Mall equity measurement based on brand equity conceptualization

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Keywords  
Brand awareness, brand association, brand service quality, brand loyalty, mall equity.

Abstract  
The main purpose of this paper is to determine whether brand awareness, brand association, brand service quality and brand loyalty factors can be taken as the elements of mall equity elements in a second order context. The analyses revealed that all mall equity elements can be loaded to mall equity dimension. These four dimensions have a total of 15 items. In this study, we empirically demonstrate that mall equity structure parallels that of brand equity as a second order model.

Introduction  
Malls have a representative role for society (Voyce, 2006) and a vital role in the lifestyles of consumers (Terblanche, 1999). These places are also centers for social activities and leisure (Ng, 2003). Almost all malls have food sections, restaurants, cinemas, children’s playing areas, social activity and resting areas and interactive entertainment facilities (Terblanche, 1999). Since the construction of the first mall nearly 50 years ago, they have increased both in number and type (Lowry, 1997). In parallel to the increasing number of malls, consumers have become much more selective. The features which appeal to some customers may not have the same attraction to others (El-Adly, 2007). Some give importance to economic stimulants, while others act on an entirely sentimental basis. Multi-purpose customers adapt various combinations of these stimulants (Ruiz, 1999).

The malls have to work in an increasingly competitive ambience - based on increasing capacity and a decreasing number of customers (Shim and Eastlick, 1998). This arena of
competitiveness lying ahead of the retailers shows the strategic importance of brand equity for the marketing staff of the retail sector (Schoenbachler and Gordon, 2002). The size of the malls is classified by the number of products they offer, the type of retailers they contain and the number of tenants they have (McGoldrick, 2002). Based on this structure, malls can be described as follows: The mall combines different shops in a co-ordinated manner in order to meet all the demands of an average household. These places are also planned to contain facilities to meet the cultural demands of the customers (Pride and Ferrell, 1983).

When we examine the literature related to malls, we see that Parker et al. (2003) investigated customers’ perceptions in department stores and outlet malls. Whyatt (2008) worked on the criteria of customers in selecting the malls whereas Fernie and Hallsworth (1998) studied their locations. Fernie (1995) and Jones (1995) examined the planning issues, and Clodfelter and Fowler (2003) investigated the reference price. Reynolds et al. (2002) has revealed that brand image has a promoting effect on customer satisfaction and the commercial success of the stores. Brand image measuring techniques could easily be employed to measure the customer satisfaction of the malls. It was also stated that the retail brands also have brand equity (Keller, 1998). The competitive ambience shows that brand equity in the retailing sector is very important for marketing success (Schoenbachler and Gordon, 2002). Yet to the knowledge of the authors, only a few similar studies analyzing the mall equity have emerged recently in this field (Chebat et al., 2009; El Hedhli and Chebat, 2009). In this context, the purpose of this paper is to investigate which measurement model is more conceptually suitable for mall equity assessment. The study conducted a confirmatory factor analysis for this purpose. Besides, measuring mall equity can be used by mall managers to measuring effectiveness of marketing programs and to benchmark their malls and their services over rivals. This paper is structured as follows: First, the existing literature on equity concept is reviewed. Second, the research methodology and the results are shown. Next, conclusions are drawn, the limitations of the research are discussed and some suggestions for future research are made.

Conceptual Framework

Some researchers measured the brand equity by conceptualizing it in a multi-dimensional structure (Arnett et al., 2003). The research showed that some of the components of the brand equity change according to different categories. The evaluation and comparison of the retail brand equity for different categories are highly important for managers (Pappu and Quester, 2008). Pappu and Quester (2006, p. 320) described brand equity as “an equity which incorporates the customer with the name of the brand”. Different terms have been used to conceptualize brand equity. Hartman and Spiro (2005) used the term “customer-based store equity”, while Arnett et al. (2003) stated it as “retailer equity”, and Pappu and Quester (2006) analyzed it as “consumer-based retailer equity”. Other studies regarding brand equity are shown at Table 1. All studies lies on brand equity or consumer based brand equity perspective developed by Aaker (1991); Keller (1993); Yoo and Donthu (2001).

Brand equity has the dimensions of customer awareness, association, perceived quality of the retailer and retailer loyalty. The brand equity is basically classified as value, bonding
Consumer awareness is defined as the consumer remembering the elements of categorization. Retailer association refers to the opinions of the consumer related to the name of the retailer, and this is expected to change with the type of the retailer. The perceived quality is the subjective evaluation of the retailer by the customer. Retailer loyalty is reflected by the urge of the customer to buy the product from a certain retailer. In other words, it is the tendency of the customer to choose the retailer. It is known that behavioral patterns of consumers change according to the type of store (Pappu and Quester, 2006). The memory systems of the consumers are important for brand equity (Ye and Raaij, 2004; Shimp, 1997; Pitta and Katsanis, 1995; Krishnan, 1996). If we look at brand equity from a consumer-based point of view we see that it is based upon the utility obtained by the consumers (Vazquez et al., 2002). Aaker (1991) refers to brand equity as the sincerity of the customers towards the brand. One has to include brand awareness and brand image in brand equity, and there should be an association formed to study the brand equity process (Keller, 1993). Association is a formation with both functional and infunfunctional structure (Chen, 2001). When brand equity is taken as a model based upon aligning and trusting the brand (Lassar et al., 1995), brand association naturally becomes important. The association base is related to the brand image of the consumers (Ugglia, 2004) and is even taken as one of the dimensions of image association (Low and Lamb, 2000). Brand association of a product and service increases as the usability level increases (Oakenful et al., 2010). The self-orientation of the product, in other words being embedded, has an effect upon the association (Quester and Farrally, 1998) and has a positioning (Punj and Moon, 2002) or semiotic meaning (Ugglia, 2006).

Store equity elements are stated to comprise a differential effect, store knowledge and customer response (Hartman and Spiro, 2005). One of the important indicators of the brand image of the shopping centers is attractiveness (Dennis et al., 2002). Awareness, preference, perceptions and choice intentions are important in the measurement of brand equity. In service-branding, the model is basically based upon brand awareness and brand meaning (Berry, 2000). Therefore, the meaning of malls and the awareness levels of consumers become important factors. The public site where global mentality merges with locality (Abaza, 2001) is a model, which includes a social interaction system as part of the urbanization process with globalized features (Merz et al., 2008), and is an indication of a transition (Salcedo, 2003). The consumers consume the goods and spend time in the mall itself and exhibit an experimental consuming model (Bloch et al., 1994). In addition, when the shopping behaviors of the consumers in malls are examined they have a combined purpose feature compared to traditional shopping centers (Finn and Rigby, 1992). Malls are known to be places where mothers have a higher consuming tendency than their daughters (Martin, 2009). Malls are also evaluated within the activity pattern of the consumers (Gilboa, 2009). The mall satisfaction of the consumers depends on the shopper's perceived control over the experience (Machleit and Mantel, 2001). Mall Equity is modeled related to the mall image and mall awareness. Mall awareness has three main functions as to mall equity: It affects the importance of the mall for the consumer, the place of the mall within the selection system and the association power of the mall (El-Hedhli and Chebat, 2009). Shopper-based mall equity can be defined as “the differential effect of mall knowledge on shopper response to the mall marketing activities” (Chebat et al., 2009, p. 51). One of the
important factors of brand equity is loyalty (Atilgan et al., 2005). It is possible to examine loyalty under two sub groups of attitude and purchase (Chaudhuri and Holbrook, 2001). If the conception of abundance of products is high, the patronage is higher (De Juan, 2004). Loyalty, a unique concept and structure, has an important effect on the outcomes of brand equity (Chaudhuri, 1995). Some of the attributes of malls create loyalty (Lehew et al., 2002). Again, mall attribute beliefs have an effect on the re-patronage of the mall (Stoel et al., 2004). Based on the sources provided, we define the mall equity concept as “a holistic but independent perspective of awareness, loyalty, association and quality for consumers.”

This research extends the consumer-based brand equity measurement approach to the measurement of the equity associated with malls. We conceptualize mall equity as a four-dimensional construct comprising mall awareness, mall associations, perceived mall quality, and mall loyalty. Some studies evaluate the factor of brand awareness and brand associations together (Yoo et al. 2000; Yoo and Donthu, 2001) and some applied these to malls and stores in order to extent the image factor (El-Hedhli and Chebat, 2009; Hartman and Spiro, 2005). Some researchers applied the brand equity factors to other fields (e.g. retail), and took these factors independently (Arnett et al., 2003; Pappu and Quester, 2006). We have to emphasize this point. Some studies point out that loyalty is the consequence of the brand equity factors. Although some studies indicate that the service quality of the retail sector is very effective on the purchase intention of the customers (Laroche et al., 2005), perception or evaluation of mall attributes may not be the primary determinant of mall loyalty (LeHew et al., 2002; Kuruvilla and Joshi, 2010). When we investigate the studies on malls in Turkey, we see that the consumer give a very big importance to the surroundings of retail and malls (Arslan et al., 2010). The return of the customers to the mall is not only dependent to the shopping purposes but they come here to follow the trends and prices (Arslan et al., 2010a). As a result, the mall loyalty dimension of present study was investigated independently.

We used Pappu and Quester (2006) approach to take the brand equity dimension as the base for the measurement of the retailer equity. The difference between this study and the studies of El-Hedli and Chebat (2009) and Hartman and Spiro (2005) is that this study has no image extension purpose in equity measurements. In this study, the validity of the brand equity factors as means of equity in malls and whether they can perceived as a model were measured. Our main approach is that whether malls can be investigated as the brands. If we take the malls as a brand, we can easily refer to as “mall equity”. Therefore the study serves the purpose of testing the validity of the four brand equity factors as the mall equity.

Table 1. Brand Equity-based approaches for retailers, stores and malls

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopper-based mall equity (SBME)</td>
<td>Started from the image and base upon Customer-based brand equity(CBBE)</td>
</tr>
<tr>
<td>El Hedhli and Chebat,2009</td>
<td>+customer based store equity(CBSE)</td>
</tr>
<tr>
<td></td>
<td>-Mall awareness</td>
</tr>
<tr>
<td></td>
<td>-Mall image</td>
</tr>
<tr>
<td>Customer-based store equity (CCSE)</td>
<td>Hartman and Spiro, 2005</td>
</tr>
<tr>
<td>-----------------------------------</td>
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</tr>
<tr>
<td>Consumer-based retailer equity</td>
<td>Pappu and Quester, 2006</td>
</tr>
<tr>
<td>Retailer equity index</td>
<td>Arnett et al., 2003</td>
</tr>
<tr>
<td>Consumer-based mall equity</td>
<td>present research</td>
</tr>
</tbody>
</table>

**Methodology**

**Sample and Data Collection**

Applying a convenience sampling approach, the survey was conducted with the customers of two regional malls in the metropolitan city of Ankara/Turkey. These malls were the most frequently visited ones in their categories. Two researchers stood at the exits and the entrance of the malls and asked every tenth person to complete the survey. When a person rejected it they waited for the next tenth person. The data were collected by the use of Sudman’s (1980) method in the malls which have more than two exits. The researchers then changed their places between the exits and asked everybody who was leaving the mall to participate in the study. A total of 260 people participated in the study. Forty-three percent of the participants were male and 57% were female, 43% were single and 57% were married.

**Measures**

We adapted four measures for mall awareness, mall association, mall loyalty and mall perceived service quality of which were selected from the brand equity and retailer equity studies (Aaker, 1991; Yoo et al., 2000; Yoo and Donthu, 2001; El-Hedhli and Chebat, 2009; Hartman and Spiro, 2005; Pappu and Quester, 2006; Kim and Kim, 2004; Arnett et al., 2003; Keller, 1993; Dabholkar, 1996; Erkip, 2005). We also included an additional item for some sub-scales. The questions were prepared as to determine the expectation of the customers. This approach is employed in various fields (Gilboa (2009); El-Adly (2007); Ruiz et al. (2004); Tuncer et al (2007)).

The dimensions of mall equity were separately measured by the use of 7 point Likert type scale (1=I strongly disagree, 7= I strongly agree). The questionnaire was pre-tested by two retail practitioners and two regarding the consistency of the statements and their relations with the brand equity dimensions. Then, all items were evaluated by ten regular people to reach understandable and simplicity of the questionnaire. Final form of the questionnaire can be seen in Appendix 1.
Models

The main aim of this paper was to determine whether brand equity dimensions (brand awareness, brand association, brand service quality and brand loyalty) can be taken as the elements of mall equity elements in a second order context. Three different models were tested for this purpose (single model, second order factor and four factor model). The models compared are as follows:

Measurement Model

We aimed to compare three models: uni-dimensionality (all mall equity items were loaded to one dimension), four factor model correlated and the last one was second order (all four constructs were loaded to one dimension). Several measures of the goodness of fit indices are used to evaluate the measurement model as suggested by Bone et al. (1989), Hair et al. (1998), Joreskog and Sörbom (1996), and Schumacker and Lomax (2004): Chi-square / df ratio, Normed fit index (NFI), relative fit index (RFI), comparative fit index (CFI), incremental fit index (IFI), root mean-square error of approximation (RMSA). After achieving adequate overall fit, the measurement model is further evaluated for its reliability and validity (convergent and discriminant). The primary analytical tool used in this study was LISREL 8.3 (Joreskog and Sörbom, 1996)
**Model Testing**

In order to test the fit of the models, firstly the single-factor model was tested. The factor loadings of this model are all statistically significant. The fit indices requirements of this model have indicated unsatisfactory result (CFI=0.68, GFI=0.82, AGFI=0.73, and NFI=0.60. RMSEA=0.23; chi-square/df value of >5). The four-factor model close to exhibits the expected fit indices (Chi-square/df=2.5, CFI=.94, GFI=.93, AGFI=.90, RMSEA=.09). However, when comparing the two models statistically, it can be seen that the fit of the four factor model is significantly better than the one-factor model. Thus, it can be considered that while neither of the models is excellent, the four-factor solution is clearly preferable to the single-factor.

The second-order factor model was tested to compare with four-factor model. Again chi-square values and fit indices were examined; however, the chi-square difference test cannot be employed to directly test the models since the higher-order model is not in any nested sequence with either of the other two. Thus, the only possible comparison is one using descriptive fit indices. The fit indices of the model are not consistently better than the other two models (chi-square/df= 2.7, CFI=.93 GFI=.92, AGFI=.90, RMSEA=.09). Table 2 presents the fit measures of all three models. Collectively, these results support the validity of second -order factor model (correlated) mall equity. This model is preferred because of larger target coefficients - TCs (Lala *et al*., 2009). The division of the chi-square value of the TC for the first model to that of second order (481/411) is 0.85, and the higher value makes the second order preferable. In other words, the second order explains 85% of the covariance between first order factors. Collectively, these results (fit indexes and TC) support the validity of a second-order mall equity construct. But we have chosen the four factor model based on a 0.88 TC comparing result.

<table>
<thead>
<tr>
<th>Table 2. Confirmatory factor analysis for constructs</th>
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<tbody>
<tr>
<td><strong>Item numbers</strong></td>
</tr>
<tr>
<td>Single Model</td>
</tr>
<tr>
<td>Four factor model (correlated)</td>
</tr>
<tr>
<td>Mall Awareness (AWA)</td>
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<tr>
<td>Mall Quality (QUAL)</td>
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<tr>
<td>Mall Association (ASSO)</td>
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<tr>
<td>Mall Loyalty (LOY)</td>
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<tr>
<td>Four factor and one second order</td>
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</table>

*Some items were extracted from the analysis according to CFA. Above items belong to last version of the scale*
Reliability, convergent and discriminant validity

Reliability was assessed at two levels; item reliability and construct validity. Table 3 shows the results of item reliability and construct reliability. The reliabilities ranged from 0.68 to 81 thus indicating good item reliability. Composite reliabilities were also high level for the all constructs. Then, convergent and discriminant validity were evaluated. Average variance extracted (AVE) was used to test convergent validity. Hair et al. (1998) and Bagozzi and Yi (1988) suggested 0.50 and above value for the AVE. All AVE values ranged from 0.55 to 0.70. We verified the convergent validity. AVE also was used to discriminant validity by comparing these values with the squared correlations between the construct and all other constructs in the model (Nusair and Hua, 2010). This expectation was satisfied (see table 4). As a result, these two criteria were verified in the analysis.

Table 3. Measurement Model Results

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Variables</th>
<th>Std. Loadings</th>
<th>Item Reliability</th>
<th>Construct Reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td></td>
<td></td>
<td>.79</td>
<td>.82</td>
<td>.55</td>
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<tr>
<td>V1</td>
<td></td>
<td>.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V2</td>
<td></td>
<td>.93</td>
<td></td>
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<td></td>
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<tr>
<td>V3</td>
<td></td>
<td>.65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V4</td>
<td></td>
<td>.81</td>
<td></td>
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<tr>
<td>Perceived Quality</td>
<td></td>
<td>.81</td>
<td>.85</td>
<td>.61</td>
<td></td>
</tr>
<tr>
<td>V6</td>
<td></td>
<td>.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V7</td>
<td></td>
<td>.89</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>V8</td>
<td></td>
<td>.89</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>V9</td>
<td></td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Association</td>
<td></td>
<td>.68</td>
<td>.83</td>
<td>.61</td>
<td></td>
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<tr>
<td>V10</td>
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<tr>
<td>V12</td>
<td></td>
<td>.36</td>
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<tr>
<td>V13</td>
<td></td>
<td>.41</td>
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<tr>
<td>V14</td>
<td></td>
<td>1.0</td>
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<tr>
<td>Loyalty</td>
<td></td>
<td>.74</td>
<td>.87</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td>V18</td>
<td></td>
<td>.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V19</td>
<td></td>
<td>.97</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>V21</td>
<td></td>
<td>.97</td>
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</table>

All factor loadings are significant at p= 0.05
Average Variance Extracted (AVE) = \( \sum (\text{Standardized loadings}^2) / [\sum (\text{Standardized loadings}^2) + \sum e_{ij}] \)
Construct Reliability= \( (\sum \text{Standardized loadings}^2) / [\sum \text{Standardized loadings}^2 + \sum e_{ij}] \)
Table 4. Discriminant validity matrix

<table>
<thead>
<tr>
<th></th>
<th>AWA</th>
<th>QUAL</th>
<th>ASSO</th>
<th>LOY</th>
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</thead>
<tbody>
<tr>
<td>AWA</td>
<td>.55</td>
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</tr>
<tr>
<td>QUAL</td>
<td>.52</td>
<td>.61</td>
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<tr>
<td>ASSO</td>
<td>.49</td>
<td>.60</td>
<td>.61</td>
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<tr>
<td>LOY</td>
<td>.17</td>
<td>.39</td>
<td>.48</td>
<td>.70</td>
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</table>

Conclusions and Implications

The main aim of this paper was to determine whether brand awareness, brand association, brand service quality and brand loyalty factors can be taken as the elements of mall equity elements in a second order context. Three different models were tested for this purpose (Single model, four factor and second order factor model). While none of the models is excellent, the fit of the second factor model is significantly better than the one and four factor model for mall equity based on brand equity elements. The analyses revealed that four main dimensions, namely mall awareness, mall association, mall perceived service quality and mall loyalty were measured better as a second factor model for mall equity. In the other words, all mall equity elements can be loaded to mall equity dimension. These four dimensions have a total of 15 items. In this study, we empirically demonstrate that mall equity structure parallels that of brand equity. Hence, the results of the present study confirm the assumptions of several previous researchers (e.g., Yoo and Donthu, 2001) in that the structure of retailer equity mirrors that of brand equity.

The dimensions obtained provide important implications for mall managers. It enables them to reach the necessary pre knowledge related to the measuring tool. Such a measure permits a better assessment of the right incremental value or equity associated to a given mall. As retailing is facing an immensely competitive environment (Leszczyc et al., 2000) and increasingly heterogeneous customers the strategic importance of brand equity for the marketing staff of the retail sector is highlighted. The retail sector must be committed and consistent with this ingredient branding strategy (In fact, measuring the mall equity helps mall managers to have a better understanding of the long-run effect of their efforts. By using the measure, mall managers can assess the effectiveness of their marketing programs. Particularly, the multidimensional feature of the measure can help mall managers to clearly understand what aspects contribute to the equity of their mall. Thus, mall operators can make an efficient allocation of resources in managing the equity of the mall (El Hedhli and Chebat, 2009; p. 586). In such a context, marketing managers could use the retailer equity as a performance indicator. Better measurement and tracking of retailer equity could contribute to better informed decision-making. In such a complex environment it would be useful for marketers to build retailer equity. Furthermore, the mall equity dimensions identified in the present study could help marketing managers alleviate the complexities in consumer decision making.
Limitations and Directions for further research

Some limitations of the study need to be pointed out. The study is pilot scale measuring mall equity by adding other brand equity dimensions (i.e. loyalty) and adopting a consumer perspective. The sample selected covers the customers of a single city. Personality items could have been added. Future researchers may also want to investigate which additional factors moderate the relationship between brand equity and personality. Finally, a multi cultural study based upon the items and groups determined in this pilot study may lead to interesting results. It is clear that a multi cultural study would make a great contribution in this area since the literature reports that there is a cultural dimension between the customers of different malls (Frasquet et al., 2001). Specifically, additional research should validate the measure by considering different types of malls (e.g., community shopping centers, factory-outlet malls). Researchers (e.g., Yoo and Donthu, 2001) have recommended including brand personality, store image dimensions, and consumers’ price-based associations measures in the measurement of retailer brand equity and future research may decide to incorporate store personality measures in the measurement of retailer equity. Furthermore, future research could examine whether mall equity varies according to consumers’ shopping frequency. Frequent shoppers could be less loyal to a mall than their less-frequent-shopping counterparts.

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