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# An empirical study of the relationship between shopping environment, customer perceived value, satisfaction, and loyalty in the UAE malls context

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ABSTRACT

This study aims to investigate through structural equation modelling (SEM) the relationships between the shopping environment, customer perceived value, customer satisfaction, and customer loyalty in regard to malls in the United Arab Emirates (UAE). The main results of this study show that the mall environment is an antecedent of the customer perceived value of malls (MALLVAL) and customer satisfaction. MALLVAL has a significant positive effect on both customer satisfaction and customer loyalty to malls. In addition, MALLVAL and customer satisfaction mediate the relationship between the mall environment and customer loyalty. Finally, customer satisfaction mediates the relationship between MALLVAL and customer loyalty to malls. Some theoretical and managerial implications of these findings are discussed.



## 1. Introduction

Although customer loyalty has received much attention in the retail marketing literature over the last two decades (Chebat et al., 2009; Rabbanee et al., 2012), mall loyalty has received little research attention. Most of the existing research on customer loyalty in the mall context has focused on examining the factors affecting mall loyalty, such as the effects of store loyalty (Rabbanee et al., 2012), shopper-based mall equity (Chebat et al., 2009), shopping well-being in malls (El Hedhli et al., 2013), shoppers' demographics and patronage of malls (Lee Taylor and Cosenza, 2002; Laroche et al., 2005; Haj-Salem et al., 2016), self-congruity (Chebat et al., 2009; Haj-Salem et al., 2016), mall environment (Lehew et al., 2002; Stoel et al., 2004; Keng et al., 2007; Haj-Salem et al., 2016), customer perceived value (Stoel et al., 2004; Keng et al., 2007; Rahman et al., 2016), and customer satisfaction (Stoel et al., 2004; Kim et al., 2015). None of the previous research in mall loyalty has been conducted in the United Arab Emirates (UAE), in spite of the noticeable movement to establish malls all over the country, which has intensified the competition between them (El-Adly, 2007).

Since having a loyal customer in these times of strenuous competition is quite vital to the success of many types of retailer, including shopping malls, it would be helpful to better understand the determinants affecting customer loyalty and the relationships between determinants. Nowadays, customers have become more value-driven; therefore, they tend to be more selective and are more likely to be loyal to those malls where they perceive high value to be available and they are more satisfied. By knowing the shopping values that customers derive from the mall shopping experience and their satisfaction with the mall environment, developers and managers of malls can identify the attributes that make shoppers loyal to malls (Jackson et al., 2011). Most studies of perceived value in the mall context (e.g., Stoel et al., 2004; Michon et al., 2007, 2008; Allard et al., 2009; Jackson et al., 2011; Rahman et al., 2016) have focused on the dimensions of utilitarian value (i.e., accomplishing the intended purpose of the shopping trip by getting what is needed or wanted) and hedonic value (i.e., the fun, enjoyment, and playfulness that shoppers gain during their shopping trip to the mall), but have ignored other dimensions that could be derived from the complete shopping experience in malls. Therefore, El-Adly and Eid (2015) proposed a new scale to measure

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the perceived value of the complete shopping experience in malls (MALLVAL), which includes more value dimensions than utilitarian and hedonic ones only.

Meanwhile, the mall environment has been proved an antecedent to both the hedonic and utilitarian values of malls (Stoel et al., 2004; Chebat et al., 2014) or hedonic value only (Michon et al., 2007, 2008). At the same time, the findings of studies that have investigated the relationship between mall environment and mall loyalty are inconsistent. For instance, Lehew et al. (2002) have found that there is no significant difference between loyal and non-loyal mall shoppers in their perception of the mall environment. However, Keng et al. (2007) and Chebat et al. (2009) have found that the perception of the mall environment has an indirect significant effect on mall loyalty. Yet, Stoel et al. (2004) find an insignificant relationship between the mall environment and mall loyalty.

From the previous discussion, we conclude the following: First, mall loyalty research has received little attention in the last two decades compared with customer loyalty in the retail marketing literature, whether at the product/brand level or at the store level. Second, research examining the effect of customer perceived value on mall loyalty has focused only on the hedonic and utilitarian values, ignoring other value dimensions that could be derived from the complete shopping experience in malls. Third, research findings about the relationship between the mall environment and mall loyalty are inconsistent. Finally, none of the previous research has examined mall loyalty and its antecedents in the UAE context. Therefore, this study tries to fill these theoretical and practical gaps by answering the following questions: First, how does the perception of the mall shopping environment influence the customer perceived value of malls (MALLVAL), customer satisfaction, and customer loyalty? Second, what is the role of MALLVAL in generating mall shopper satisfaction and loyalty? Third, how does customer satisfaction affect mall loyalty? To answer these questions, we theorised and tested a model that clarifies how the perceived value of a mall, satisfaction, and loyalty are influenced.

This study may contribute in several ways to the literature of the customer perceived value of malls, customer satisfaction with them, and customer loyalty to them. First, it operationalises and empirically validates the perceived value of malls (MALLVAL). Second, it assesses the influence of the shopping environment of the mall on MALLVAL, customer satisfaction, customer loyalty and the mediating role of MALLVAL and satisfaction in the mall environment-loyalty relationship. Third, it adds to the very limited research on malls in the Arab countries in general and the UAE in particular.

The remainder of this paper is structured as follows. The MALLVAL scale of El-Adly and Eid (2015) is briefly described. This is followed by conceptualisation of the model and formulating the hypotheses about the relationship between the mall shopping environment, perceived value, satisfaction, and loyalty. The next section explains the research method. Then, the main results of the tested model are presented. Finally, the theoretical and managerial implications of the study as well as its limitations and possible directions for future research are discussed.

## 2. Customer perceived value in malls (MALLVAL)

From the consumer's perspective, obtaining value is a substantial consumption goal in the successful shopping experience (Davis and Hodges, 2012). To reflect the subjective nature of the value that is provided by the complete shopping experience and not merely in acquiring a product, value is defined as 'all the factors, qualitative and quantitative, subjective and objective, that make up the complete shopping experience' (Zeithaml, 1988; Babin et al., 1994; Jackson et al., 2011).

Previous research on customer perceived value demonstrates its multidimensional and contextual nature (Chen and Dubinsky, 2003). In the retailing industry specifically, it is mainly investigated in the product/brand context (see, for example, Sweeney and Soutar, 2001; Chi and Kilduff, 2011) and in the store context (see, for example, Rintamäki et al., 2006; Jones et al., 2006; Carpenter, 2008; Carpenter and Moore, 2009; Davis and Hodges, 2012). While customers can derive many values from malls that cannot be found at the store level or at the product level, little research so far has investigated customer perceived value at the mall level (see, for example, Stoel et al., 2004; Michon et al., 2007, 2008; Keng et al. 2007; Allard et al., 2009; Jackson et al., 2011; Singh and Prashar, 2014). Most studies in the mall value context focus mainly on both hedonic and utilitarian values (Stoel et al., 2004; Michon et al., 2007, 2008; Allard et al., 2009; Jackson et al., 2011; Rahman et al., 2016), neglecting other important value dimensions that could be generated during the shopping trip to the mall.

Malls are characterised by many features that cannot be found in stand-alone stores: for instance, they are open all day without breaks seven days a week; they contain a variety of stores, products, restaurants, coffee shops, food courts, entertainment facilities, banks, airlines, travel agents, exchange, car rental agencies, as well as opticians and pharmacies. Therefore, they can be expected to offer more values to customers than merely utilitarian and hedonic ones.

El-Adly and Eid (2015) conceptualised and empirically validated MALLVAL, a scale of customer perceived value in malls. Their study confirms that MALLVAL is a multidimensional scale of eight dimensions, namely: hedonic, self-gratification, utilitarian, epistemic, social interaction, spatial convenience, time convenience, and transaction values. El-Adly and Eid (2015) describe hedonic value as the fun and enjoyment that shoppers get from their shopping experience in the mall, while self-gratification is the improvement of the shopper's well-being provided by the shopping experience in the mall, which relieves stress, changes negative moods, and takes them away from daily routine and problems. At the same time, they see utilitarian value in the accomplishing of the intended purpose of the shopping trip by getting what is needed or wanted by every member of the household. In addition, they identify epistemic value as the perceived utility provided by malls to inspire the mall shopper's curiosity (i.e., to explore stores, products, and events), to provide novelty through new offers, events, new fashions, new ideas, new assortments of products, and to satisfy the shopper's desire for knowledge through keeping them up to date with the newest trends and fashions. Moreover, El-Adly and Eid (2015) explain social interaction value in terms of positive feelings gained through interaction with others, such as friends, family, salespeople, and customers during the shopping experience in the mall. With regard to spatial convenience as a value of malls, El-Adly and Eid (2015) explain it as the shopper's capacity to carry out a wide variety of shopping tasks with minimal time and effort without leaving the mall. Meanwhile, they explain the time convenience value as the perceived utility of time provided by malls to shoppers through one-stop shopping, extended trading hours, an enclosed environment and locations that are close to where customers live or work. Finally, they describe the transaction value as the positive emotional perception and pleasure of getting good offers, bargains, and deals in their shopping experience in the mall. The research reported here operationalises MALLVAL in a model that explains the antecedents of mall loyalty.

## 3. Conceptual framework: model and hypotheses

Reviewing the mall loyalty literature, we find that very few researchers have investigated the effect of mall environment on mall loyalty (Lehew et al., 2002; Stoel et al., 2004; Keng et al., 2007; Haj-Salem et al., 2016). Each one of these studies investigated the effect of mall interior design and either mall recreational opportunities or mall staff on mall loyalty. None of them studied all the mall's environmental factors together (i.e. mall interior design, mall recreational, and mall staff). In addition, very few researchers investigated the effect of shopping values on mall loyalty. Stoel et al. (2004), Keng et al. (2007), and Rahman et al. (2016) focused only on hedonic and utilitarian values, ignoring other important value dimensions that can be derived from the complete shopping experience in malls. Moreover, the effect of customer satisfaction with malls on mall loyalty has been investigated very rarely in the mall context (Stoel et al., 2004; Kim et al., 2015). Therefore, we theorise a model to study mall loyalty in the UAE context, its antecedents, and the relationships between them. Our theoretical model is exhibited in Fig. 1. We claim that the positive perception of the mall environment has direct positive influence on the customer perceived value of malls (MALLVAL), satisfaction, and loyalty. The effect on customer loyalty is also mediated by MALLVAL and satisfaction. We also argue that MALLVAL has direct and positive influence on satisfaction and loyalty. However, the effect of MALLVAL on mall loyalty is also mediated by satisfaction. Finally, satisfaction has direct positive influence on mall loyalty.

### 3.1. Perception of mall environment and customer perceived value

Developing an attractive environment (atmospherics) is an important retail strategy to induce certain positive emotional responses and ultimately affect consumer purchase behaviour (Levy and Weitz, 2012). From the mall's point of view, Dennis et al. (2010) predict that atmospherics contribute to building mall traffic, improved sales and consumer spending. However, from the shoppers' point of view, atmospherics is their perception of the quality of their surroundings. Of course, this perception may not be exactly the same as that identified by the mall and may also vary from one shopper to another, according to their shopping orientation (task shopping vs. social shopping) and personal differences (i.e., age and gender) (Baker and Wakefield, 2012). This conclusion has been confirmed by Sands et al. (2015), who find that task-oriented consumers derive more value and satisfaction from an education-focused event than from an entertainment-focused event, while recreation-oriented consumers acknowledge both types of event.

Turley and Milliman (2000) made an extensive review of the literature on the retail environment (atmospherics) and classified 57 atmospheric variables into five categories: those of the mall exterior, general interior, layout and design, point-of-purchase and decoration, and human. In addition, Lam (2001), Baker et al. (2002), and Haj-Salem et al. (2016) classified retail environmental factors into 3 groups: ambient factors (e.g., music, lighting, colours, scents), design factors (e.g., layout, signs, textures, display), and social factors (e.g., staff).

Two theories, environmental psychology theory and inference theory, are deployed to explain the effect of the mall environment on consumer behaviour (Massicotte et al., 2011). Research based on environmental psychology theory developed by Mehrabian and Russell (1974) suggests that the mall environment has an effect on shoppers' behavioural responses: cognitive (e.g. beliefs, categorization, symbolic meaning), emotional (e.g. mood, attitude) and physiological (e.g. pain, comfort) (Massicotte et al., 2011). These behavioural responses, may successively influence shopping outcomes positively (i.e., to approach) or negatively (i.e., to avoid), either in the short term (e.g. more enjoyment, staying longer, less stress, spending more, exploring the premises, and affiliating with other shoppers and/or sales associates) or in the long term (e.g., repeating visits, going there more often, recommending the mall) (Stoel et al., 2004; Massicotte et al., 2011; Chebat et al., 2014). However, research grounded on the inference theory originated by Nisbett and Ross (1980) argues that shoppers use atmospherics cues to supply absent or difficult to evaluate information, such as price and quality (Massicotte et al., 2011).

The relationship between the mall environment and customer perceived value has been investigated in previous research (Stoel et al., 2004; Keng et al., 2007; Michon et al., 2007, 2008; Chebat et al., 2014). For example, Stoel et al. (2004) showed that consumer beliefs about mall attributes positively influence the hedonic and utilitarian shopping values resulting from the mall visit. In addition, Michon et al. (2007) have explored the impact of the shopping mall environment on the hedonic and utilitarian shopping experiences of fashion leaders and followers and find that the mall environment directly influences fashion leaders' hedonic shopping experience. Moreover, Michon et al. (2008) have found that a positive perception of the mall atmosphere elicits hedonic shopping experiences but has little or no effect on the utilitarian values of low- or high-fashion oriented shoppers. Furthermore, Chebat et al. (2014) examined the effect of the renovated mall atmosphere on shopping values (hedonic and utilitarian) and found that it has

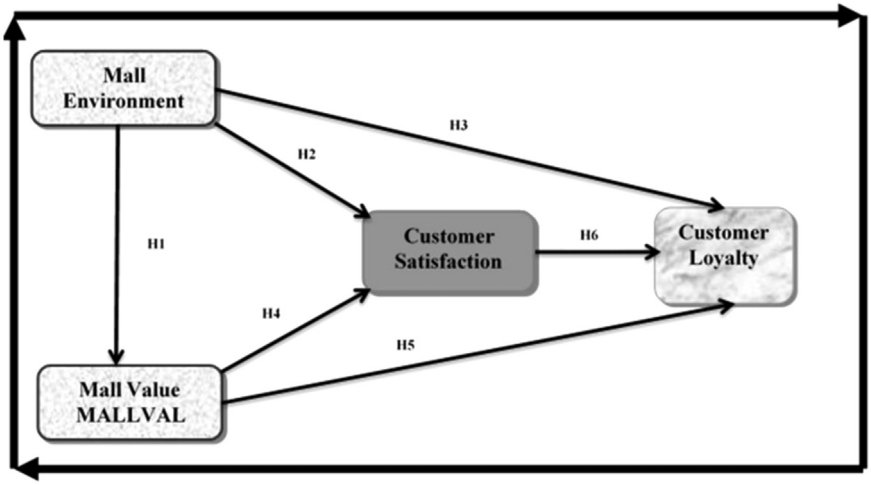


**Fig. 1.** Proposed generic model for customer loyalty.

positive significant impact on both hedonic and utilitarian values.

From the above discussion we see that researchers have focused on two value dimensions only: hedonic and utilitarian values; but have ignored other value dimensions that constitute the MALLVAL. We find as well that the effect of the mall environment on customer perceived value varies from one study to another. In this situation, we propose that:

**H1.** Favourable customer perception of mall environment has a positive influence on the customer perceived value of malls (MALLVAL).

### 3.2. Perception of mall environment and customer satisfaction

One can argue that customer satisfaction has received significant attention in the marketing literature in general and retailing in particular (see, for example, Anderson and Srinivasan, 2003; Babin et al., 2005; Carpenter, 2008; Chen, 2012; Chebat et al., 2014; Sands et al., 2015; Kwon et al., 2016). If their customers became satisfied, retailers can benefit from many results, such as customer loyalty and sustained profitability (Greenwell et al., 2002; Liu and Jang, 2009). Previous research reports that atmospherics influence a customer's expectations, perception and consequently satisfaction (see, for example, Turley and Milliman, 2000; Lam, 2001; Kwon et al., 2016). Chebat and Michon (2003) have found that the perception of the mall environment very strongly affects shoppers' arousal and also has an impact on emotions. This is confirmed by Nuttavuthisit (2014), who concludes that being in a pleasant mall atmosphere is sufficient to create aesthetic experience (i.e., enjoyment) for shoppers. In addition, Wright et al. (2006) demonstrate that shoppers' perceptions of the mall atmospherics as pleasurable shopping experiences make them spend more time and money on their shopping trip. Thus, the mall atmospherics can be designed in a way that leads to positive emotions and increased satisfaction (Stoel et al., 2004; Wright et al., 2006; Ha and Jang, 2010; Dennis et al. 2010). Therefore, we propose that:

**H2.** Favourable customer perception of the mall environment has a positive influence on customer satisfaction.

### 3.3. Perception of mall environment and customer loyalty

Having loyal and profitable customers represents an ultimate goal for any retailer, promising future profits and sustainable business (Grace and O'Cass, 2005). In recent years, there has been an increasing interest in examining the factors influencing customer loyalty (Rabbanee et al., 2012) which has been measured sometimes by either behavioural (e.g., repeat purchase) or attitudinal (e.g., positive word-of-mouth) evidence (Mandhachitara and Poolthong, 2011). According to the conceptual framework of Dick and Basu (1994), a true loyal customer is one who holds relatively positive attitudes towards the retailer and has high repeat purchase behaviour. Ideally, and consistent with the conceptual framework of Dick and Basu (1994), loyalty research should integrate both attitudinal and behavioural measures, since they complement each other in measuring customer loyalty (Rundle-Thiele and Bennett, 2001). Therefore, in the study reported here, we used combined measures: behavioural (by asking respondents about their experience with the mall that they patronise most frequently) and attitudinal (by asking them about their commitment, positive word-of-mouth activity, and intention to shop in the same mall in the future).

Few studies have been conducted to investigate the effect of mall environment perception on customer loyalty (see for instance, Lehew et al., 2002; Stoel et al., 2004; Keng et al., 2007). It has been argued that positive perception of the mall environment has a positive effect on both excitement and the desire to stay in the mall, which in turn strengthens the intention to repeat the patronage and the recommendation to others (Rahman et al., 2016). Keng et al. (2007) conclude that personal interaction encounters and physical environment encounters (both of which shape the mall environment) positively influence customer experiential value and, in turn, behavioural intentions, such as the desire to shop at the mall, come back to the mall and recommend the mall to others. Additionally, Chebat et al. (2009) have found that the perception of the mall environment has an indirect significant effect on mall loyalty. However, Lehew et al. (2002) have found that loyal mall shoppers were not differentiated from non-loyal shoppers by such perceptions of the mall environment as mall and restroom cleanliness, adequate comfort areas and security, attractive decor, and lighting. As seen in most of the previous studies, mall loyalty was significantly predicted either directly or indirectly by the shopper's positive perception of the mall's environment; therefore, in the present study we propose that:

**H3.** Favourable customer perception of the mall environment has a positive influence on customer loyalty.

### 3.4. Customer perceived value and customer satisfaction

Creating and delivering superior value and increasing customer satisfaction are crucial practices for retailers who want to achieve sustainable competitive advantage. From the customers' perspective, gaining value and being satisfied are essential consumption outcomes that influence buying behaviour and post purchase behaviour (Keng et al., 2007). From the academic point of view, customer perceived value and satisfaction are antecedents of patronage intentions (Ryu et al., 2008), word-of-mouth (Babin et al., 2005; Lee et al., 2007), loyalty (Lam et al., 2004; Yang and Peterson, 2004; Eid, 2015), and retention (Eid, 2015).

However, the literature shows that customer perceived value differs from customer satisfaction in several ways. First, the components of the two concepts are different. While customer satisfaction is a comparison between the customer's perception of a product's performance (or outcome) and his/her expectations about this performance (Kotler and Keller, 2009); customer perceived value in the specific view is a trade-off between what they get (i.e., benefits) for what they give (i.e., price or sacrifice) but, in its panoramic view, is seen as all the factors, qualitative and quantitative, subjective and objective, that make up the complete shopping experience (Zeithaml, 1988). Second, customer satisfaction has been conceptualised as a unidimensional construct (Sweeney and Soutar, 2001), whereas the literature has demonstrated the multidimensional and context-dependent nature of customer perceived value (Chen and Dubinsky, 2003). Third, the occasion of the two notions is different. Customer perceived value can be derived at various stages of the purchase process, including the pre-purchase stage but customer satisfaction takes place only after purchasing or using the product or service (Sweeney and Soutar, 2001). This indicates that customer perceived value could be an antecedent of customer satisfaction. Many researchers have supported this last conclusion and shown that customer perceived value is a positive and direct antecedent of customer satisfaction (see, for example, Jones et al., 2006; Babin et al., 2007; Chen and Tsai, 2008; Ryu et al., 2008;Chebat et al., 2014; Sands et al., 2015). Therefore, we propose that:

**H4.** The customer perceived value of malls (MALLVAL) has a

**Table 1**
Sample characteristics.

| Demographic characteristics | % | Demographic characteristics | % |
|---|---|---|---|
| *Sex* | | *Marital status* | |
| • Male | 41.8% | • Single | 47.0% |
| • Female | 58.2% | • Married | 49.5% |
| | | • Divorced | 2.7% |
| | | • Widowed | 0.8% |
| *Age* | | *Household monthly income* | |
| • Less than 20 years | 8.2% | • Less than 10,000 Dhs[a]. | 32.6% |
| • From 20 to 30 years | 55.6% | • From 10,000 to 15,000 Dhs. | 20.9% |
| • From 31 to 40 years | 23.1% | • From 15,001 to 20,000 Dhs. | 17.4% |
| • From 41 to 50 years | 10.1% | • From 20,001 to 30,000 Dhs. | 12.2% |
| • From 51 to 60 years | 2.2% | • From 30,001 to 40,000 Dhs. | 11.1% |
| • 60 years and above | 0.8% | • More than 40,000 Dhs. | 5.8% |
| *Occupation* | | *Educational level* | |
| • Student | 30.2% | • High school or equivalent | 18.5% |
| • Government employee | 25.8% | • University degree or equivalent | 62.7% |
| • Private sector employee | 38.3% | • Post graduate degree | 18.8% |
| • Housewife | 4.1% | | |
| • Business man/woman | 0.5% | | |
| • Retired | 1.1% | | |

[a] $1 = 3.67 Dhs.

positive influence on customer satisfaction.

### 3.5. Customer perceived value and customer loyalty

The relationship between customer perceived value and customer loyalty has been examined in many studies and indicates that customer perceived value has a direct and positive influence on customer loyalty (see, for example, Chen and Tsai, 2008; Pan et al., 2012; Eid, 2015; Rahman et al., 2016). It has been argued that when perceived value goes down, customers are more likely to switch to rival brands, indicating a decline in loyalty (Anderson and Srinivasan, 2003). In addition to the direct relationship with loyalty, other researchers indicate that the relationship between customer perceived value and loyalty could be better explained by presenting satisfaction as a mediating factor (Lam et al., 2004). Therefore, we propose that:

**H5.** The customer perceived value of malls (MALLVAL) has a positive influence on customer loyalty.

### 3.6. Customer satisfaction and customer loyalty

Retailers strive to satisfy their customers in order to maximise the benefits gained from them. A satisfied customer is more likely to spend more money, stay longer with the business (Chen, 2012) and recommend it positively to others (Babin et al., 2005; Lee et al., 2007). Customer satisfaction can be measured in transaction-specific terms (i.e., the customer's emotional response to the most recent transactional experience with the retailer) or overall satisfaction (i.e., cumulative evaluation of all encounters with the retailer) (Yang and Peterson, 2004; Chen and Tsai, 2008). In the present study, we adopt the overall satisfaction measure since it reflects the customer's cumulative impression of the retailer's performance over time and hence it may serve as a better predictor of customer loyalty (Yang and Peterson, 2004). The relationship between customer satisfaction and customer loyalty has long been studied by numerous researchers in the retailing industry (see for instance, Yang and Peterson, 2004; Lam et al., 2004; Chen and Tsai, 2008; Liu and Jang, 2009; Pan et al., 2012). In general, customer satisfaction is regarded as an antecedent for customer loyalty. Therefore, we propose that:

**H6.** Customer loyalty will be positively influenced by customer satisfaction with malls.

## 4. Research method

### 4.1. Sampling design and data collection

The research sample of this study consists of mall shoppers of above 18 years old in three main cities in the UAE (i.e., Abu Dhabi, Dubai, and Al Ain). Using the mall intercept technique along with the self-administered questionnaire method, 400 questionnaires were distributed to mall shoppers who were asked by 5 well-trained university senior students to take a few minutes to fill out the questionnaire. A total of 382 questionnaires was returned, but 14 questionnaires had to be excluded from analysis for various reasons, such as incompleteness or inconsistent answers. Therefore, 368 completed questionnaires were used in the data analysis. Our sample size was considered suitable because it fits the recommendations of Bartlett et al. (2001) to have 10 observations (cases) per indicator (independent variable) for studies employing Structural Equation Modelling (SEM). Since we have 368 usable questionnaires and 37 independent variables were used in the SEM analysis, the current sample size is suitable for employing SEM, as well as being acceptable in practice. The questionnaire was written not only in Arabic but in English, since a considerable percentage of residents in the UAE are non-Arabic speakers. The accuracy of the translation from English to Arabic was secured by the back translation method. The questionnaire was pre-tested by two marketing experts and piloted with 15 mall shoppers who were intercepted and asked to complete the questionnaire; their comments or questions were taken into consideration. A slight modification to the questionnaire was made as a result of the pre-testing process.

To make sure that there was no non-response bias due to the sampling procedures, the demographic characteristics of the early respondents (weekday mall shoppers) were compared with the demographics of the late respondents (weekend mall shoppers). Chi-square tests showed no significant differences between the two groups of respondents at the 5% significance level, indicating that non-response bias need not be a concern. Table 1 outlines the respondents' demographics.

### 4.2. Measures

We measured the four constructs involved in the model (Mall Environment, Customer Perceived Value, Customer Satisfaction and Customer Loyalty) by multiple-item scales adapted from previous studies. First, in conceptualising the mall environment, we followed Keng et al. (2007) defining it as a multidimensional construct: Mall Recreational, Mall Interior, and Mall Staff. Nine items were adapted or borrowed from Keng et al. (2007); El-Adly (2007) to capture the mall environment. Second, in conceptualising the customer perceived value of malls, we adopted from El-Adly and Eid (2015) their multi-dimensional scale of 37 items (MALLVAL), which consists of eight first-order constructs: Hedonic, Self-Gratification, Utilitarian, Epistemic, Social Interaction, Spatial Convenience, Transaction, and Time Convenience. Third, in conceptualising customer satisfaction, two items were adapted from Carpenter (2008) as a uni-dimensional construct. Finally, customer loyalty was conceptualised as a uni-dimensional construct of 3 items adapted from Chebat et al. (2009). These items were measured on a five-point Likert scale anchored by *strongly agree* and *strongly disagree,* except for the scale items of the mall environment which ranged from *excellent* to *extremely poor*. Demographic questions were also included at the end of the questionnaire.

## 5. Analysis and Results

### 5.1. Reliability and Validity of the First-Order Measurement Model

As recommended by Anderson and Gerbing (1982), Exploratory Factor Analysis (EFA) was performed using principal components analysis with Varimax rotation to identify the latent factors of the measurement model items. For the given data, Bartlett's test of sphericity (approx. chi-square = 9494.61, $df = 780$, $p = .000$) was conducted. The significant value for this analysis indicates that there were correlations in the data set that were appropriate for factor analysis. In addition, the high value of Kaiser-Meyer-Olkin (KMO)'s measure of 0.926 indicates that the sample was appropriate for factor analysis. All the items of the original measures loaded highly on their intended constructs, except one item from the hedonic value, as well as three items from the utilitarian value, two items from the transaction value, and all items of the spatial convenience value which were dropped from further analysis. The final result of the EFA showed 40 items out of 51 loading on 12 meaningful factors which accounted for 75.91% of the variance extracted, as shown in Table 2, which presents the items used to measure each construct included in the first-order measurement model.

Next, we assessed the psychometric properties (reliability, convergent and discriminant validity) of the twelve factors by calculating the Cronbach's alpha reliability coefficient (Nunnally and Bernstein, 1994). These coefficients are represented for each of the factors in Table 2. The reliability coefficients of all constructs range from 0.745 to 0.957, which surpasses the cut-off level of 0.70 set for basic research (Nunnally and Bernstein, 1994). Further, these twelve factors were subject to Confirmatory Factor Analysis (CFA). Estimation displayed excellent goodness-of-fit statistics for our data, as indicated by $X^2 = 933.27$, df. = 670, $p = .000$; $X^2/df = 1.393$; AGFI = .868; CFI = .971; IFI = .971; RMSEA = .033.

The results shown in Table 2 also supported the internal consistency of all the measures, since the composite reliability (CR) was greater than 0.70 for all constructs, as recommended by Fornell and Larcker (1981) and Hair et al. (2006). The average variance extracted (AVE) for all constructs was greater than the generally accepted value of 0.50, confirming the convergent validity of the constructs in question (Fornell and Larcker, 1981). To assess the discriminant validity of the first-order measurement model, the correlation matrix, as reported in Table 3, shows that the square root of the average variance extracted for each construct in the first-order model was greater than the square of the inter-construct correlations, which supports the discriminant validity of the 12 factors included in the first-order measurement model.

### 5.2. Reliability and validity of the second-order measurement model

Since the mall environment and customer perceived value of malls (MALLVAL) constructs have many dimensions, it is important to know if the dimensions of each construct are correlated with each other and also to determine the structural relations between the dimensions and their construct. This is done by specifying a second-order factor model which assumes that the first-order factors estimated are actually sub-dimensions of a broader and more comprehensive second-order factor (Hair et al., 2006; Narayan et al., 2008). This second-order factor is completely latent and unobservable (Narayan et al., 2008). Second-order confirmatory factor analysis is employed as illustrated in Table 4, which shows that the second-order measurement model has achieved both convergent and discriminant validity, since the composite reliability (CR) of all constructs exceeded the recommended value of 0.7, the average variance extracted (AVE) for all constructs was greater than the generally accepted value of 0.50, and the square root of the average variance extracted for each construct was greater than the square of the inter-construct correlations (Fornell and Larcker, 1981). In addition, the estimation displayed excellent goodness-of-fit statistics for the second-order measurement model, as indicated by $X^2 = 1131.47$, df. = 720, $p = .000$; $X^2/df = 1.571$; AGFI = .849; CFI = .955; IFI = .955; RMSEA = .039.

### 5.3. Structural analysis and model testing

Finally, using the Structural Equation Modelling package of AMOS 22, we tested the hypothesised causal relationships between different constructs of the proposed model shown in Fig. 1. We followed the guidelines recommended by Joreskog and Sorbom (1982) in performing a path analysis, applying the maximum likelihood estimates (MLE) method. The path diagram for the causal model, which shows the estimated standardised parameters for the causal paths, their significance levels, and the square multiple correlations for each construct is presented in Fig. 2.

A more detailed analysis of the standardised regression weights for the causal paths, the squared multiple correlations ($R^2$), and the overall goodness of fit indices is reported in Table 5. The results indicate excellent goodness of fit for the causal model.

As can be seen in Table 5, all hypotheses were supported except H3, which had no direct significant effect on customer loyalty. Therefore, we can argue that our conceptual model was generally supported. A more detailed analysis shows that the mall environment has been found to significantly affect MALLVAL (**H1**) (Standardized Estimate = 0.729, $P < 0.001$). Similarly, certain suggested factors positively affect *customer satisfaction*, namely the *mall environment* (**H2**) (Standardized Estimate = **0.258**, $P < 0.01$) and MALLVAL (**H4**) (Standardized Estimate = *0.435*, $P < 0.001$). Finally, apart from the *mall environment* (**H3**) (Standardized Estimate = 0. **164**, $P > 0.05$, not significant), the suggested factors positively affect *customer loyalty*, namely *MALLVAL* (**H5**) (Standardized Estimate = **0. 376**, $P < 0.001$) and *customer satisfaction* (**H6**) (Standardized Estimate = *0.* **359**, $P < 0.001$). The above significant causal relationships provide empirical support for the theoretical view which states that the mall environment is an antecedent of MALLVAL and customer satisfaction. MALLVAL and customer satisfaction, in addition, are direct antecedents of customer loyalty. However, for the purpose of identifying the mediating effects of MALLVAL and customer satisfaction in the mall environment-loyalty relationship; the direct, indirect (i.e., mediated via the effects of other variables), and total effects of the suggested constructs were computed and are reported in Table 6.

## 6. Discussion

The purpose of this study is (a) to provide some valuable and practical insights for mall developers and managers willing to measure customer perceived value; and (b) to understand the relationship between the mall shopping environment, customer perceived value of malls (MALLVAL), customer satisfaction, and customer loyalty; and (c) to determine the mediating role of MALLVAL and customer satisfaction in the mall environment-loyalty relationship.

### 6.1. Mall environment and MALLVAL

This study offers mall developers and managers a number of effective dimensions of the mall environment where they can improve the shopping experience of their shoppers. These mall environment factors include: 1) mall recreational amenities, 2) mall interior, and 3) mall staff. The taxonomy of these three factors is – to some extent – consistent with the mall environment

**Table 2**
The first-order measurement model.

| Scale[a]/items | EFA factor loadings | CFA standardised loadings |
|---|---|---|
| **Mall environment construct** | | |
| *Mall recreational*[b] *(α=0.767; CR=0.782; AVE=0.549)* | | |
| Comfortable seats during shopping inside that mall | 0.677 | 0.61 |
| Presence of fun and entertainment programs in that mall | 0.797 | 0.84 |
| Existence of fun spaces for kids and youth in that mall | 0.781 | 0.75 |
| *Mall interior*[b] *(α=0.745; CR=0.757; AVE=0.512)* | | |
| This mall is decorated in an attractive fashion | 0.757 | 0.77 |
| The layout of that mall makes it easy to get around and reach wherever I want inside the mall | 0.567 | 0.62 |
| The overall design of that mall is interesting | 0.799 | 0.75 |
| *Mall staff*[b] *(α=0.882; CR=0.888; AVE=0.726)* | | |
| The mall staff are friendly | 0.846 | 0.87 |
| The mall staff are helpful | 0.845 | 0.92 |
| The mall staff are knowledgeable | 0.778 | 0.75 |
| **MALLVAL construct** | | |
| *Hedonic*[c] *(α=0.881; CR=0.883; AVE=0.602)* | | |
| I feel excited about walking into that mall | 0.737 | 0.76 |
| I feel sense of joy to look at the merchandise in that mall | 0.677 | 0.77 |
| It is fun to be in that mall | 0.669 | 0.81 |
| I feel happy going to that mall because of its environment | 0.721 | 0.77 |
| Compared to other things I could have done, the time spent in that mall was truly enjoyable | 0.619 | 0.77 |
| *Self-gratification*[c] *(α=0.887; CR=0.889; AVE=0.668)* | | |
| Shopping trip to that mall truly felt as an escape from life pressure | 0.788 | 0.77 |
| While shopping, I was able to forget my problems | 0.805 | 0.86 |
| Shopping trip to that mall helped me to release stress and to relax | 0.798 | 0.87 |
| For me, doing shopping in that mall is a way to do something different from daily routine | 0.701 | 0.76 |
| *Utilitarian*[c] *(α=0.888; CR=0.868; AVE=0.622)* | | |
| This mall can satisfy all family members | 0.786 | 0.82 |
| Every family member can find what he/she wants in that mall | 0.815 | 0.86 |
| I prefer shopping in that mall because it has a variety of activities to satisfy everyone in the family | 0.727 | 0.79 |
| I prefer shopping in that mall because it has a variety of stores and products to satisfy everyone in the family | .689 | 0.80 |
| *Epistemic*[c] *(α=0.866; CR=0.853; AVE=0.595)* | | |
| I like shopping in that mall to get ideas about new trends, fashion, and style. | 0.653 | 0.79 |
| I do shopping in that mall to see what's interesting or innovative | 0.684 | 0.81 |
| I like to go to that mall to learn interesting ways of decoration and dressing models. | 0.814 | 0.72 |
| I really enjoy looking around in that mall to keep up with newest trends and fashion | 0.751 | 0.83 |
| *Social interaction*[c] *(α=0.871; CR=0.874; AVE=0.697)* | | |
| I often go to that mall with friends, family to have fun and make good memories | 0.717 | 0.83 |
| I often go to that mall with friends not necessarily buying anything but to have good time interacting with each other | 0.811 | 0.87 |
| I used to go to that mall to socialize with friends and family | 0.759 | 0.80 |
| *Transaction*[c] *(α=0.852; CR=0.853; AVE=0.660)* | | |
| I feel good when I get some real bargain in that mall | 0.784 | 0.80 |
| I enjoy the thrill of finding that one expensive piece on sale | 0.783 | 0.85 |
| I consider my shopping trip is successful when I find bargains | 0.788 | 0.79 |
| *Time convenience*[c] *(α=0.778; CR=0.777; AVE=0.538)* | | |
| It is convenient for me to shop at that mall because it works till late | 0.676 | 0.77 |
| I prefer shopping in that mall because it works continuously without breaks | 0.802 | 0.74 |
| Whenever I want doing shopping in that mall I find it open | 0.797 | 0.68 |
| **Customer satisfaction**[c] *(α=0.957;* CR=0.959; AVE=0.921) | | |
| The shopping experience in that mall makes me satisfied | 0.806 | 0.95 |
| Overall, I feel satisfied about that mall | 0.794 | 0.97 |
| **Customer loyalty**[c] *(α=0.827;* CR=0.840; AVE=0.639) | | |
| I do not like to change to another mall. | 0.772 | 0.67 |

**Table 2** (*continued*)

| Scale[a]/items | EFA factor loadings | CFA standardised loadings |
|---|---|---|
| I will continue doing shopping in that mall in the future | 0.702 | 0.86 |
| I would be willing to recommend that mall to my friends | 0.672 | 0.85 |

[a] Cronbach alpha (α), Composite reliability (CR), and average variance extracted (AVE) are calculated for each scale.
[b] Anchored by "excellent" and "extremely poor".
[c] Ranged from "strongly agree" to "strongly disagree".

**Table 3**
Discriminant validity for the first-order measurement model.

| | Correlations[a] | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **MR** | **MI** | **MS** | **HE** | **SG** | **UT** | **EP** | **SI** | **TR** | **TC** | **SAT** | **LOY** |
| Mall recreational (MR) | **0.741** | | | | | | | | | | | |
| Mall interior (MI) | 0.578 | **0.716** | | | | | | | | | | |
| Mall staff (MS) | 0.483 | 0.596 | **0.852** | | | | | | | | | |
| Hedonic (HE) | 0.476 | 0.508 | 0.407 | **0.776** | | | | | | | | |
| Self-gratification (SG) | 0.286 | 0.334 | 0.276 | 0.681 | **0.817** | | | | | | | |
| Utilitarian (UT) | 0.439 | 0.509 | 0.461 | 0.598 | 0.427 | **0.789** | | | | | | |
| Epistemic (EP) | 0.456 | 0.429 | 0.375 | 0.713 | 0.620 | 0.591 | **0.771** | | | | | |
| Social Interaction (SI) | 0.389 | 0.383 | 0.406 | 0.590 | 0.638 | 0.470 | 0.646 | **0.835** | | | | |
| Transaction (TR) | 0.332 | 0.401 | 0.395 | 0.454 | 0.438 | 0.612 | 0.476 | 0.480 | **0.812** | | | |
| Time convenience (TC) | 0.284 | 0.485 | 0.417 | 0.441 | 0.393 | 0.578 | 0.475 | 0.352 | 0.580 | **0.734** | | |
| Satisfaction (SAT) | 0.385 | 0.484 | 0.410 | 0.555 | 0.339 | 0.639 | 0.380 | 0.389 | 0.458 | 0.411 | **0.959** | |
| Loyalty (LOY) | 0.449 | 0.524 | 0.468 | 0.648 | 0.444 | 0.647 | 0.459 | 0.508 | 0.498 | 0.493 | 0.695 | **0.799** |

The diagonals represent the square root of average variance extracted (AVE) and the lower cells represent the squared correlation among constructs.
[a] Correlation is significant at the 0.001 level (2-tailed).

**Table 4**
Convergent and discriminant validity results of the second-order measurement model.

| | Correlations | | | | | |
|---|---|---|---|---|---|---|
| | CR | AVE | Mall environment | Mall value (MALLVAL) | Customer satisfaction | Customer loyalty |
| Mall environment | 0.790 | 0.557 | **0.746** | | | |
| Mall value (MALLVAL) | 0.890 | 0.538 | 0.729[a] | **0.733** | | |
| Customer satisfaction | 0.958 | 0.919 | 0.575[a] | 0.623[a] | **0.959** | |
| Customer loyalty | 0.840 | 0.639 | 0.645[a] | 0.719[a] | 0.687[a] | **0.799** |

The diagonals represent the square root of average variance extracted **(AVE)** and the lower cells represents the squared correlation among constructs.
[a] Correlation is significant at the 0.001 level (2-tailed).

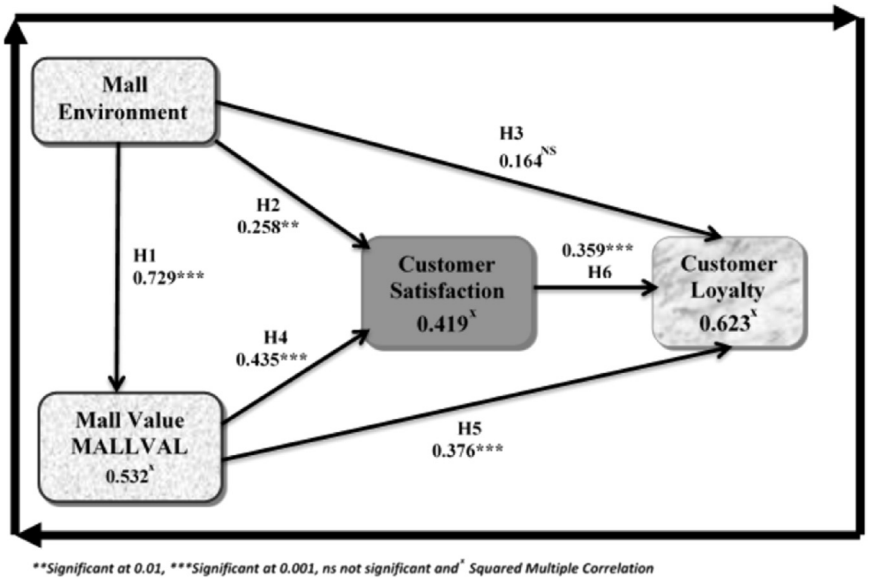


**Fig. 2.** Results of path analysis.

**Table 5**
Standardised regression weights for the causal paths.

| Predictor variables | Criterion variables | Hypothesised relationship | Standardised coefficient | Result | $R^2$ |
|---|---|---|---|---|---|
| Mall environment | Mall value (MALLVAL) | H1 | 0.729*** | **Supported** | 0.532 |
| Mall environment | Customer satisfaction | H2 | 0.258** | **Supported** | 0.419 |
| Mall value (MALLVAL) | Customer satisfaction | H4 | 0.435*** | **Supported** | |
| Mall environment | Customer loyalty | H3 | 0.164NS | **Rejected** | 0.623 |
| Mall value (MALLVAL) | Customer loyalty | H5 | 0.376*** | **Supported** | |
| Customer satisfaction | Customer loyalty | H6 | 0.359*** | **Supported** | |
| Statistic | | | Suggested | Obtained | |
| $X^2$/df | | | ≤ 5 | 1.571 | |
| Adjusted goodness-of- fit index (AGFI) | | | ≥ 0.80 | 0.849 | |
| Comparative fit index (CFI) | | | ≥ 0.90 | 0.955 | |
| Incremental fit index (IFI) | | | ≥ 0.90 | 0.955 | |
| Root mean square residual (RMSEA) | | | ≤ 0.10 | 0.039 | |

** $P < 0.01$.
*** $P < 0.001$, NS is not significant.

**Table 6**
Direct, indirect, and total effect of mall environment, MALLVAL, and customer satisfaction.

| Criterion variable | Predictor variables | Direct effect | Indirect effect | Total effect |
|---|---|---|---|---|
| Mall value (MALLVAL) | Mall environment | 0.729 | 0.000 | 0.729 |
| Customer satisfaction | Mall environment | 0.258 | 0.317 | 0.575 |
| | Mall value (MALLVAL) | 0.435 | 0.000 | 0.435 |
| Customer loyalty | Mall Environment | 0.164 | 0.481 | 0.645 |
| | Mall Value (MALLVAL) | 0.376 | 0.156 | 0.532 |
| | Customer Satisfaction | 0.359 | 0.000 | 0.359 |

classification provided by Keng et al. (2007) above. A closer examination of the items constituting these factors, as illustrated in Table 2, demonstrates the importance of having a comfortable, pleasing environment, and entertainment facilities for different family members, which is congruent with the findings of El-Adly (2007) about the patronage motives of malls. In addition, it shows the crucial role played by the mall staff in enhancing customer perceived value and satisfaction with the mall. This latter result supports the findings of Baker et al. (2002) and Keng et al. (2007) in that friendly, helpful, and knowledgeable mall staff positively affect the mall shoppers' perception of the mall environment and consequently their shopping outcomes.

Similarly, this study operationalised the MALLVAL scale developed by El-Adly and Eid (2015) and confirmed its multidimensional nature of seven first-order value dimensions namely: hedonic, self-gratification, utilitarian, epistemic, social interaction, transaction, and time convenience. Although this study dropped one dimension of the original MALLVAL scale, that is, *spatial convenience*, it shows that mall shoppers still derive more value during their shopping trip to the mall than merely utilitarian and hedonic ones. This means that a mall shopper's decision to patronise a certain mall should be seen from the experiential view of the value that is provided by the complete shopping experience and not merely the value of product acquisition, as suggested by Babin et al. (1994). In addition, this study supports – to some extent – the findings of Rintamäki et al. (2006), who conceptualise shopping value in department stores as having three dimensions: utilitarian value, hedonic value, and social value. This is logical, since malls – due to their nature – are expected to provide shoppers with more values than those provided by stand-alone stores.

### 6.2. Mall environment and MALLVAL consequences

The study, as seen in Tables 5 and 6 reveals that mall environment has direct positive significant effect on customer perceived value of malls (MALLVAL), supporting H1. Also, mall environment proved to be an important predictor of MALLVAL, accounting 53.2% of the variance explained. This result supports the findings of Stoel et al. (2004) and Chebat et al. (2014) that mall environment positively affects the hedonic and utilitarian values of malls. Similarly, mall environment has significant positive influence on customer satisfaction supporting H2. This supports the idea that favourable perception of the mall environment elicits positive emotional states such as pleasantness, excitement, and satisfaction (Kwon et al., 2016). However, Ha and Jang (2010) argue that if the perception of mall environment is exaggerated, this may lead to overestimation of the shopper's expectations and to lower his/her satisfaction about the mall. This latter argument is not accurate because perception and expectations are two independent notions and no causal relationship seems to exist between them. In general, the present findings are in agreement with the environmental psychology theory developed by Mehrabian and Russell (1974) in that the mall environment has an effect on shoppers' behavioural responses. However, this study points out that mall environment has insignificant direct influence on customer loyalty, rejecting H3. We were surprised to find that the mall environment appears to make only a negligible and insignificant impact on customer loyalty. However, closer examination of our findings revealed that this should not have been unexpected. As seen in Table 6, this negligibly insignificant direct effect (0.164) is enhanced by the strong significant indirect positive effect (0.481) of the mall environment on customer loyalty. This result is consistent with the findings of Chebat et al. (2009) that perception of the mall environment has an indirectly significant effect on mall loyalty.

Moreover, the study demonstrates that MALLVAL has direct significant positive effect on both customer satisfaction and customer loyalty, supporting H4 and H5 respectively. This result supports the findings of Babin et al. (2007); Carpenter (2008); Chebat et al., 2014 that utilitarian value and hedonic shopping value are both positively related to customer satisfaction. It also supports the findings of Rahman et al. (2016), who found that shopping value significantly influences mall patronage intention. In addition, as expected, customer loyalty is directly and positively influenced by customer satisfaction, supporting H6, which is consistent with the findings of Carpenter (2008). This endorses the idea that shoppers tend to be loyal to those malls where they perceive high value to be available and they are more satisfied. Together, the mall environment, MALLVAL, and customer

satisfaction explain 62.3% of mall shopper loyalty, which confirms that they are antecedents and powerful predictors of customer loyalty.

### 6.3. The mediating role of MALLVAL and satisfaction in the mall environment-mall loyalty relationship

As illustrated in Fig. 2 and Table 5, there is an insignificant relationship between the mall environment and customer loyalty, while the relationship between the mall environment and both MALLVAL and customer satisfaction is significant. This indicates that MALLVAL and customer satisfaction fully and positively mediate the mall environment-customer loyalty relationship. Thus, the direct relationship between the mall environment and customer loyalty is better explained through MALLVAL and customer satisfaction mediators. Similarly, there are significant relationships among the three constructs of mall environment, MALLVAL, and customer satisfaction, indicating that MALLVAL partially and positively mediates the relationship between mall environment and customer satisfaction. The overall conclusion of this mediation is that the existence of the customer perceived value of malls (MALLVAL) is essential for the effect of the mall environment to be achieved in both customer satisfaction and customer loyalty. This result is in concert with the findings of Keng et al. (2007), in that customer experiential value mediates the effect of the mall environment – expressed by personal interaction encounters and physical environment encounters – on behavioural intention. Moreover, the significant relationships between the constructs of MALLVAL, customer satisfaction, and customer loyalty demonstrate that customer satisfaction plays the role of a mediator between the customer perceived value of malls (MALLVAL) and customer loyalty. This latter result confirms the findings of Lam et al. (2004) that the relationship between customer perceived value and loyalty can be better explained through satisfaction as a mediating factor.

## 7. Conclusion and research limitations

This study contributes to the retailing literature specifically in the mall context of Arab countries (in the UAE) in several ways: First, it reveals that the mall environment has three dimensions; mall recreational amenities, mall interior, and mall staff. Second, it operationalises and empirically validates the perceived value of malls (MALLVAL). The study confirms that MALLVAL is a multi-dimensional scale of seven first-order value dimensions (hedonic, self-gratification, utilitarian, epistemic, social interaction, transaction, and time convenience) and demonstrates that shoppers derive more values from the complete shopping experience than the hedonic and utilitarian ones only. Third, it provides a more robust model of the influences of the mall environment and MALLVAL constructs in the mall context. This claim rests on the fact that we found strong support for 5 of the 6 hypotheses in our model. The model findings indicate that: (a) a mall environment is an antecedent of MALLVAL and customer satisfaction; (b) MALLVAL has a significant positive effect on both customer satisfaction and customer loyalty; (c) MALLVAL and customer satisfaction fully and positively mediate the relationship between the mall environment and customer loyalty, (d) MALLVAL partially and positively mediates the relationship between mall environment and customer satisfaction, and (e) customer satisfaction partially and positively mediates the relationship between MALLVAL and customer loyalty. Finally, it adds to the very limited research on malls in the Arab countries in general and the UAE in particular.

From the managerial point of view, this study recognises the importance of the different dimensions constituting the mall environment and MALLVAL in predicting customer satisfaction and customer loyalty to the mall. Thus, mall developers and managers should create an appealing mall environment (atmospherics) that make shoppers perceive the high value of the shopping experience in the mall (i.e., the seven dimensions of MALLVAL: hedonic, self-gratification, utilitarian, epistemic, social interaction, transaction, and time convenience) which will positively affect their satisfaction and their willingness to continue shopping in the mall and to recommend the mall to others. To do so, they should consider the three mall environmental dimensions that have been approved in this study; these are mall recreational amenities, mall interior and mall staff factors.

However, the study has some limitations. First, it is specific to one context (i.e., the UAE) and one sector of the retailing industry (i.e., malls). As mentioned above, customer perceived value is subjective and contextual in nature; there is therefore a need to study customer perceived value and its relationship with the mall environment, customer satisfaction and customer loyalty in other contexts (countries, cultures, and industries). Second, we measured the mall environment through only three dimensions and MALLVAL through only seven, while there is evidence that the mall environment and MALLVAL are much wider constructs. For example, the mall environment might include the mall exterior (Turley and Milliman, 2000); comfort (El-Adly, 2007); while customer perceived value might include aesthetics (Gallarza and Saura, 2006) and religiosity (Eid, 2015). Finally, although customer perceived value and customer satisfaction are dynamic notions and should be measured on a continuous basis, this study is cross-sectional in nature. Therefore, it would better in the future to employ a longitudinal approach in order to shed light on the relative importance of the seven dimensions of mall value on customer satisfaction and loyalty to malls.

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