mall retailing (Babin et al., 2021). One key contributor to this field was Jean-Charles (J.-C.) Chebat, who explored various angles, perspectives, and constructs around customer shopping mall experiences. His research efforts accumulated into an extensive collection of articles exploring the vast array of mall elements. To synthesize this collection of knowledge into a source for future retailing and specifically shopping mall research, the identification of communalities and areas of inadequacies is necessary (Babin et al., 2020).

In line with this special issue paying tribute to Chebat's tremendous contributions to the marketing, retailing, and atmospherics literatures, this study examines 31 research articles related to shopping malls co-authored by Chebat. Specifically, a bibliometric analysis offers insights into the most prevailing authors, journals, and keywords associated with the research. Additionally, important themes are identified that are confirmed via a systematic review. The contributions of this research hinge on two main considerations. First, it integrates a rich and diverse literature in a comprehensive Shopping Mall Experience Framework driven by the findings of the two different, yet complementary analytical approaches. To facilitate the development of research, the study also outlines a measurement tool box summarizing commonly administered constructs and scales. Second and following the tradition of Chebat, managerial insights provide guidance for shopping mall managers to identify suitable tools and achieve a desirable strategic position in the long-run as well as consumer outcomes in the short-run.

## 2. Shopping mall retailing

Understanding how a specific retail environment shapes consumer attitudes, emotions, and behaviors is central to advancing both consumer and retailing research (Pizam and Tasci, 2019). Here, shopping malls constitute a unique retail environment in numerous ways grouping a mix of service and retail businesses under one roof that are managed as a single unit at the shopping mall level. From a macro perspective, these malls might seem like one large homogeneous retail entity, housing retailers in one central location for a one-stop shopping proposition. Yet, "shopping malls are classified as either regional (…) or super regional (…) [with] more anchors, specialty stores, and recreational opportunities and draw(ing) from a larger geographic area. They often are considered tourist attractions." (Levy and Weitz, 2007: p. 192).

Furthermore, these shopping destinations do not only represent retail outlets but also serve as social and community centers as an integral part of consumers' social life (Bloch et al., 1994; Elmashhara and Soares, 2020). So, the uniqueness of shopping malls as a retail environment arises from its heterogeneous mix of consumption, social, recreational, and entertainment activities (Gomes and Paula, 2017). Additionally, it stems from the potential multipurpose shopping trip and the fulfillment of various customer experiences in a single location.

Customer experiences, i.e. customers' non-deliberate, spontaneous responses and reactions to offering-related stimuli along the customer journey (Becker and Jaakkola, 2020), are inevitably impacted by the unique retail environment of shopping malls (Haytko and Baker, 2004). Considering the aforementioned multiplicity of consumption, recreational, and social activities taking place in a shopping mall, a mall experience develops in an extremely complex set of physical, social, and physiological stimuli (Gilboa et al., 2020). Indeed, a mall consumer experience results from the experiences provided by each store or activity individually, combined with the experiences offered by the shopping mall itself (Chebat et al., 2010). Shopping mall managers have the challenging task to design mall environments that can create positive consumer shopping experiences among these complex stimuli.

Moreover, shopping malls offer simultaneous touchpoints, i.e. moments of customer interaction and contact with a firm, across channels (Lemon and Verhoef, 2016), by many different retailers, brands, and services within one location (Ameen et al., 2020). But, as shopping malls represent more than just consumption space (Bloch et al., 1994), their role in the customer journey also varies. A mall can function as a self-contained customer journey offering various touchpoints along the mall experience including different stores, entertainment, services, or digital channel. In contrast, a mall can also merely represent an individual touchpoint among

other retail environments within a customer journey across multiple channels and as part of a larger retail ecosystem (Picot-Coupey et al., 2020).

Finally, not only do shopping mall managers have to create a physical environment favorable to creating memorable experiences in-store (Flacandji and Krey, 2020), but they also have to respond to consumer omnichannel expectations (Lopes et al., 2021). Subsequently, synergistically managing the physical mall environment along the virtual environments has become a key task (Ameen et al., 2020). While shopping malls still remain essential shopping venues, the marketplace keeps transforming into a collection of various locations, micro-experiences, and shopping means that constitute overall consumption experiences (Treadgold and Reynolds, 2021). One notable example is the fragmentation of today's shopping behaviors that increasingly incorporate online experiences across channels such as websites and mobile applications (Picot-Coupey et al., 2020). As a result, seamless and comprehensive shopping journeys consisting of multiple experiences or touchpoints, rather than single shopping journeys, is becoming the norm (Becker and Jaakkola, 2020; Lemon and Verhoef, 2016). Regarding shopping mall retailing, this leads to the current emergence of smart malls that integrate advanced technologies for a seamless combination of the physical mall environment with the virtual and augmented environments (Van Kerrebroeck et al., 2017). Those advanced technologies – such as smart sensors improving navigation in the parking lot, connected stores sharing personalized notifications with consumers, or virtual reality experiences as an entertainment option – can contribute to optimize the environment and to improve customers' experience in a mall (Ameen et al., 2020; Van Kerrebroeck et al., 2017).

These numerous evolutions and challenges call for an examination of the foundational knowledge of shopping mall research. Results will provide a holistic understanding of the

different variables influencing consumer behaviors and experiences to further advance scholarly research as well as offer new insights to shopping mall managers. Considering Figure 1, Chebat remains indeed a seminal author in the field of shopping mall research. As of July 7th 2021, out of 235 peer-reviewed articles in business published since 1995 featuring the keyword "shopping mall(s)" in the Web of Science Core Data collection, Chebat is the most cited author with 926 citations followed by El Hedhli with 152 citations. This further warrants the focus on Chebat's contributions in this research field.

*[Insert Figure 1 about here]*

## 3. Methodology

Mall environments and mall atmospherics within the scope of Chebat's research contributions were comprehensively examined utilizing two distinct yet complementary review methods: a bibliometric analysis and a systematic literature review (Donthu et al., 2021). First, a bibliometric analysis examined the social and structural relationships related to Chebat's shopping mall research to identify the most influential articles, authors, and sources (Donthu et al., 2021). Specifically, various metrics related to performance analysis and science mapping, such as number of publications, co-citation analysis, and co-word analysis, offered imperative insights to map the underlying structure, dynamic, and paradigm developments (Lopes et al., 2021) of shopping mall research according to Chebat.

Second, a systematic domain-based literature review was completed to arrange and synthetize this shopping mall literature. In contrast to the bibliometric analysis, the systematic review relied on a qualitative evaluation and interpretation of the sample articles to synthesize the findings (Donthu et al., 2021). The integration of quantitative and qualitative assessment

provided a deeper understanding of the literature by utilizing the unique advantages of both methodologies to extract meaning (Donthu et al., 2021).

*4.1. Data collection*

To identify suitable research within the scope of the particular literature stream, a systematic search incorporated common business databases including *Academic Search Complete*, *Business Source Elite*, *ProQuest Central*, *Science Direct*. Findings were cross-validated using *Google Scholar* and *Web of Science Core Collection*. To optimize each search, implementation of keywords and field tags facilitated search efforts: author (*Chebat; Chebat, JC; Chebat, J.C.; Chebat Jean Charles; Chebat Jean-Charles*), title and abstract (*mall*), language (*French; English*) and document type (*journal*). A second search included *mall* as a general search term with *Chebat* as an author to further expand the potential reach. Inclusion criteria focused on 1) published journal articles, 2) authored by Jean-Charles Chebat, 3) featuring a mall context either in a conceptual article or a mall sample in an empirical study, and 4) limited to English or French language publications.

The initial search produced 34 articles. Upon reviewing the articles and eliminating three papers that did not meet the inclusion criteria, the final sample retained 31 papers. These 31 articles represent more than 1/4 of Chebat's total journal publications, thus demonstrating his dedication to mall research as well as his position as an eminent scholar in the area.

*4.2. Data analysis*

The bibliometric analysis first focused on performance metrics to determine the contributions of each of the 31 articles. Analysis included number of publications per journal, citations per year, total citations per article, and number of publications per author, with citation being a proxy for impact and influence and publication considered as a measure of productivity.

A co-citation relationship was established between two papers when these co-occurred in a third paper 's reference list (Donthu et al., 2021). The more co-citations two documents reflected, the higher the co-citation strength (Mustak et al., 2021). Co-citation analysis used the network analysis method to divide these literatures into clusters, thus reflecting the underlying intellectual structure of the studied domain. The depicted nodes in the co-citation map represent research papers and authors that were closely associated i.e. founding pillars to shopping mall research Chebat co-authored; the larger the node or the more nodes, the stronger the association (Van Eck and Waltman, 2020). Finally, co-word analysis applied keyword occurrence to map the conceptual structure of the shopping mall research domain inherited from Chebat (Mustak et al., 2021). As suggested, this technique represented the cumulative knowledge of studies and provided insights into the trajectory of the research field (Donthu et al., 2021; Gomes and Paula, 2017). VOSviewer (version 2020) was used to complete science mapping (Van Eck and Waltman, 2020).

The systematic literature review included a manual content analysis conducted independently by three researchers to synthesize, identify, and develop common themes across the articles (Donthu et al., 2021). Following Gaur and Kumar (2018), the assessment included a vertical analysis per paper and a horizontal analysis along a coding structure with nine categories. These suggested coding categories for the systematic literature review centering on both research theme and research methods with narrow scope include: (i) theory(ies) employed, (ii) considered constructs and corresponding definitions, (iii) scales and items used, (iv) number of studies conducted, (v) analysis and methods performed, (vi) primarily variables (dependent and independent variables; moderator or mediator variables), (vii) type of data and data collection methods used, (viii) sampling technique and characteristics (size, country,

characteristics), and (ix) key findings. The findings of this assessment were organized into the Shopping Mall Experience Framework focusing on guiding future research efforts and aiding retailer's application of mall elements in strategic positioning.

## 4. Results

### *4.1. Bibliometric analysis results*

#### *4.1.1. Descriptive overview of publications*

The time frame represented by the 31 papers spanned from 1999 to 2016, with a publication rate of one to five papers per year. This steady trend reflected the continuous interest in shopping malls over these 27 years. Based on the included articles, 2005 was the most productive year with five publications on shopping malls followed by 2008 with four publications (see Figure 2).

*[Insert Figure 2 about here]*

The publications also included a wide range of journals as depicted in Table 1. By far, the *Journal of Business Research* represented the most popular choice for mall research authored by Chebat with 12 publications. The *Journal of Retailing and Consumer Services* followed with seven articles while the remaining twelve publications equally distributed across various other journals outlets. Therefore, the *Journal of Business Research* and the *Journal of Retailing and Consumer Services* remained key outlets among the mall research community. In terms of citations, the *Journal of Business Research* once again outranked all other journals with 3,190 total citations, followed by *the Journal of Retailing of Consumer Services* with 1,006 total citations. However, when evaluating the average citations per publication, the *Journal of Marketing Management* ranked highest with 437 citations (see Table 1).

*[Insert Table 1 about here]*

To determine the most influential article across the 31 publications, Table 2 lists all articles by total number of citations. Chebat and Michon (2003) article focused on ambient odors in shopping malls had the highest impact with 1,104 total citations. Despite being published in 2003, the average number of citations per year was 61.33, reflecting the continuous impact of this article. The next article was Michon et al.'s (2005) article about mall atmospherics and shopping behaviors, with a total citation count of 628 and an average citation count per year of 39.25. Overall, 61% of the articles had over 100 citations.

*[Insert Table 2 about here]*

*4.1.2. Co-citation results*

While the descriptive performance metrics provided a first overview of the shopping mall research co-authored by Chebat, the co-citation analysis uncovered the structure and interrelations of journals and references within this studied topic (Mustak et al., 2021). Co-citation refers to the number of citations by different research within the same set of articles (Donthu et al., 2021). For the current analysis, the established minimum citation threshold was three citations of a cited reference following the usual standards (Van Eck and Waltman, 2020). Based on this criterion, the set comprised 58 articles.

With regards to the journals, Table 3 shows that the top three journals most influential in shaping Chebat's shopping mall research, meaning that these journals were most often cited across all of Chebat's 31 articles, included: *Journal of Retailing* (104 citations), *Journal of Business Research* (86 citations), and *Journal of Consumer Research* (65 citations). As previously mentioned, the *Journal of Business Research* was also the most popular journal outlet of choice for Chebat's mall research articles. These landmark publications from the *Journal of Retailing* that contributed to form and grow Chebat's research on shopping malls suggested

context-specific considerations. Additionally, the papers published in the *Journal of Business Research* and the *Journal of Consumer Research* covered two different yet complementary perspectives, advancing understanding of business situations and consumer behaviors respectively.

*[Insert Table 3 about here]*

Reference co-citation analysis is an important mean to detect the structure and evolution path of a specific domain. Two publications are co-cited if a third publication cites them both (Donthu et al., 2021). Figure 3 and Figure 4 respectively present the network and density diagrams of this analysis. Regarding the network diagram depicted in Figure 3, the largest set of connected articles was structured around the Babin et al. (1994) paper about personal shopping value (57 links) with the top two co-cited papers being Bitner (1992) (55 links) and Mehrabian and Russell (1974) (54 links). Therefore, the literature on value and on the impact of physical surroundings on customer behavior, employee behaviors, and customer emotions is tied to shopping mall research. The second cluster is structured around Babin and Attaway (2000) (53 links). Here, the top two co-cited papers included Sirgy et al. (2000) (45 links) and Chebat et al. (2006) (44 links), which represented the interconnection of retail atmosphere, retail environment, and retail patronage. The network analysis depicted the key influential nature of these six papers and their respective links in the area of shopping mall experiences associated with Chebat's research. Not only did research by Chebat receive attention, but his studies have also been inspired by other scholars as indicative by the co-citation findings.

Additional information on these co-cited references was provided by the density visualization map in Figure 4. While the co-citation network diagram identifies key references, the density visualization maps allows for an assessment of the interconnections between these

references; therefore, how these important references are interrelated can be answered with this second map. Specifically, the density visualization depicted each point in a specific color based on the density of items ranging from blue to yellow (blue = low density; yellow = high density). The larger the number of items surrounding a point and the greater the weight of neighboring items, the more intense yellow shading of the area. Density views are especially useful for understanding the overall structure of a map and drawing attention to its most important areas. The large number of yellow areas on the map showed multiple influences of co-cited references in Chebat's research on shopping mall. The yellow areas occupied a substantial surface, reflecting the tight density of studies that have influenced and impacted Chebat's research. A total of five main areas are evident based on high density as indicated by yellow shading. Describing them from left to right, the first cluster covered customer responses, both in terms of value and emotions. The second cluster related to olfactory cues, while the third was about colors, both studied at the store level. The fourth cluster included background music and ambient scent while the last one uncovered works on store patronage and store personality. Thus, the findings determined that Chebat leveraged different research areas on specific environmental characteristics and their impact on consumer responses at the store level, yet investigated these across the holistic shopping mall experience.

*[Insert Figures 3 and 4 about here]*

*4.1.3. Keyword analysis results*

Keyword co-occurrence analysis aims to highlight the mutual interconnections of a pair of concepts within the literature base (Mustak et al., 2021), thus reflecting the research hotspots in the domain. Figure 5 depicts the keyword co-occurrence network for shopping malls in Chebat's research with a minimum threshold of occurrences in the literature base set at three.

Four clusters of keyword co-occurrences totalizing 39 items emerged: 1) blue – spatial wayfinding, 2) green – atmospherics, 3) yellow – individual differences across shopping mall experiences, and 4) red – shopping mall consequences.

The red cluster related to the shopping mall in itself and its characteristics in terms of image, personality, and environment. In addition, its impact on key consequences such as mall patronage, mall loyalty, and mall quality remained another focus within this domain. The yellow cluster displayed keywords associated with shopping mall experiences and consumer difference measures including shopping value, self-congruity, and shopping well-being. These themes tended to be studied in conjunction with gender issues. Mall atmospherics represented the green cluster. Specifically, music, color, and scent and their connections with behaviors, emotions, and memories were summarized in this part of the keyword co-occurrence analysis. Lastly, the blue cluster showed a strong presence of studies related to spatial information and wayfinding. Topics focused on customer strategies to overcome difficulties to find their way in shopping malls as well as sex-differences and determinants related to information processing or orientation.

*[Insert Figure 5 about here]*

A temporal mapping of central keywords allows to investigate the progression of Chebat's central focus about shopping malls over time, as illustrated in Figure 6. It concentrated first on investigating specific issues in shopping malls, relating to atmospheric effects on consumer behavior and spatial considerations. For example, a strong cluster formed around ambient cues such as scent, music, and color and their influence on memory, emotions, and behaviors. A second cluster focused on strategic topics including orientation, wayfinding, and sex-differences. The dynamic evolution of keywords then shifted toward the experience in shopping malls including mall environment, experience, quality, and shopping valued. The final

and most recent stage of the research examined the influence of mall elements on various outcomes such as loyalty, image, gender differences, or shopping well-being. Interestingly, value now predominantly examined utilitarian value and fun individually. These findings can be used to provide some assessment of emerging topics in shopping mall research discussed in combination with the proposed framework in section 4.3.1.

*[Insert Figure 6 about here]*

*4.2. Systematic literature review results*

Assessment shifted to the systematic examination of the shopping mall literature produced by Chebat. As previously discussed, horizontal and vertical assessment included nine categories suggested for literature reviews with narrow scopes of research theme and research methods (Gaur and Kumar, 2018).

*4.2.1. Theoretical foundations of shopping mall research*

Upon reviewing the sampled research for theoretical foundations, frameworks, or premises, only 32% out of the articles presented a theoretical background discussion. Therefore, only one out of three articles explicitly positioned their research within an existing theory. With regard to the type of referenced theories, most of these were consistent with environmental psychology and retailing literature such as cognition-emotion-behavior paradigm (e.g., Laroche et al., 2005), person-place congruency framework (e.g., Morrin and Chebat, 2005), schema congruity model (e.g., Eroglu et al., 2005), and self-congruity theory (e.g., Chebat et al., 2006).

While not every article included a theoretical discussion, the study design and constructs still echoed the stimulus-organism-response (S-O-R) model by Mehrabian and Russell (1974). The central focus remained the relation between the stimulus (S) in the environment that the organism (O) was exposed to and the subsequent responses (R) in form of behaviors, attitudes, or

emotions. Hence, the interaction between the consumer and the shopping mall environment leading to various outcomes relevant to this specific context (Pizam and Tasci, 2019).

*4.2.2. Study design and procedure*

Next, the review explored research design, samples, methodology, and other details of each individual study included in the 31 articles (see Table 4). The geographic scope primarily reflected North America (87%), while only three papers focused on multiple countries (Sirgy et al., 2008), Italy (Petruzzellis et al., 2014), or Israel (Gilboa et al., 2016). As a consequence, seminal research on shopping mall was North-America oriented. While only half of the studies explicitly stated the language that was used for the research, all of these 16 studies utilized English. In addition, 42% were also administered in French. In terms of participants, mall-intercept samples ensured the inclusion of actual shoppers in nearly all studies. Consequently, the most frequently applied survey technique was paper-pencil, followed by online surveys. As common in shopping behavior studies, samples reflected a slightly higher percentage of female shoppers. Overall, only one study included complete details of basic sample details such as sample size, gender, age, country, and language; a common issue as previously identified by review papers (e.g., Babin and Krey, 2020).

Concerning research methods, with the exception of one conceptual paper, all remaining 30 papers administered either cross-sectional surveys or experiments. 90% of all articles included one study in their research; only the articles focusing on international samples or on scale development relied on a multi-study approach. The most frequent data analysis techniques included structural equation modeling (SEM) (61%) or variance analysis (29%); only one study administered a qualitative content analysis. Consistent with the theoretical background previously discussed, common dependent variables included approach/avoidance, mall

perceptions, mall image, or actual behaviors such as total purchases, money spent, or store visits. As further elaborated in the next section, some of the most studied constructs overlapped with other retail or atmospherics research: hedonic value, utilitarian value, pleasure, arousal, and satisfaction. Lastly, atmospheric cues were captured primarily via scent, music, color, and décor. In addition, overall mall atmospherics and physical design were also popular constructs.

*[Insert Table 4 about here]*

*4.2.3. Constructs, measurement scales, and items in shopping mall research*

The next step of this systematic review focused on synthetizing constructs and conceptualizations as well as respective measurement scales administered in shopping mall studies (Table 5). Constructs and scales were selected on the basis of frequency of consideration and administration in the sampled articles. Moreover, the two constructs and corresponding measures developed by Chebat and co-authors namely "Shopper Based Mall Equity (SBME)" (El Hedhli and Chebat, 2009) and "Mall Environment" (El Hedhli et al., 2013) completed the collection.

The top three constructs assessed across all studies were hedonic value (42%), utilitarian value (42%), and product perception or quality (42%). Consistent with the previously discussed S-O-R model, pleasure (32%), arousal (29%), and approach/avoidance (16%) also appeared frequently in these articles. The most commonly assessed ambient cue was scent in 16% of all articles. Constructs positioned as outcome variables focused on mall perception (32%), spending behaviors (19%), mall loyalty (16%), and mall attitude (16%). For most of the frequently incorporated constructs, consistent labels and conceptualizations were evident. For example, hedonic and utilitarian value consistently represented gratification and self-expression or task accomplishment respectively. However, other constructs such as mall atmosphere were

approached from two related yet different conceptualizations depending on the focus of the study (i.e., overall mall atmosphere vs. individual atmospheric cues). Table 5 highlights these different conceptualizations.

The two most frequent type of scales were Likert scales or semantic differential. Furthermore, most studies administered 7-point scales. Yet, not all studies disclosed what specific scales were utilized or did not state the specific items that were administered. Regarding scale items, shorter versions of original scales were often implemented. For example, hedonic value was commonly captured with five items compared to the original eleven items developed by Babin et al. (1994). Moreover, wording of individual items was adjusted to match the shopping mall context; for example, approach/avoidance behavior and self-congruity. While a common technique, these adjustments lead to new scales requiring common scale development and refinement procedures (Ortinau, 2011); a step not evident in the explored articles. Table 5 summarizes the most frequently studied constructs and corresponding scales in shopping mall research. This overview can act as a starting point for future empirical research on shopping mall experiences facilitating the identification of relevant constructs, operationalizations, and scales. Especially the constructs developed by Chebat – SBME and mall atmosphere – are as relevant today as they were ten years ago.

*[Insert Table 5 about here]*

*4.2.4. Shopping mall research key findings*

The previous bibliometric keyword analysis identified four main clusters of research hotspots across the 31 articles: 1) spatial wayfinding, 2) mall atmospherics, 3) individual differences across shopping mall experiences, and 4) shopping mall consequences. Each focus area is further explored below.

*4.2.4.1. Spatial wayfinding*

Maneuvering the shopping mall and all of its spatial elements encompassed the first set of studies. Specifically, areas of interest ranged from wayfinding, orientation, density, to sex-differences, and information processing. Chebat et al. (2005) raised the concern that consumers potentially faced difficulties finding retail store(s) within the mall or identifying opportunities of interest, all of which was indicative of wayfinding. They observed that men rely more on maps as an information source while women seek out assistance from other people. Chebat et al. (2008) further showed that female shoppers asked more for assistance and information when in need while simultaneously expressing higher levels of hedonistic shopping motivations; therefore, wayfinding and enjoyment were not mutually exclusive. One influential factor of wayfinding was density defined as the number of people and objects within a limited space (Eroglu et al., 2005). High retail density negatively impacted various emotions, attitudes, and behaviors including affect, satisfaction, wayfinding, and patronage (Eroglu et al., 2005; Michon et al., 2005; Michon et al, 2008). In general, density appeared to be difficult to capture as it was perceived differently by consumers; hence, perceived crowding was often measured (Eroglu et al., 2005).

*4.2.4.2. Mall atmospherics*

Throughout all shopping mall articles, ambient cues remained a focal explanatory element in predicting consumer responses in mall environments. Specifically, scent (16%), music (10%), and colors (6%) were the most frequently examined cues in mall retailing. With regard to music, Chebat et al. (2001) discussed how cognitive processes moderated music influence. Moreover, Petruzzellis et al. (2014) studied music notoriety and confirmed that famous music

reinforced patronage. However, famous music also reduced cognitive activity and distracted consumers from hearing promotional messages in stores.

With regard to scent, Chebat and Michon's (2003) in-mall experiment showed that ambient scent directly influenced customers' perceptions and impacted moods while indirectly influencing mall environment perceptions. Therefore, they concluded that "the shopping mall plays the role of a global packaging for the products sold" (p. 537). In addition, young shoppers spent more money at a mall when a pleasant ambience (citrus) scent prevailed (Chebat et al., 2008). Moreover, Michon et al. (2005) determined that scent only positively influenced shoppers' perceptions when retail density was at a medium level.

Across all 31 articles, only a small number assessed individual atmospherics cues. Instead, cross-modal correspondence administering multiple senses simultaneously, and implicitly adopting a multisensory perspective, was more common (Spence et al., 2014). For example, Eroglu et al. (2005) considered music and retail density to support moderate incongruity among cues as a trigger of more elaborate information processing. Comparing the effects of both scent and music, Morrin and Chebat (2005) determined that scent influenced contemplative shoppers whereas music positively affected impulsive shoppers. Ruiz et al. (2004) also studied music and scent but added a third cue, store decoration, to segment mall clientele. In later years, a holistic approach to atmospherics replaced individual or multiple cue assessment by incorporating mall atmospherics into studies. Chebat noted multiple times in his research that isolating effects of a single cue can be challenging. Consequently, Chebat increasingly administered "mall atmosphere;" a construct and scale he developed. Mall atmosphere captured the entire mall environment including environmental cues (odors, music, decoration) and was shown to impact cognitive, emotional, and physiological responses (Gilboa et al., 2016;

Massicotte et al., 2011). When managed correctly, mall atmosphere remained an essential communication tool, influencing self-congruity (Massicotte et al., 2011) and enhancing product quality and price perceptions (Haj-Salem et al., 2016).

*4.2.4.3. Individual differences across shopping mall experiences*

In addition to investigating the different facets of shopping mall atmospherics, the consumer perspective and corresponding individual differences based on various key constructs were also examined. Ruiz et al. (2004) showed that consumers differed by the mall activities they performed and profiled four activity-based groups: recreational shoppers, full experience shoppers, browsers, and mission shoppers. The four groups differed in terms of approach/avoidance reactions and shopping value. Individual differences also appeared related to consumer's self-concept as a leader or a follower: studying fashion shoppers, Michon et al. (2007) observed that fashion leaders utilized cognitive processing in creating hedonic shopping experiences compared to fashion followers who relied on mood. Consequently, the shopping mall appeared as "a fun place" for those fashion followers or "a serious matter" for the fashion leaders (Michon et al., 2007: p. 497).

Individual differences were also apprised via the concept of environmental appropriateness, namely the perceptual appropriateness in terms of décor, music, and scent of a shopping mall by a consumer (Babin et al., 2004). Findings showed that appropriate mall décor, music, and scent elements increased product quality perceptions and hedonic shopping value. In addition, higher product quality perceptions strengthened the relationship between appropriateness and utilitarian value as well as affect. Good matching between the environment elements appeared essential in creating shopping value. The research of Chebat and co-authors also focused on how shopping in malls could contribute to perceived quality of life, i.e. feelings

of well-being. El Hedhli et al. (2013) determined six retailing mix factors influencing shoppers' well-being: functionality, convenience, safety, leisure, atmospherics, and self-identification. El Hedhli et al. (2016) further confirmed full mediating effects of shopping well-being between hedonic value - but not utilitarian value - and mall attitude as well as word-of-mouth.

*4.2.4.4. Shopping mall consequences*

Shopping mall outcomes echoed commonly examined consequences in retailing studies, such as perceived quality (Laroche et al., 2005), mall loyalty (Haj-Salem et al., 2016), mall patronage (Chebat et al., 2010; Raajpoot et al., 2008), mall attachment (Chebat et al., 2014a), and word-of-mouth (Chebat et al., 2010). Laroche et al. (2005) showed that consumers' moods induced by their perceptions of shopping mall environment and of product quality impacted their purchase intentions through their perceptions of service quality. Furthermore, Haj-Salem et al. (2016) investigated the drivers of mall loyalty and gender. While mall atmosphere was a common driver of mall loyalty for both genders, male shoppers' loyalty was further influenced by price and identification with the mall yet female shoppers' loyalty was further impacted by mall physical design and perceived quality of products and services.

Another mall outcome of interest was mall attachment investigated by Chebat et al. (2014a). Specifically, the emotional link between an individual and a setting indicative of how well a consumer identified with a particular shopping center. Results showed that mall attachment depended on the shoppers' companion during the shopping trip. Raajpoot et al. (2008) concentrated on better understanding mall patronage decision and showed how employee behavior, mall design, customer compatibility, product assortment, and access to the mall all influenced customers' emotional responses to the mall. In addition, Chebat et al. (2010) determined that mall patronage was impacted by mall image just like word-of-mouth

communication. With regard to mall image, Chebat et al. (2006; 2010) observed that mall image influenced stores' image, and inferred that consumer experience should be managed locally at the store level as well as globally at the shopping mall level.

Beyond those traditional retail outcomes, one substantial contribution regarding mall outcomes remained El Hedhli and Chebat's (2009) conceptualization and measure of Shopper-Based Mall Equity (SBME). SBME included both mall awareness and mall image. Results showed that mall awareness, although rarely considered by mall managers, weighed more heavily in mall equity than mall image. Shoppers' positive awareness of the mall characteristics helped to predict consumers' commitment and mall loyalty (Chebat et al., 2009).

The in-depth assessment of the four shopping mall research areas provides an extensive overview of the findings associated with spatial wayfinding, mall atmospherics, individual differences, and shopping mall consequences. To facilitate the generation of future research in mall retailing and offer relevant managerial insights addressing current trends and concerns, additional influences, concepts, and constructs are integrated into the Shopping Mall Experience Framework below to enhance its relevancy and generalizability.

### *4.3. Organizing framework and managerial perspectives*

#### *4.3.1.Shopping Mall Experience Framework*

Synthesizing insights from the bibliometric analysis and the systematic literature review, the proposed Shopping Mall Experience framework offers a comprehensive overview of the shopping mall environment and elements of mall experiences pertinent for future scholarly studies (see Figure 6). This framework articulates seven main components, namely: 1) tangible elements, 2) spatial elements, 3) environmental elements, 4) employee factors, 5) consumer factors, 6) mall perceptions, and 7) mall outcomes.

*[Insert Figure 6 about here]*

Tangible elements include the different components the mall offers, such as brands, retail mix of different stores, and product assortment variety within stores. The elements that can assist consumers in maneuvering the mall are represented in the spatial elements. Digital signs and information are essential in strategically guiding consumers through their way in the environment. Technological advances including digital signs and augmented reality (AR) maps could facilitate the strategic alignment of these elements as well as manage density. Lastly, environmental elements reflect mall atmospherics and each individual cue for indoor as well as outdoor environments. Especially the integration of multisensory cues across the mall environment is of interest since congruity of cues could be accomplished at different levels, i.e. product, brand, store, and mall (Spence et al., 2014).

Employee and consumer factors follow next in the framework. Considering the retail industry, employees play an integral part of the service delivery (Turley and Chebat, 2002). Therefore, factors such as employee emotions and self-congruity need to be considered. With an increasing trend to phygital retail spaces (Treadgold and Reynolds, 2021) including sales technology e.g., smart mirrors (Pantano and Naccarato, 2010), artificial intelligence (AI) sales assistance (Ameen et al., 2020), technology readiness and capability is a crucial factor in ensuring a successful consumption experience. For consumers, their shopping experiences can be influenced by shopping motivations, emotions, and self-congruity. Need for touch has emerged as an important individual difference trait in shopping and should be incorporated in shopping mall research (Helm et al., 2020). Moreover, while tangible, spatial, and environmental mall elements impact consumer-employee interactions, these interactions will subsequently influence mall perceptions.

Mall perceptions represent mall attitude, mall image, intentions, and mall perception. These consumer perceptions are an essential component of mall experiences since these lead to mall outcomes and behaviors. These outcomes include approach/avoidance behaviors, mall attachment, mall loyalty, total spending, and word-of-mouth. Shopper well-being and shopper-based mall equity are also of interest, especially in current times as the overall customer journey is increasing in importance (Becker and Jaakkola, 2020; Sirgy et al., 2008).

A final consideration of the framework is the integration of different channels and touchpoints as part of the overall mall experience in line with the customer journey perspective. Consumers increasingly rely on multiple touchpoints (e.g., website, mobile application, social media) and expect new tools (e.g., AI, AR, VR) to enrich their consumption experience (Becker and Jaakkola, 2020; Roggeveen et al., 2020). For example, VR experiences offered during mall visits have been shown to increase mall loyalty and approach behaviors (Van Kerrebroeck et al., 2017). Therefore, designing a consistent and holistic mall experience across multiple channels and touchpoints beyond the physical environment is essential. The challenge of successfully articulating experiences at both the store and mall levels previously considered by Chebat finds a new extension here at channel and touchpoint levels.

*4.3.2. Mall manager perspectives*

The current framework provides an overview of major elements of interest for shopping mall research that can offer additional guidance for mall managers. The tangible, spatial, and environmental elements are the three components that mall managers have the highest direct control over. These elements not only include indoor features such as retail mix, brands, and atmospherics but also extend to the outdoor features of the mall such as architectural structure, exterior display windows, parking lot, and signage. Mall managers need to strategically evaluate

and actively manage these tangible, spatial, and environmental mall elements as their consistency is essential to create a cohesive mall environment. Importantly, these elements need to be considered across the holistic mall environment as well as individual stores, entertainment offerings, and any other mall components. In addition, these elements influence consumer-employee interactions and subsequent perceptions, so it is in the interest of mall managers to take advantage of mall element mix to maximize interactions and mall perceptions. Therefore, each element's contribution to enhancing interaction or mall perceptions need to be determined and performance strategically evaluated over time.

Understanding and considering the characteristics that differentiate consumer responses to mall environments can further assist in securing a long-term competitive advantage. Pre-emptively designing mall environments and experiences by considering consumer important factors maximizes success potential by shifting from a reactive to a proactive positioning. Here, hiring qualified employees is crucial to ensure efficient mall experience delivery during consumer-employee interaction. While new sales technologies can facilitate these efforts and can attract new targets like younger consumers who rely on these technologies in daily life, it also requires skilled employees who can easily maneuver these technologies.

Additionally, mall managers need to expand their shopping mall beyond the physical environment and incorporate diverse channels to create a consistent customer mall journey. Indeed, while consumers still patronize physical malls, a large portion of the consumption experience happens outside of the traditional environment. Successful mall managers need to expand their strategic approach by incorporating multiple channels and streamlining their communication efforts. For example, integrating a well-designed mall website, app, or other technology that extends mall experiences to a virtual dimension strengthens positive mall

perceptions and ultimately lead to actual mall patronage (Van Kerrebroeck et al., 2017). Such integrations of new channels and touchpoints are also necessary to consider in a phygital perspective. New technologies such as virtual and augmented reality offer additional opportunities for touchpoints to engage with consumers and to offer new services. Finally, capitalizing on new technologies allows mall managers to respond to the repercussions of the COVID-19 pandemic, offering dynamic and engaging experience alternatives that elevate mall image and attachment in a time when in-person shopping is challenging (Pantano et al., 2020).

## 5. Conclusion and future research

In line with the special issue devoted to the evolution and challenges facing retailing in honor of J.-C. Chebat, the current study provides a detailed and exhaustive synthesis of 31 papers co-authored by Chebat about shopping malls. Specifically, this research implements a bibliometric analysis and a systematic review providing a detailed overview of Chebat's heritage on shopping mall research. Results identify co-citation and keyword clusters that are indicative of the prominent themes in shopping mall retailing: 1) spatial wayfinding, 2) mall atmospherics, 3) individual differences across shopping mall experiences, and 4) shopping mall consequences. Interestingly, findings reflect Chebat's shift towards a holistic conceptualization and assessment of mall atmospherics and environments; a trend still evident in recent retailing literature. Results also organize key constructs, scales, and indices administered across twenty years of shopping mall research. Furthermore, the comprehensive Shopping Mall Experience Framework introduces a new approach to shopping mall experiences across various components, including tangible, spatial, and environmental mall elements, employee and consumer-related factors and consequences in terms of mall perceptions and mall outcomes, while considering newer digital

touchpoints and channels. Finally, managerial implications suggest the monitoring of various shopping mall elements to implement a successful strategic positioning.

As such, this research has implications for both mall managers and mall researchers. From a managerial perspective, findings offer guidance to frame the future of shopping mall retailing during the current challenging times based on declining mall attendance and situational factors. For researchers, findings provide a platform to further develop the literature on shopping malls grounded in the rich but disperse collection of mall research inherited from Chebat. The new framework in conjunction with the conceptualizations and scales offer a starting point for interested researchers to secure the future of shopping mall retailing.

In line with these findings, future research directions emerge. First, future research should continue the assessment of wayfinding and potential gender differences by exploring new technologies as means for maneuvering through a mall. Specifically, replacing static maps with interactive notifications on smartphones or AR apps could negate the previously identified gender differences. Furthermore, positioning shopping malls as a smart shopping environment requires further assessment. The integration of smart mirrors and technology shopping assistance in retail store has been previously explored (Pantano and Naccarato, 2010 ). However, since retail stores are part of the larger mall environment, the impact of these technologies on the overall mall shopping experience needs to be considered. Considering the importance of entertainment as part of the shopping mall experience, utilizing AR devices beyond seasonal pop-up stands (Van Kerrebroeck et al., 2017) is an important future research agenda. Shopping mall employees are also confronted with changes in their responsibilities once these new technologies are introduced. Understanding how these new devices and services can improve customer-employee interactions in malls will be a key avenue for future research.

Additionally, future research should also aim at understanding multisensory mall experiences and the importance of congruence at a store as well as mall level. Extending prior research on multisensory atmospherics (e.g., Spence et al., 2014) into the mall environment will be helpful in designing experiential and satisfactory consumption experiences. The concept and scale of mall atmospheric or mall environment can facilitate the assessment of multisensory experiences at the mall as commonly done by Chebat (e.g., Massicotte et al., 2011). Furthermore, while scent cues have been predominantly studied in mall research, results remain inconsistent warranting additional research. Focusing on other cues such as color or touch could be an additional research area. Finally, future research needs to explore the repercussions of both e-commerce and m-commerce development magnified by the COVID-19 pandemic (Pantano et al., 2020) on consumers' expectations towards shopping malls. Understanding how consumers' confidence in visiting enclosed malls has been fragilized and the perceived risks to patronize them is a priority. Future research needs to examine a potential change in consumer expectations related to mall offerings including social, recreational, and entertainment activities. Here, considering constructs such as community-based consumer well-being could be especially helpful since factors focusing on the consumer as a person could provide important insights.

As with any research, this study is subject to limitations. The lack of complete information as provided by the original authors of the publications made it challenging to compare elements of interest across certain papers. Consequently, this research cannot follow the complete assessment of study characteristics and designs for some articles. This reflects the importance of providing full information during the publication process and a limitation that unfortunately permeates all levels of journals (Babin and Krey, 2020). Furthermore, the aim of the research – assessing mall research as published by Chebat – led to selection of the search

keywords. Despite best efforts and cross-checking search results in different databases, the chosen keywords and databases might not incorporate every single publication. In addition, in accordance with the special issue the focus of this review remains research published by Chebat. Therefore, other research not published by Chebat was automatically excluded. Despite these limitations, the current research systematically examines shopping mall – as inherited by Chebat – providing a platform for advancing mall retailing by considering the foundations of the past.

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Van Kerrebroeck, H., Brengman, M., Willems, K., 2017. Escaping the crowd: an experimental study on the impact of a Virtual Reality experience in a shopping mall. Comput. Hum. Behav. 77, 437-450. https://doi.org/10.1016/j.chb.2017.07.019.

**Fig. 1.** Network diagram of authors' citations in shopping mall research.

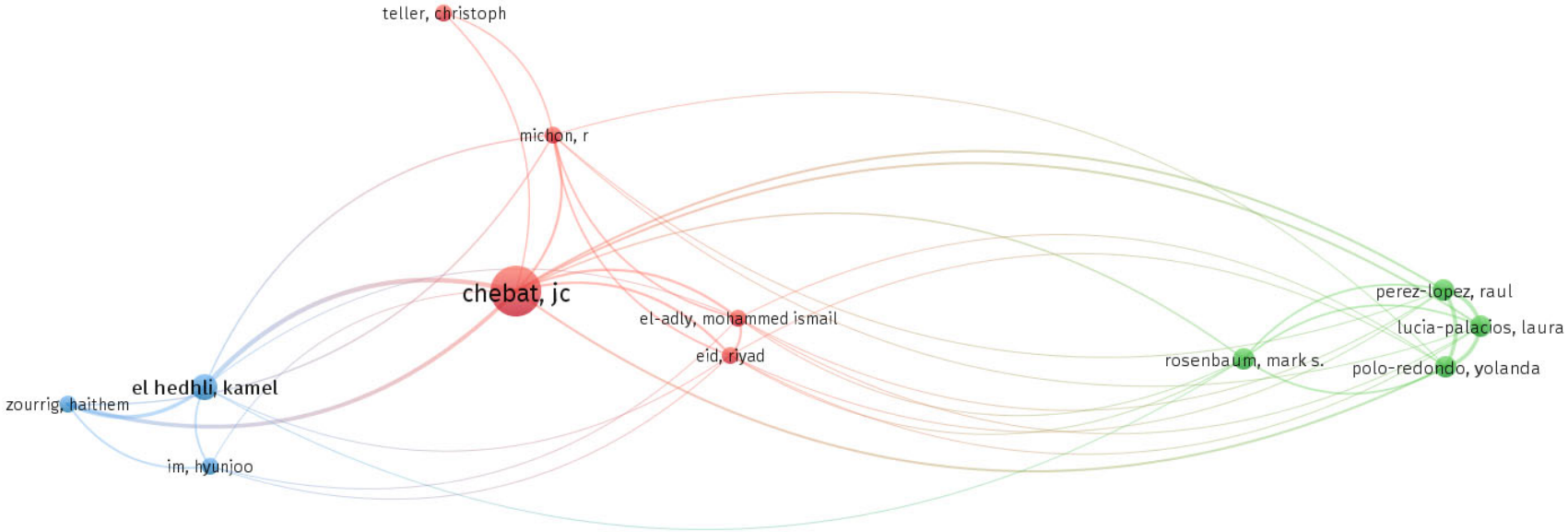


**Fig. 2.** Number of publications per year.

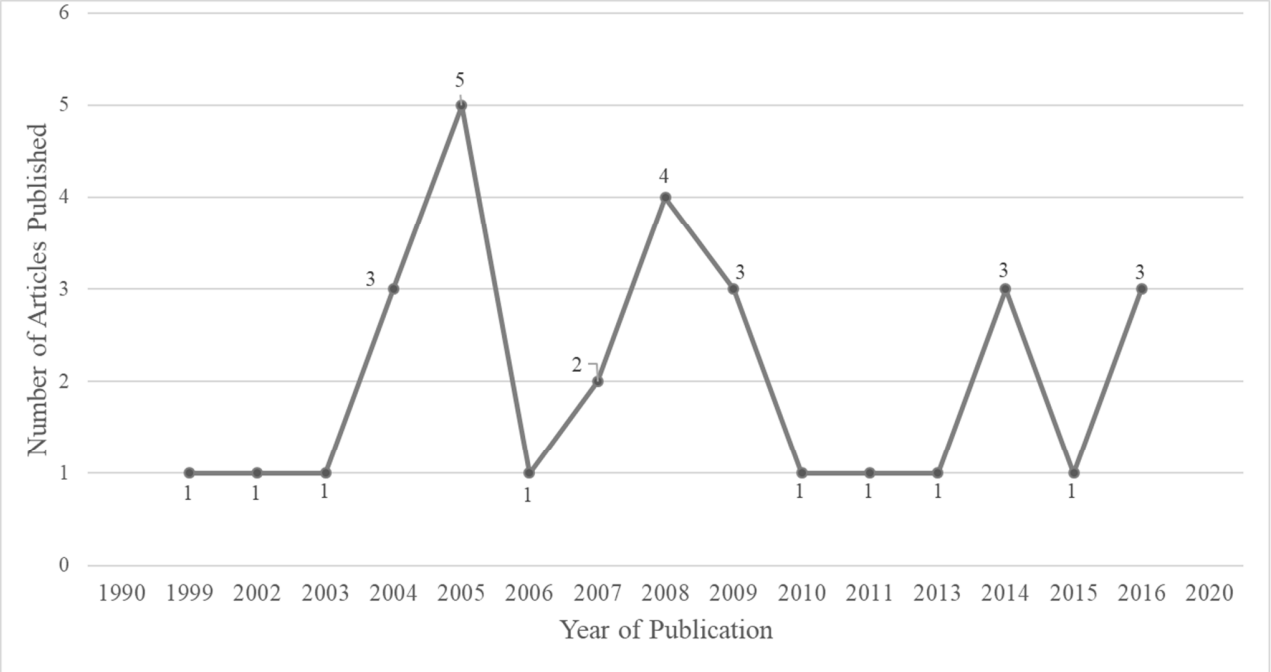


**Fig. 3.** Network diagram of co-citation of references.

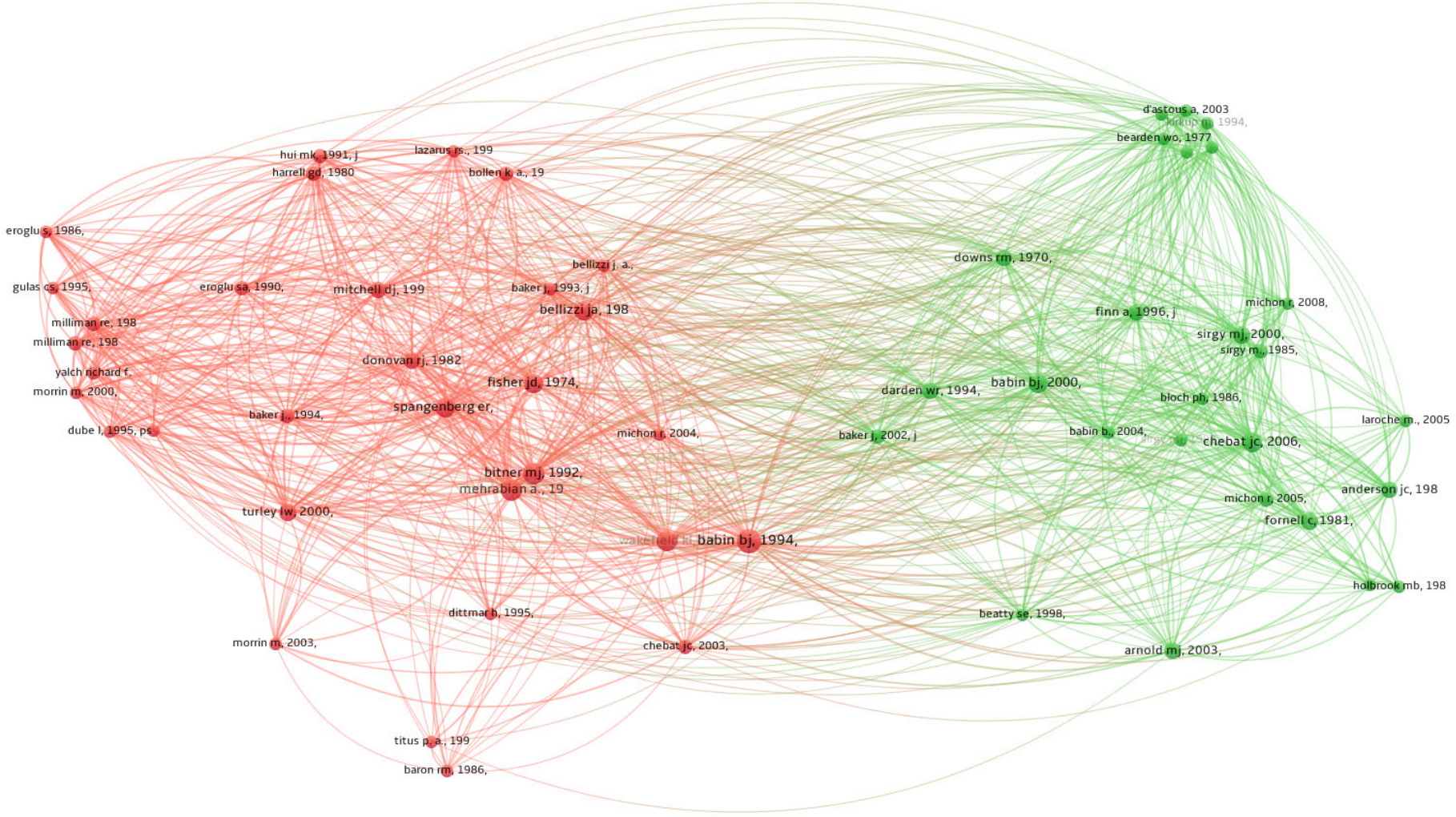
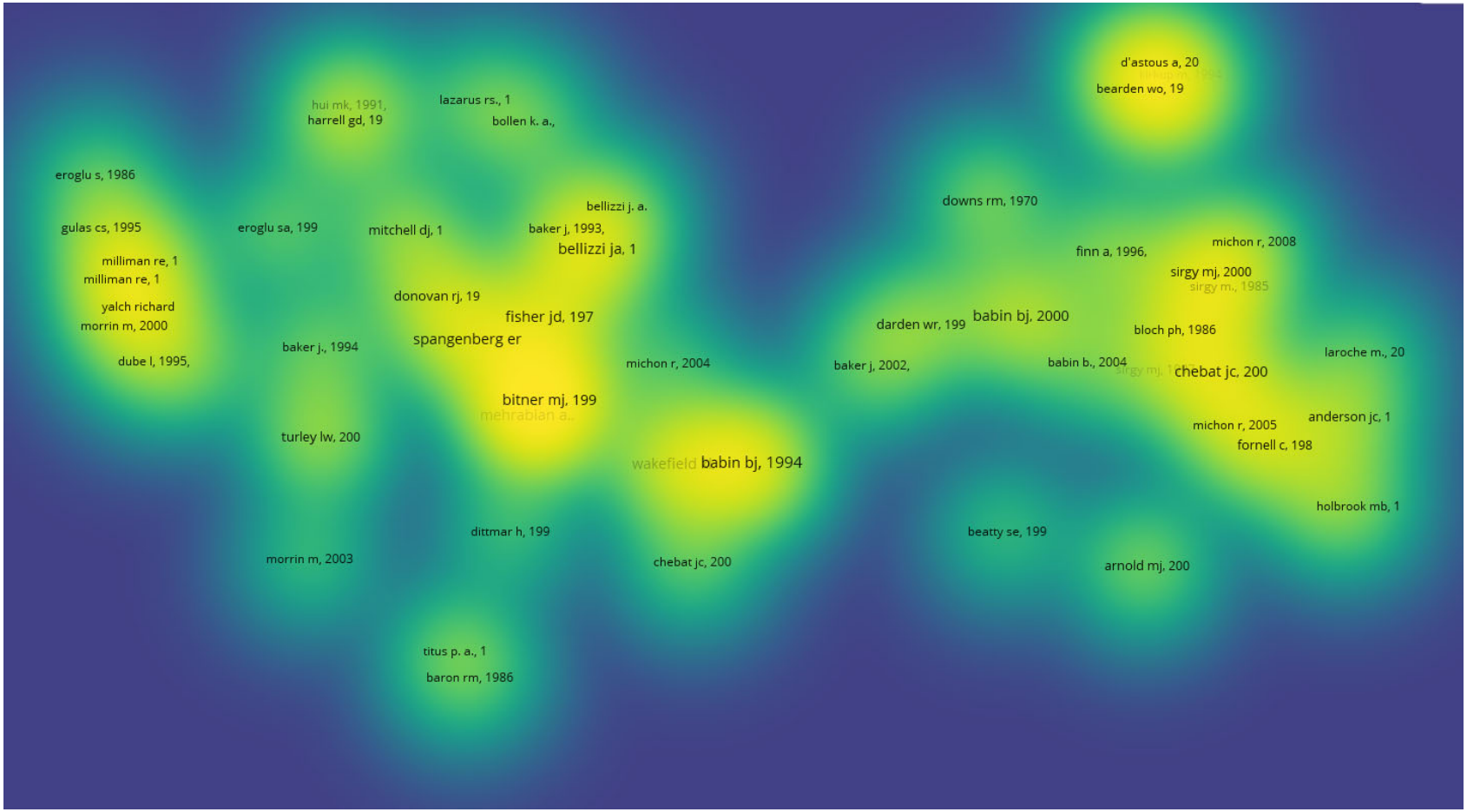


**Fig. 4.** Density diagram of co-citation of references.




Note: blue color = low density; green color = moderate density; yellow color = high density.

**Fig. 5.** Keyword co-occurrences in the shopping mall literature by Chebat.

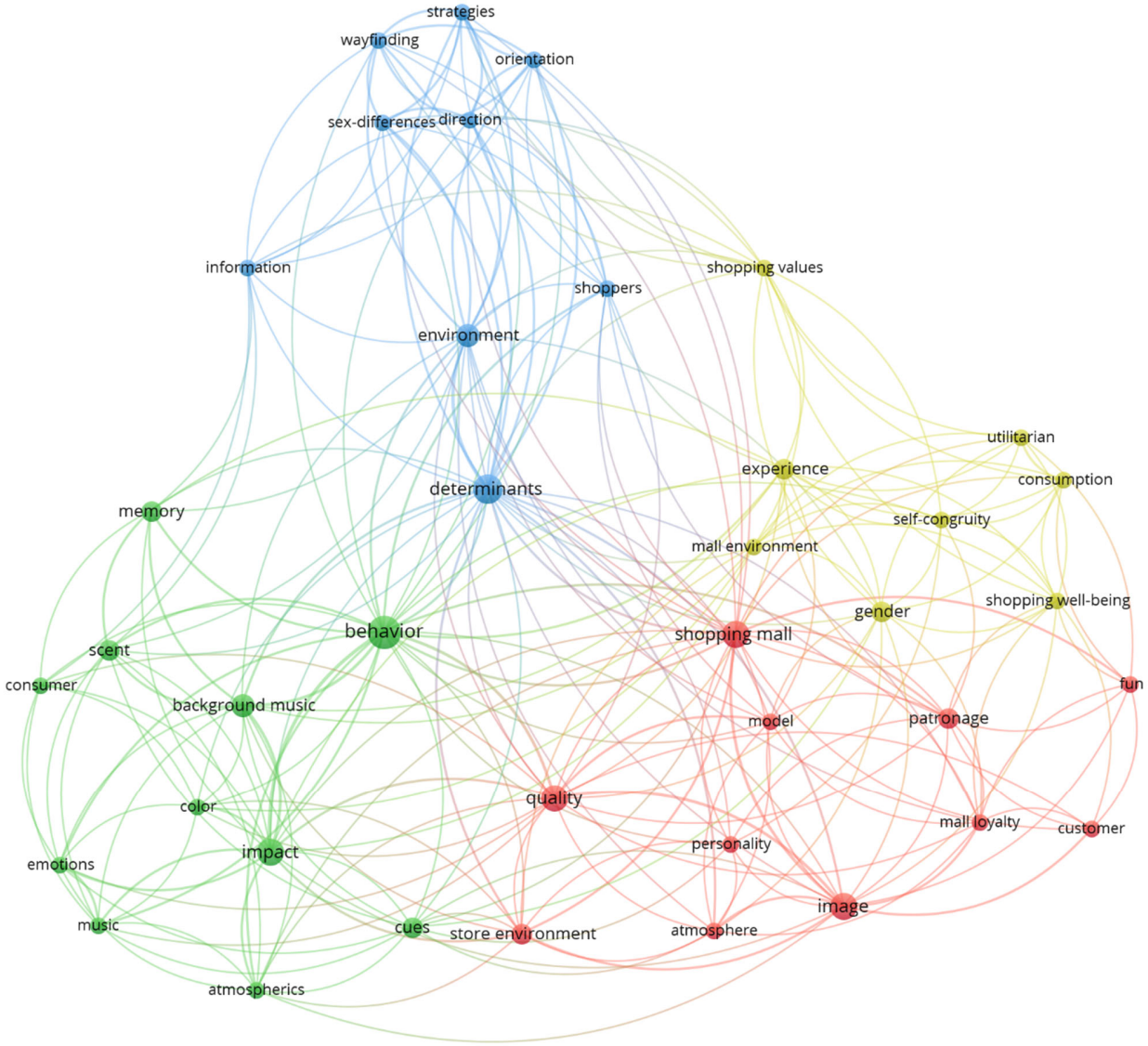


**Fig. 6.** Temporal mapping of keywords.

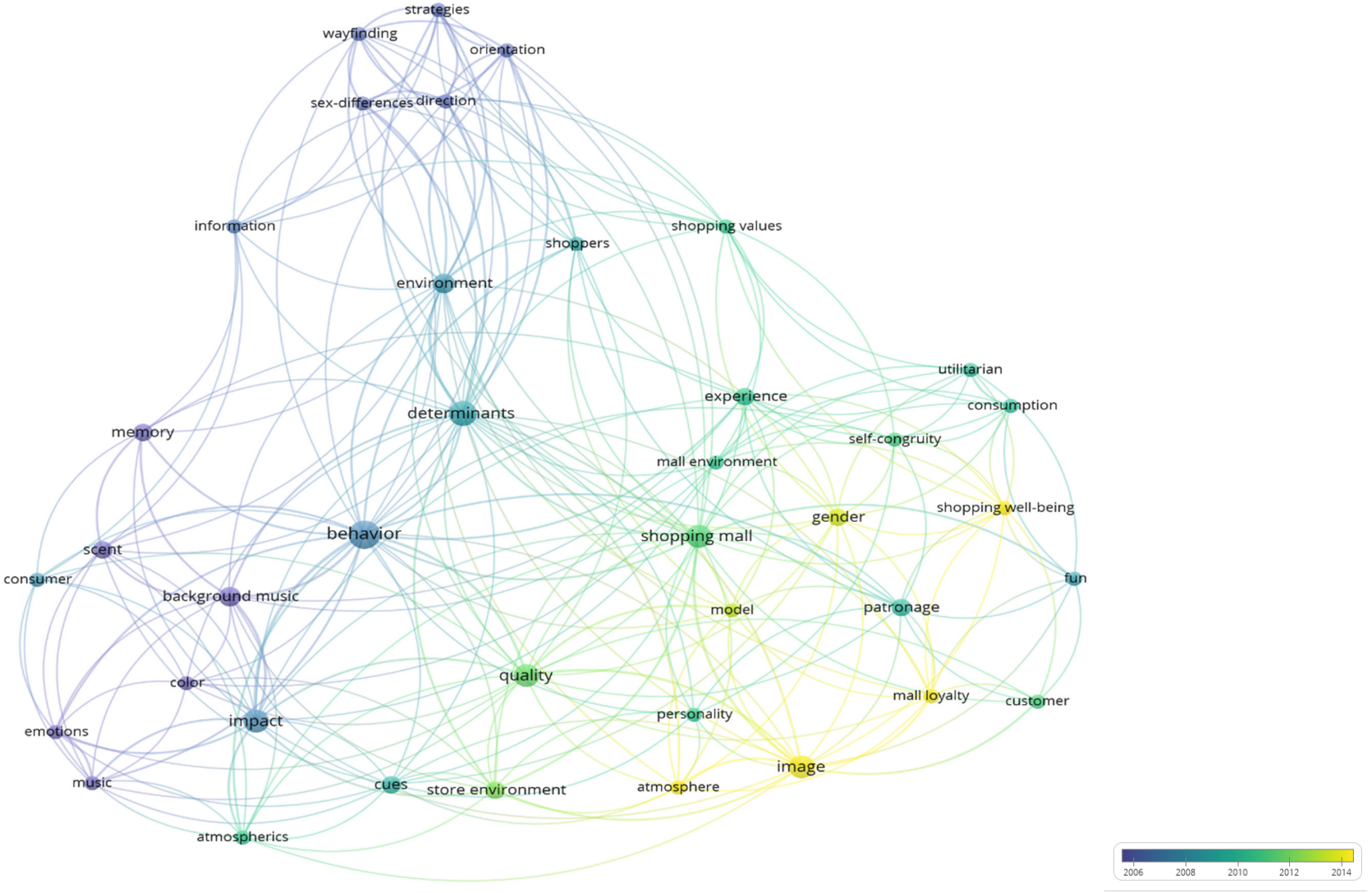


**Fig 7**. The Shopping Mall Experience Framework.

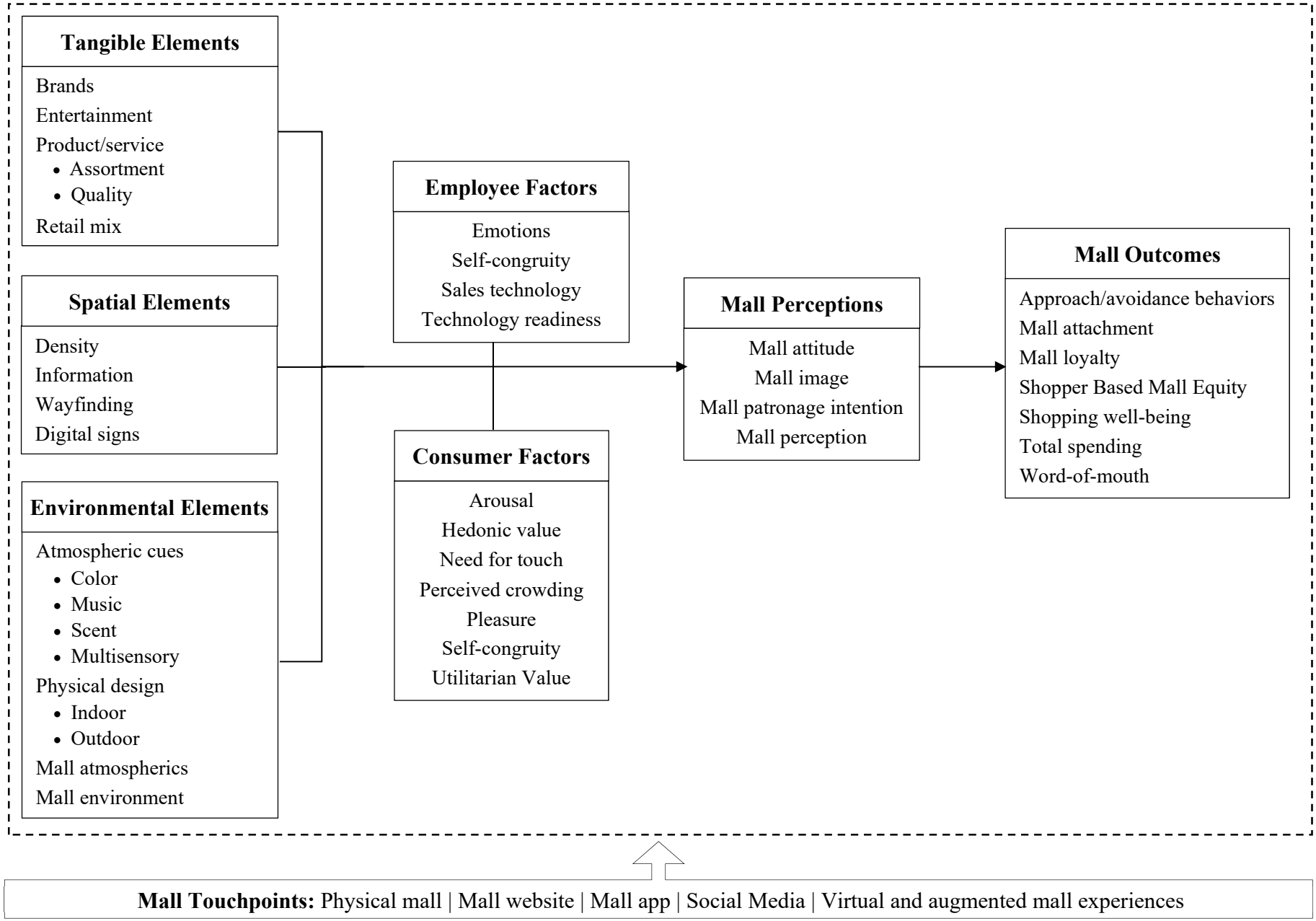


**Table 1**
Citations ranking by journal.

| Journals | Articles | TC | AC |
|---|---|---|---|
| Journal of Business Research | 12 | 3190 | 265.83 |
| Journal of Retailing and Consumer Services | 7 | 1006 | 143.71 |
| Journal of Marketing Management | 1 | 437 | 437.00 |
| Psychology & Marketing | 1 | 253 | 253.00 |
| Journal of Service Research | 1 | 222 | 222.00 |
| Journal of Services Marketing | 1 | 138 | 138.00 |
| Intern Journal of Retail & Distribution Management | 1 | 128 | 128.00 |
| Environment and Behavior | 1 | 76 | 76.00 |
| Journal of Fashion Marketing & Management | 1 | 55 | 55.00 |
| Journal of Consumer Behaviour | 1 | 44 | 44.00 |
| Journal of Macromarketing | 1 | 38 | 38.00 |
| Journal of Marketing Theory & Practice | 1 | 33 | 33.00 |
| Journal of Marketing Development & Competitiveness | 1 | 21 | 21.00 |
| Perceptual and Motor Skills | 1 | 10 | 10.00 |
| Total | 31 | 5651 | 1864.55 |

Note: TC = total number of citations; AC = average number of citations.

**Table 2**
Most influential article by citation ranking.

| TC | Title | Authors | Journal | Year | CPY |
|---|---|---|---|---|---|
| 1104 | Impact of ambient odors on mall shoppers' emotions, cognition and spending: A test of two competitive causal theories. | Chebat, J.-C., Michon, R. | JBR | 2003 | 61.33 |
| 628 | Mall atmospherics: The interaction effects of the mall environment on shopping behavior. | Michon, R., Chebat, J.-C., Turley, L. | JBR | 2005 | 39.25 |
| 437 | Linking retail strategy, atmospheric design and shopping behaviour. | Turley, L., Chebat, J.-C. | JMM | 2002 | 23.00 |
| 256 | Perceived appropriateness and its effect on quality, affect and behavior. | Babin, B., Chebat, J.-C., Michon, R. | JRCS | 2004 | 15.06 |
| 253 | The interaction of retail density and music tempo: Effects on shopper responses. | Eroglu, S., Machleit, K., Chebat, J.-C. | P&M | 2005 | 15.81 |
| 248 | Colors and cultures: Exploring the effects of mall decor on consumer perceptions. | Chebat, J.-C., Morrin, M. | JBR | 2007 | 17.71 |
| 222 | Person-place congruency: The interactive effects of shopper style and atmospherics on consumer expenditures. | Morrin, M., Chebat, J.-C. | JSR | 2005 | 13.88 |
| 212 | Another trip to the mall: A segmentation study of customers based on their activities. | Ruiz, J-P., Chebat, J.-C., Hansen, P. | JRCS | 2004 | 12.47 |
| 211 | Shopping well-being at the mall: Construct, antecedents, and consequences. | El Hedhli, K., Chebat, J.-C., Sirgy, J. | JBR | 2013 | 26.38 |
| 193 | When income matters: Customers evaluation of shopping malls' hedonic and utilitarian orientations. | Allard, T., Babin, B., Chebat, J.-C. | JRCS | 2009 | 16.08 |
| 192 | Upscale image transfer from malls to stores: A self-image congruence explanation. | Chebat, J.-C., Sirgy, M. St-James, V. | JBR | 2006 | 12.80 |
| 177 | Lost in a mall, the effects of gender, familiarity with the shopping mall and the shopping values on shoppers' wayfinding processes. | Chebat, J.-C., Gélinas-Chebat, C., Therrien, K. | JBR | 2005 | 11.06 |
| 175 | Cross-cultural mall shopping values and habitats: A comparison between English- and French-speaking Canadians. | Michon, R., Chebat, J.-C. | JBR | 2004 | 10.29 |
| 164 | How can shopping mall management best capture mall image? | Chebat, J.-C., Sirgy, M., Grzeskowiak, S. | JBR | 2010 | 14.91 |
| 138 | Incorporating service quality into consumer mall shopping decision making: A comparison between English and French Canadian consumers. | Laroche, M., Teng, L., Michon, R., Chebat, J.-C. | JSM | 2005 | 8.63 |
| 130 | The role of gender and work status in shopping center patronage. | Raajpoot, N., Sharma, A., Chebat, J.-C. | JBR | 2008 | 10.00 |
| 128 | The shopping experience of female fashion leaders. | Michon, R., Yu, H., Smith, D., Chebat, J.-C., | IJRDM | 2007 | 9.14 |
| 116 | The effects of mall renovation on shopping values, satisfaction and spending behaviour. | Chebat, J.-C., Michon, R., Haj-Salem, N., Oliveira, S. | JRCS | 2014 | 16.57 |

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|---|---|---|---|---|---|
| 114 | Effects of mall atmosphere on mall evaluation: Teenage versus adult shoppers. | Massicotte, M.-C., Michon, R., Chebat, J.-C., Sirgy, J., Borges, A | JRCS | 2011 | 11.40 |
| 76 | Does age attenuate the impact of pleasant ambient scent on consumer response? | Chebat, J.-C., Morrin, M., Chebat, D.-R. | EB | 2009 | 6.33 |
| 69 | Shopping well-being: Is it just a matter of pleasure or doing the task? The role of shopper's gender and self-congruity. | El Hedhli, K., Zourrig, H., Chebat, J.-C. | JRCS | 2016 | 13.80 |
| 63 | Developing and validating a psychometric shopper-based mall equity measure. | El Hedhli, K., Chebat, J.-C. | JBR | 2009 | 5.25 |
| 58 | Why male and female shoppers do not see mall loyalty through the same lens? The mediating role of self-congruity. | Haj-Salem, N, Chebat J.-C., Michon, R., Oliveira, S. | JBR | 2016 | 11.60 |
| 55 | Fashion orientation, shopping mall environment, and patronage intentions. | Michon, R., Chebat, J.-C., Yu, H., Lemarié, L. | JFMM | 2015 | 9.17 |
| 46 | Why shopping pals make malls different? | Chebat, J.-C., Haj-Salem, N., Oliveira, S. | JRCS | 2014 | 6.57 |
| 44 | Capturing the multiple facets of mall experience: Developing and validating a scale. | Gilboa, S., Vilnai-Yavetz, I., Chebat, J.-C. | JCB | 2016 | 8.80 |
| 40 | Gender-related wayfinding time of mall shoppers. | Chebat, J.-C., Gélinas-Chebat, C., Therrien, K. | JBR | 2008 | 3.08 |
| 38 | An extension and further validation of a community-based consumer well-being measure. | Sirgy, M., Lee, D.-J., Grzeskowiak, S., Chebat, J.-C., et al. | JMcM | 2008 | 2.92 |
| 33 | Breaking open the consumer behavior black box: SEM and retail atmospheric manipulations. | Michon, R., Chebat, J.-C. | JMTP | 2008 | 2.54 |
| 21 | "Hey dee-jay let's play that song and keep me shopping all day long": The effect of famous background music on consumer shopping behavior. | Petruzzellis, L., Chebat, J.-C., Palumbo, A. | JMDC | 2014 | 3.00 |
| 10 | Effects of time of day on shopping behavior. | Chebat, J.-C. | PMS | 1999 | 0.45 |

Note: TC = total number of citations; CPY = average citations per year. JBR = Journal of Business Research; JMM = Journal of Marketing Management; JRCS = Journal of Retailing and Consumer Services; P&M = Psychology & Marketing; JSR = Journal of Service Research; JSM = Journal of Services Marketing; IJRDM = International Journal of Retail & Distribution Management; EB= Environment and Behavior; JFMM= Journal of Fashion Marketing & Management; JCB= Journal of Consumer Behaviour; JMcM = Journal of Macromarketing; JMTP = Journal of Marketing Theory & Practice; JMDC = Journal of Marketing Development & Competitiveness; PMS = Perceptual and Motor Skills.

**Table 3**
Co-citation analysis of journals.

| Source | Citations | Total Link Strength |
|---|---|---|
| Journal of Retailing | 104 | 3,814 |
| Journal of Business Research | 86 | 3,310 |
| Journal of Consumer Research | 65 | 2,235 |
| Journal of Marketing | 56 | 2,075 |
| Journal of Marketing Research | 34 | 1,312 |
| International Journal of Retail & Distribution Management | 30 | 1,266 |
| Journal of the Academy of Marketing Science | 29 | 1,149 |
| Psychology & Marketing | 25 | 902 |
| Journal of Retailing and Consumer Service | 19 | 899 |
| Clothing and Textiles Research Journal | 11 | 599 |
| Environment and Behavior | 22 | 584 |
| Psychological Bulletin | 15 | 519 |
| Advances in Consumer Research | 12 | 398 |
| Journal of Fashion Marketing Management | 7 | 394 |
| An approach to Environmental Psychology (book) | 10 | 376 |
| Journal of Consumer Psychology | 9 | 373 |
| Marketing Letters | 8 | 371 |
| Journal of Consumer Behavior | 8 | 364 |
| Journal of Services Marketing | 8 | 357 |
| Journal of Macromarketing | 10 | 356 |

**Table 4**
Study design and procedure overview.

| Author | N | Sample | Language | Method | Atmospherics |
|---|---|---|---|---|---|
| Chebat (1999) | 417 | Canada; 55% female; ⁂; ⌗ | English, French | ANOVA | |
| Turley and Chebat (2002) | N/A | N/A | | Conceptual | |
| Chebat and Michon (2003) | 592 | Canada; 57% female; age range from 18 to over 65 with 29% being 35 to 44 years old; ⁂; ⌗ | English, French | SEM | S |
| Michon and Chebat (2004) | 2,326 | Canada; 50% female; average age is 37 for the English sample and 35 for the French sample; ⌗ | English, French | SEM | |
| Babin et al. (2004) | 820 | USA; ⁂; ⌗; ♀♂ | English | SEM | |
| Ruiz et al. (2004) | 889 | Canada; 61% female; age range from 18 to over 65 with 27% being 35 to 44 years old | English, French | P-Median, Clustering, Chi-square | S; M; D |
| Chebat et al. (2005) | 160 | Canada; ⁂; ⌗; ♀♂ | | Content analysis | |
| Michon et al. (2005) | 279 | Canada; ⁂; ⌗; ♀♂ | | SEM | S; MA |
| Laroche et al. (2005) | 266 | Canada; ⁂; ⌗; ♀♂ | English, French | SEM | MA |
| Morrin and Chebat (2005) | 774 | Canada; 62% female; ⁂; ⌗ | English, French | Regression, ANOVA | S; M |
| Eroglu et al. (2005) | 347 | Canada; 59% female; age 23 to 54 with 29% being 35 to 44 years old; ⁂ | | MANOVA, ANOVA, Regression | M |
| Chebat et al. (2006) | 185 | Canada; 59% female; 59% below 34 years old; ⁂; ⌗ | English | MANOVA | |
| Michon et al. (2007) | 312 | Canada; 100% female; ⁂; ⌗ | English | SEM | MA |
| Chebat and Morrin (2007) | 587 | Canada; 65% female; ⁂; ⌗ | English, French | ANOVA | C; MA |
| Chebat et al. (2008) | 156 | Canada; ⁂; ⌗; ♀♂ | | ANOVA, Regression | |
| Raajpoot et al. (2008) | 1,015 | Canada; 63% female; 48% between 18 to 24 years old; ⁂ | | SEM | |

| | | | | | |
|---|---|---|---|---|---|
| Sirgy et al. (2008) | 1,955 | N= Australia-120, Canada-447, China-150, Egypt-150, Germany-130, Korea-202, Spain-93, Switzerland-100, Turkey-174, USA-389; 53% female; average age of 28; ⁜; ♀♂ | Arabic, Chinese, English, French, German, Korean, Spanish, Turkish | EFA, CFA | |
| Michon and Chebat (2008) | | Samples used from previous papers Chebat and Michon (2003) and Michon et al., (2005) | English, French | SEM | S |
| Chebat et al. (2009) | 592 | Canada; ⁂; ⁜; ♀♂ | | ANOVA | S |
| El Hedhli and Chebat (2009) | 905 | Canada; 53% female; 32% between 18 to 25 years old; ⁂ | | EFA, CFA | |
| Allard et al. (2009) | 772 | Canada; ⁂; ⁜; ♀♂ | English, French | SEM | |
| Chebat et al. (2010) | 861 | Canada; ⁂; ⁜; ♀♂ | English, French | EFA, CFA, SEM | MA |
| Massicotte et al. (2011) | 265 | Canada; 62% female; age range 15 to over 45 with 70% being 25-34 years old; ⁂ | English, French | SEM | MA |
| El Hedhli et al. (2013) | 720 | Canada; 58% female; 48% between 18 to 25 years old; ⁂ | | EFA, CFA, SEM | |
| Petruzzellis et al. (2014) | 304 | Italy; 56% female; average age of 39.5; ⁜ | | ANOVA | M; MA |
| Chebat et al. (2014a) | 1,055 | North-Eastern America; 65% female; average age of 34; ⁜ | | MANOVA | |
| Chebat et al. (2014b) | 545 | North America; 58% female; age range 18 to over 65 with 40% being 18-24 years old; ⁂ | | PLS SEM | MA |
| Michon et al. (2015) | 479 | Canada; 65% female; average age of female respondents is 36; ⁜ | English, French | SEM | |
| Haj-Salem et al. (2016) | 905 | North America; 53% female; 54% between 18 to 34 years old; ⁂ | | SEM | MA |
| Gilboa et al (2016) | $N_1$150<br>$N_2$163<br>$N_{3.1}$200<br>$N_{3.2}$186 | Study 1 = Israel; 47% female, average age of 37; ⁜;<br>Study 2 = Israel; 48.5% female; average age of 39; ⁜;<br>Study $3_1$ = 55% female; majority under 35; ⁂; ⁜; ±;<br>Study $3_2$ = 186; 66% female; majority under 35; ⁂; ⁜; ± | | EFA, CFA, SEM | |
| El Hedhli et al. (2016) | 323 | North America; 58% female; age range 18 to 44 with 54% being 18-14 years old; ⁂ | | SEM | |

Note: S = scent; M = music; C = color; D = décor; MA = mall atmosphere; ⁂ = mean age not mentioned; ⁜ = age range not mentioned; ♀♂ = gender not mentioned; ± = country not mentioned

**Table 5**
Scales and constructs for shopping mall research.

| # | Construct | Operationalization | Scale Items | Example Citations |
|---|---|---|---|---|
| 13 | Hedonic Value | Hedonic Value: Indicates the level of personal gratification and self-expression associated with the shopping experience. | Hedonic Value *(5-point / 7-point Likert)*<br>1. This shopping trip was truly a joy.<br>2. This shopping trip truly felt like an escape.<br>3. Compared with other things I could have done, the time spent shopping was truly enjoyable.<br>4. I enjoyed being immersed in exciting new products.<br>5. While shopping, I felt a sense of adventure. | Babin et al. (2004); El Hedhli et al. (2016); Michon et al. (2007); Morrin and Chebat (2005); Ruiz et al. (2004) |
| 13 | Utilitarian Value | Utilitarian Value: Represents task accomplishment. The experience was worthwhile; a shopper found the item or information needed. | Utilitarian Value *(5-point / 7-point Likert)*<br>1. I accomplished just what I wanted to on this shopping trip.<br>2. I couldn't buy what I really needed today.<br>3. While shopping, I found just the item(s) I was looking for. | Babin et al. (2004); Chebat et al. (2014b); Michon et al. (2015); Ruiz et al. (2004) |
| 13 | Product Perception/ Quality | Perception of Product/Quality: Customers evaluate the style, selection and quality of products available at the mall. | Product Perception/Quality *(7-point Likert)*<br>1. Rate the style of the products offered in this shopping center: Outdated/ Up to date<br>2. The product selection of this shopping center is: Inadequate/Adequate<br>3. The product quality in this shopping center is: Low/High | Laroche et al. (2005); Massicotte et al. (2011); Raajpoot et al. (2008) |
| | | Within-Category Assortment: The depth of a store's assortment within a product category. Depth here may involve greater assortment of brands, flavors, and sizes. | Within-Category Assortment *(7-point semantic differential)*<br>1. Most of the products have outdated/fashionable styles.<br>2. This mall does/does not have stores that carry new style products.<br>3. The quality of the products available in this mall is high/ rather low.<br>4. This mall has good/does not have brand names.<br>5. Most of the stores in this mall carry high/low quality products.<br>6. Most of the products found in this mall are very/are not well-known brands. | Chebat et al. (2010) |
| | | Cross-Category Assortment: Shoppers' perceptions of the breadth of different products and services offered by a store under one roof. | Cross-Category Assortment *(7-point semantic differential)*<br>1. Assortment of products and services is very wide/limited.<br>2. Has well/poorly stocked stores.<br>3. This mall lacks/does not lack variety in specialty stores.<br>4. This mall needs/does not need more variety of specialty stores.<br>5. This mall lacks/does not lack department stores. | Chebat et al. (2010) |
| 10 | Pleasure / Positive Affect | Pleasure: The degree to which an individual feels good, happy or satisfied in a shopping environment. | Pleasure *(7-point / 9-point semantic or Likert)*<br>1. Happy / Unhappy<br>2. Pleased / Annoyed<br>3. Satisfied / Unsatisfied<br>4. Contented / Melancholic | Chebat and Morrin (2007); Laroche et al. (2005); Michon et al. (2007) |

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|---|---|---|---|---|
| 10 | Mall Perception | Mall Perception: Consumers' perceptions of the shopping mall environment. | Perception of Mall / Environment *(7-point)** <br>1. Tense / Relaxed; 2. Uncomfortable / Comfortable <br>3. Depressing / Cheerful; 4. Drab / Colorful <br>5. Boring / Stimulating; 6. Unlively / Lively <br>7. Dull / Bright; 8. Uninteresting / Interesting | Chebat and Morrin (2007); Raajpoot et al. (2008); Ruiz et al. (2004) |
| 9 | Arousal | Arousal: The degree to which an individual feels stimulated, active, or alert in the shopping environment. | Arousal *(7-point / 9-point semantic or Likert)* <br>1. Stimulated / Relaxed <br>2. Excited / Calm <br>3. Wide-awake / Sleepy <br>4. Aroused / Unaroused | Chebat and Morrin (2007); Morrin and Chebat (2005); Ruiz et al. (2004) |
| 7 | Mall Atmosphere | Mall Atmosphere: Atmosphere in the context of malls refers to aesthetics and ambiance of the mall. | Mall Atmosphere *(7-point semantic differential)* <br>1. The atmosphere of this mall is boring/stimulating. <br>2. The atmosphere of this mall is dull/entertaining. <br>3. The atmosphere of this mall is depressing/cheerful. <br>4. The atmosphere of this mall is drab/colorful. | Chebat et al. (2010); Massicotte et al. (2011) |
| | | Atmospheric Mall Variable: Customers were asked about their perception of the atmospheric variables in the mall i.e. odors, music, and decoration. | Odors *(7-point Likert)* <br>1. The odors make shopping in this shopping centre pleasant at this moment. <br>2. The odors in this shopping centre bother me at this moment. <br>3. The odors today are appropriate at this moment. <br>Music *(7-point Likert)* <br>1. The background music makes shopping in this shopping centre pleasant at this moment. <br>2. The background music bothers me at this moment. <br>3. The background music is appropriate at this moment. <br>Decorations *(7-point Likert)* <br>1. The decorations make shopping in this shopping centre pleasant at this moment. <br>2. The decorations in this shopping centre bother me at this moment. <br>3. The decorations are appropriate at this moment. | Ruiz et al. (2004) |
| 6 | Self-Congruity | Self-Congruity: The extent to which shoppers see themselves as being the kind of person that the mall is designed to cater to. | Self-Congruity *(7-point)** <br>1. The typical people who shop at (shopping mall) match how I see yourself. <br>2. I cannot/can identify myself with the people who shop at this mall. <br>3. The typical person who comes to this mall does not match/matches how I see. <br>4. The image of this mall is not at all/is highly consistent with myself image. | El Hedhli et al. (2013, 2016) |
| 6 | Spending | Total Spending | Dollar Expenditure <br>1. Participants were asked how much they had spent, excluding groceries, during their shopping trip. | Chebat et al. (2009); Eroglu et al. (2005) |
| 5 | Ambient Scent | Ambient Scent: Involves a mixture of biological responses, psychology, and memory; smell is | Scents *(7-point Likert)* <br>1. The scent is pleasant. | Chebat et al. (2009) |

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|---|---|---|---|---|
| | | most closely attached to emotional reactions. | 2. The scent is appropriate.<br>3. The scent bothers me. | |
| 5 | Approach/ Avoidance | Approach/Avoidance: A desire to stay longer in the mall or the store, explore, and affiliate with other shoppers and sales associates | Approach/Avoidance Behaviors *(7-point Likert)*<br>1. This shopping centre is a place where I would easily speak to a salesperson.<br>2. This shopping centre is a place where I might try to avoid talking to a salesperson.<br>3. I like this shopping centre.<br>4. This is a kind of place where I would spend more money than expected. | Babin et al. (2004); Eroglu et al. (2005); Ruiz et al. (2004) |
| 5 | Mall Attitude | Mall Attitude: The extent shoppers have favorable attitudes towards the mall–to the extent they like and are fond of the mall. | Mall Attitude *(7-point)**<br>1. How do you feel about (name of the shopping mall)?<br>2. I don't like it at all/I like it a lot.<br>3. I am not particularly fond of it/I am very fond of it. | Allard et al. (2009); Chebat et al. (2010); El Hedhli et al. (2016) |
| 5 | Mall Loyalty | Mall Loyalty: The inclination of customers to revisit the mall and recommend it to their friends and relatives. | Mall Loyalty *(7-point Likert)*<br>1. I will very likely be back in this shopping mall to buy products.<br>2. I would gladly buy presents in this shopping center.<br>3. I would certainly recommend this shopping mall. | Haj-Salem et al. (2016) |
| | | Mall Patronage | Mall Patronage *(7-point semantic differential)*<br>How often do you come to Shopping Mall (name of mall)?<br>1. Once in a while / A lot<br>2. Very infrequently / Very frequently | Chebat et al. (2010) |
| 5 | Service Quality | Service Quality | Service Quality *(7-point Likert)*<br>1. Stores at [...] offer excellent service to their customers.<br>2. Stores at [...] are known for offering excellent service.<br>3. Stores at [...] always offer very good service at each visit. | Haj-Salem et al. (2016); Michon et al. (2015) |
| 1** | Community-Based Consumer Well-Being | Community-Based Consumer Well-Being: Captures consumer experiences with purchasing of goods and services, maintenance and repair of goods, and local disposal of goods. | Instructions for all Community-Based Consumer Well-Being Scales:<br>Please indicate how satisfied/dissatisfied you are with shopping for a variety of consumer goods and services in your local area. Respond to only those stores you have patronized; skip those you have not patronized. | Sirgy et al. (2008) |
| | | Acquisition (Shopping) Satisfaction: Satisfaction with "shopping in your community" with respect to aspects of shopping in the local area. | Acquisition (Shopping) Satisfaction *(7-point Likert)*<br>1. Satisfaction with shopping malls. 2. Satisfaction with shopping plazas and centers. 3. Satisfaction with department stores. 4. Satisfaction with discount stores. 5. Satisfaction with grocery stores. 6. Satisfaction with drug stores. 7. Satisfaction with sporting goods stores. 8. Satisfaction with consumer electronics stores. 9. Satisfaction with clothing boutiques. 10. Satisfaction with furniture stores. 11. Satisfaction with other specialty stores (e.g., toy stores, gift stores). | |

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| | | Preparation (Assembly) Satisfaction: Degree of satisfaction with assembly/preparation of durable goods. | Preparation (Assembly) Satisfaction *(7-point Likert)*<br>1. Consumer electronics (e.g., CD player, TV, computers).<br>2. Furniture (e.g., sofas, dinning sets).<br>3. Appliances (e.g., microwave oven, refrigerator).<br>4. Personal transportation (e.g., cars, trucks, motorcycles).<br>5. Clothing, clothing accessories (e.g., suits, jewelry).<br>6. Lawn, garden tools and equipment. | |
| | | Consumption (Product Use) Satisfaction: Satisfaction with six major categories of consumer goods purchase locally and twenty-three major categories of local consumer services. | Consumption (Product Use) Satisfaction *(7-point Likert)*<br>*A. Consumer Goods:*<br>1. Consumer electronics. 2. Furniture. 3. Appliances. 4. Personal transportation. 5. Clothing, clothing accessories. 6. Lawn, garden tools and equipment.<br>*B. Consumer Services:*<br>1. Banking/savings services. 2. Insurance services. 3. Taxi/private transportatio 4. Restaurants/night clubs. 5. Health care services. 6. Telephone services. 7. Electric services. 8. Gas/oil services. 9. Real estate and realtor services. 10. Day care services. 11. Nursing homes/ retirement community–type services. 12. Primary schools. 13. Secondary schools. 14. Community colleges. 15. Colleges and universities. 16. Continuing education. 17. Investment services 18. Legal services. 19. Entertainment. 20. Spectator sports. 21. TV stations. 22. Radio stations. 23. Local newspaper. | |
| | | Possession (Ownership) Satisfaction: Satisfaction with monetary value of owning a variety of durable goods purchased in the local area. | Possession (Ownership) Satisfaction *(7-point Likert)*<br>1. Consumer electronics. 2. Furniture. 3. Appliances. 4. Personal transportation. 5. Clothing, clothing accessories. 6. Lawn, garden tools and equipment. 7. Savings and investments. 8. Real estate. 9. Boat and other leisure investments. | |
| | | Maintenance (Repair) Satisfaction: Satisfaction with local repair service experiences with various categories of consumer goods. | Maintenance (Repair) Satisfaction *(7-point Likert)*<br>1. Consumer electronics. 2. Furniture. 3. Appliances. 4. Personal transportation. 5. Clothing, clothing accessories. 6. Lawn, garden tools and equipment. | |
| | | Disposal Satisfaction: Satisfaction consumers feel with disposability of categories of consumer products. | Disposal Satisfaction *(7-point Likert)*<br>1. Consumer electronics. 2. Furniture. 3. Appliances. 4. Private transportation. 5. Clothing, clothing accessories. 6. Lawn, garden tools and equipment. | |
| 1** | Shopper Based Mall Equity (SBME) | SBME: The incremental value of a mall due to the shopper knowledge about that mall. Multidimensional construct consisting of mall awareness and mall image. | | El Hedhli et al. (2009) |

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| | | Mall Awareness: The informational node associated with the mall name in the shopper's memory, representing a shopper's ability to recognize and easily recall mall characteristics. | Mall Awareness *(7-point / 10-point)** <br>1. I am aware of [mall name]. <br>2. I can recognize [mall name] among other competing malls. <br>3. Some characteristics of [mall name] come to mind quickly. | |
| | | Mall Image: Includes four dimensions; convenience of the mall (e.g., easy to accesses into the mall), overall environment (e.g., music, lighting, ambiance.), perception of services quality, and perception of products quality. | Mall Image *(7-point / 10-point)** <br>*Convenience* <br>1. It is easy to get to the [mall name]. <br>2. It is easy to park near the [mall name]. <br>*Overall Environment Perception* <br>The environment of the [mall name] is: <br>1. Uncomfortable / Comfortable; 2. Depressing / Cheerful <br>3. Drab / Colorful; 4. Unlively / Lively; 5. Dull / Bright; <br>6. Uninteresting / Interesting <br>*Perceived Products Quality* <br>1. Merchandise at [mall name] is of a very good quality. <br>2. There is a high likelihood that items bought at [mall name] will be of extremely high quality. <br>3. Overall, [mall name] sells high quality merchandise. <br>*Perceived Services Quality* <br>1. [mall name] provides excellent services to its customers. <br>2. [mall name] is known for its excellent services. | |
| 1** | Mall Environment | Mall Environment: Mall retail environment corresponds to the way in which a mall is perceived by shoppers with respect to a set of functional qualities (products, services, parking, facilities, etc.) as well as an aura. | | El Hedhli et al. (2013) |
| | | Functionality: Mall functionality refers to the quality of the mall in the way that the mall has an assortment of quality and quantity stores to meet shoppers' consumption needs. | Functionality *(7-point semantic differential)* <br>*Store variety* <br>1. This mall lacks/does not lack department stores. <br>2. This mall lacks/does not lack variety in specialty stores. <br>*Product assortment* <br>1. This mall has poorly/well stocked stores. <br>2. This mall has limited/wide assortment of products/services. <br>*Merchandise quality* <br>1. The quality of the products available in this mall is rather low/high. <br>2. Most of the stores in this mall carry low/high quality products. <br>*Merchandise fashion* <br>1. Most of the products have outdated styles/are fashionable. <br>2. This mall does not have/has stores that carry new style products. <br>*Branding* | |

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| | 1. This mall does not have/has good brand names.<br>2. Most of the products found in this mall are not well-known/very well-known brands.<br>*Merchandise value*<br>1. Most of the products in this mall don't have much/have great deal of value for the money I would spend.<br>2. Most of the stores in this mall don't have/have good sales.<br>*Customer services*<br>1. The people who work at this mall are very/not courteous.<br>2. The service in this mall is not friendly/is very friendly.<br>3. I rate the quality of the service in this mall as very low/as very high. |
| Convenience: Ease of disposal of a product. | Convenience *(7-point semantic differential)*<br>*Distance to home*<br>1. This mall is far away from/very close to my home.<br>2. The location of this mall from my home is not convenient at all/is very convenient.<br>*Distance to work*<br>1. This mall is far away from/very close to my place of work.<br>2. The location of this mall from my place of work is not /very convenient.<br>*Accessibility*<br>1. This mall is/is not easily accessible from the street.<br>*Hours of operation*<br>1. The hours of operation of this mall should be extended/are fine as they are.<br>2. The weekend hours of operation of this mall are inadequate/are more than adequate.<br>*Parking*<br>1. Parking is a big problem/no problem at all at this mall.<br>2. I hate parking/parking is a breeze at this mall.<br>*Layout*<br>1. This mall has a complicated/simple layout.<br>2. This mall is poorly/well designed.<br>*Restrooms*<br>1. The restrooms at this mall are always/never crowded.<br>2. The restroom situation in this mall is terrible/a comfort.<br>*Safety*<br>1. There is a/is no safety problem at this mall.<br>2. I heard this mall is not safe/I know this mall is very safe.<br>*Atmospherics*<br>1. The atmosphere of this mall is depressing/cheerful.<br>2. The atmosphere of this mall is dull/entertaining. |

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| | 3. The atmosphere of this mall is boring/stimulating.<br>4. The atmosphere of this mall is drab/colorful. |
| Leisure | Leisure *(7-point semantic differential)*<br>*Food and cafés*<br>1. The fast food at this mall is terrible/great.<br>2. There are no good/are great cafés at this mall.<br>*Entertainment*<br>1. There are no/plenty of entertainment facilities at this mall.<br>2. This mall doesn't have any/has many entertainment programs for children.<br>3. This mall doesn't have any/has many entertainment programs for young adults.<br>4. This mall doesn't have any/has many entertainment programs for mature adults.<br>5. I think this mall stinks/is great when it comes to entertainment. |

Note: * = specific type of scale not identified in original papers. ** = scale developed by Chebat and co-authors.