Canonical Correlation Analysis—Examining the Relationship between Consumption Experience and Experiential Value

Fan-Yi Chuang, Graduate Student, Institute of Leisure and Sport Management, Cheng Shiu University, Kaohsiung City, Taiwan
Long-Yuan Lee, Corresponding Author, Department of Leisure and Sport Management, Cheng Shiu University, Kaohsiung City, Taiwan
Lung-Yu Li, Department of Applied Foreign Languages, Cheng Shiu University, Kaohsiung City, Taiwan

ABSTRACT

Experiential marketing has been used as a significant strategy for marketers to rethink their marketing mix recently. Perceived value has also been studied to investigate what consumers really want and how to reach their mind. The purpose of this study was to investigate the relationship between dimensions of consumption value and experiential value toward a sample of resort hotel visitors. Data were collected from 378 subjects (male=221, female=157) by using purposive sampling method. Participants were required to finish the consumption experience and experiential value questionnaire. Data was analyzed by descriptive statistics, reliability and validity test, and canonical correlation analysis. The results of the first canonical correlation function indicated that improvement of visitors’ consumption experience in all five dimensions would increase their perceived hedonic value and utilitarian value. The findings of this research could provide experiential marketers a useful determinant to reinforce their service quality, so that to promote perceived values in the resort hotel industry.

Keywords: Consumption Experience, Experiential Value, Canonical Correlation, Resort Hotel

INTRODUCTION

With the raise of experiencing economy, marketers have paid more attention to rethink their marketing strategy in order to fulfill consumer’s experience and improve their perceived value. So that it became necessary to further understand why individual make a particular decision toward the consumption. Today, what consumers really wants would not only be satisfaction of product function, design, store decoration and service quality, but also the values added gained from during the process, interaction, or feeling of the consumption (Maghnati et al., 2012). The key point of experiencing marketing management is how to create valuable experience to satisfy the need of consumers and raise customer satisfaction in the process of providing products or services (Kotler, 1999). Both academic research and practitioners showed growing interests in understanding the strategic benefits of experiential marketing. Previous research has put efforts on discussing the degree of consumer’s satisfaction with expectation of products or services before consumption and the feeling they perceived after purchased before and after consumption. The difference between expectation and performance will result in unhappy experiences for consumers. Therefore, some researchers were making efforts to study and figure out motivations that might influence consumer’s experiential marketing decision, as well as factors that might have effects on perceived values, specifically during the experiential consumption (Maghnati et al., 2012; Conway & Leighton, 2011; Joy & Sherry, 2003; Pine & Gilmore, 1999).
In practical situation, the hotel industry in Taiwan, specifically the mixed concept of accommodation and leisure oriented resort center has been a huge growth over the past decade. The effect has brought an experiential marketing trend to the industry. However, little attention has been paid to investigate how consumers perceived the consumption experience related to the hotel industry and what potential determinant might influence their responses toward the phenomenon. Thus, it should be necessary to explore the cause association toward consumer’s consumption experience and effect relationships among different situational experience and perceived value of resort hotel visitors. A review of service related literature indicates that there is a direct relation between service quality and behavioral intention (Zeithaml et al., 1996; Bolton & Drew, 1991). However, the consumer’s cognition toward service quality is derived from consumption experience and perceived values themselves, and it has direct effect on consumer satisfaction as well (Sun et al., 2011; Kwortnik & Ross, 2007). The research by Sweeney et al. (2000) indicated that consumers with dissatisfaction with experiences were unable to perceive the value. Consequently, the relationship between satisfaction and consumption experience is significant and would be accompanied with the perceived value. Thus, the current research adopted the experiential marketing perspective, and was to investigate the relationship between each of the variables, naming consumption experience and experiential value. The findings of this research could help hotel marketers and managers to improve consumer relationship quality with respect to issues of experiential marketing.

**LITERATURE REVIEW**

**Consumption Experience**

Experiential marketing has been studied in varies industries, such as bookstore, food and restaurant, hotel, furniture, theme park, and so on. The concept of experiential marketing was proposed by Schmitt (1999), including five dimensions, sense, feel, think, act and relate. Consumption experience conception emphasized not the function, quality or usage of the product, but the related service of products. Comparing with the appearance of physical product, service experience emphasizes the internal and invisible feeling from individuals’ minds, and the feeling is from the interaction process of delivery service. That is, consumers always feel specific stimulation, induce the motive, bring the cognition or purchasing behavior, and then increase value by observing or involvement. Providing consumers with the most valuable consumption experience is more important than traditional brand image and preference (Holbrook, 2000). The related research of experience marketing found that there are significant relevant between consumption experience, customer satisfaction and brand loyalty. Mano & Oliver (1993) suggested that positive feeling experience was form the positive evaluations of interaction with the product or service provided. Moreover, the quality of consumption experience will directly affect the behavioral intentions of consumers, such as positive evaluation, recommending others and the re-purchasing behaviors (Kwortnik and Ross, 2007; Petrick et al., 2001; Parasuraman et al., 1996). In addition, several studies have indicated that providing well consumption experience service would contribute to increase consumer’s perceived values (Williams, 2006; Petrick & Backman, 2002).

**Experiential Value**

Zeithaml (1988) suggested consumers make entire utility evaluation between the sacrifice of perception and benefits. Perceived value can be regarded as the evaluation consumers make to the utility that product or service provided. Monroe and Krishnan (1985) propose that consumers can obtain perceived value by comparing perceived quality and perceived sacrifice. Research into perceived value
has proved that higher perceived value would raise consumer’s purchase intention (Dodds & Monroe, 1985). However, in the study of experiential marketing, consumption value or experiential value was getting more important than traditional perceived value. Several studies have suggested that other factors, such as fun, feeling, emotion, interaction, and aesthetics should be included in perceived value (Mathwick et al., 2002; Pine & Gilmore, 1998; Butz & Goodstein, 1996). Babin, Darden & Griffin (1994) divide perceived value into utilitarian values and hedonic values. Utilitarian values refer to the direct benefits consumers obtain from the product, and it is more functional, while hedonic values are experiential orientation, which indicate the emotional satisfaction from product attributes or usage. Recent studies of service industry support that perceived value have positive effect on satisfaction (Park et al., 2004; Cronin et al., 2000; Hallowell et al., 1996). Consumer’s expectation and perceived quality would have positive effect on perceived value, and positively affect consumer satisfaction by raising their perceived value (Juhl et al., 2002). Perceived value has an impact on word of mouth (Molinari et al., 2008; Dubrovski, 2001; Schneider & Bowen, 1995). Furthermore, studies also indicated that positive hedonic and utilitarian values would have significant effects on consumer’s shopping satisfaction (Cottet et al., 2006; Eroglu et al., 2005; Jason & Ann, 2005).

**METHODOLOGY**

**Sampling Frame**

Because the limitation of accessibility of private sector, the designated resort hotel in southern Taiwan was selected for data collection. A purposive sampling method was used to choose subjects at the front desk of the resort hotel. Trained research personnel also provided assistance of participants. Subjects above eighteen years old and had at least experience once over the past year were eligible for the research. A total of 422 questionnaires were distributed and 420 questionnaires were returned. 378 questionnaires were considered effective for further analysis. The response rate was 89.6%.

**Instrument**

A multi-item scale was used to obtain the data from the voluntary participants. Upon the basis of previous research, the survey was developed, and split into two portions. The first portion used nominal scale to measure respondent’s background, by using demographic statistics variable “socioeconomic characteristics” and “consumption characteristics.” items. The second portion was divided into two parts, “consumption experience” and “experiential value” items. A total of thirty-nine items were composed of the questionnaire. The consumption experience scale was modified from Schmitt’s (1999) study, containing “sense”, “feel”, “think”, “act” and “relate” five facets. A total of twenty-four items was used for measurement. The experiential value was modified from study of Babin, Darden, & Griffin (1994). Eight items were included in “hedonic value” and “utilitarian value” two facets. Respondents were required to value the degree of agreement based on a seven-point scoring Likert-type scale, with 7= strongly agree, 4= neutral, 1= strongly disagree.

**Data Analysis**

Data was analyzed by using SPSS12.0 for Windows statistical software. Descriptive statistics was used to analyze the distribution characteristics of participants. To test validity, exploratory factor analysis (EFA) was performed to reexamine the constructs of consumption experience and experiential value. Then, Cronbach’s alpha estimates were calculated to ensure the consistency of the new dimensions.
identified. Canonical correlation analysis was employed to investigate the relationship between these two constructs. Finally, the path model was conducted to examine effect relationship among variables. According to Hair et al. (2006), the preferable sample size required for factor analysis should be greater than 100. However, at least five times as the number of items was suggested. The minimum ratio of observations to variables regression was 5 to 1. For the SEM, required sample size of 200 was recommended. In the current study, the sample size of 378 subjects was satisfied with the requirement for data analysis.

RESULTS

Subject Characteristics

For the subject characteristics, 221 of the respondents were male (58.5%), while 157 were female (41.5%). In terms of marriage status, 216 of respondents indicated married (57.1%), and 162 were single (42.9%). With regard to age distribution, the age ranged from 18 to 45 years old accounted for about 68.5% (n=223). The majority of occupation rated was government employees and teachers, accounted for 32.5%, following by students (20.4%) and businessmen (18.8%). About 78.6% (n=297) of the respondents held college degrees or above and the income level distributed from 20~50 thousand dollars was about 58.5 percent (n=221). More than 66% of respondents (n=250) reported they were 3-5 times repeated visitors.

Reliability and Validity

Cronbach’s alphas were calculated to ensure internal consistency of the scales. In this study, Cronbach’s alpha estimates for the five dimensions of consumption experience construct were “feel” .899, “sense” .900, “think” .908, “relate”.863, and “act”.888. For the experiential value construct, two dimensions included, “hedonic value” and “utilitarian value” with Cronbach’s alphas of .890 and .928, respectively. All scores were well above 0.70, which meet the minimum acceptable level (Nunnally & Bernstein, 1994).

To examine the validity, the current study utilized exploratory factor analysis (EFA) to examine the underlying dimensions of consumption experience and experiential value. The principal component analysis were used to extract the principal components, selecting components with an eigenvalue greater than 1, using the varimax rotation procedure, and all variables with an extraction of greater than 0.50, and without double loading cross factors. The KMO for the consumption experience construct was 0.868, and 0.835 for the experiential value construct. In addition, the approximate chi-square in the Bartlett’s Test of Sphericity for consumption experience construct was chi-square = 14290.74, df = 276, sig. = .000 and chi-square = 2599.97, df = 28, sig. = .000) for the experiential value construct. Both reached the level of significance, indicating they were adequate for the factor analysis. Five principal factors were extracted for consumption experience construct, which explained 83.88% of total variance, with 41.59% of variance for “feel”, 18.86% of variance for “sense”, 9.70% of variance for “think”, 7.55% of variance for “relate”, and 6.18% of variance for “act”, respectively. And, two principal factors were extracted for experiential value, which explained 81.65% of total variance, with 60.94% of variance for “hedonic value” and 20.71% of variance for “utilitarian value”, respectively. Overall, the values of each factor were above the suggested value of 0.5, which met the least requirement and had convergent validity.
Canonical Correlation Analysis

The purpose of this study was to examine the relationship between consumption experience and experiential value constructs. Using canonical correlation analysis, with dimensions of “feel”, “sense”, “think”, “relate”, and “act” as covariates (X variables), and “hedonic value” and “utilitarian value” as dependent variables (Y variables), this research were trying to figure out the linear relationship between each of the variables. As shown in Table 1, two canonical correlation functions were figured out between consumption experience and experiential value constructs after data analysis. Canonical correlations of both functions reached level of significance ($p<.001$). The percentage of eigenvalue variance explained were 85.302% and 14.698%, respectively. Moreover, the canonical variables of $\chi_1 \cdot \chi_2$ of both covariates explained 56.3% and 18.1% of total variance of $\eta_1 \cdot \eta_2$ of dependent variables.

<table>
<thead>
<tr>
<th>Roots No.</th>
<th>Eigenvalue</th>
<th>% of Variance Explained</th>
<th>Canonical Correlation</th>
<th>Sq. Canonical Correlation</th>
<th>Wilk’s L.</th>
<th>$F$</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.287</td>
<td>85.302</td>
<td>.750</td>
<td>.563</td>
<td>.358</td>
<td>49.816*</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>.222</td>
<td>14.698</td>
<td>.426</td>
<td>.181</td>
<td>.819</td>
<td>20.617*</td>
<td>.000</td>
</tr>
</tbody>
</table>

*p<.050

Results in Table 4 indicate that, for the first canonical function ($\chi_1$and $\eta_1$), the canonical correlation was $.750$ ($F=49.816$, $p=.000$). For covariates, the dimension E5, E2 and E4 were highly correlated with the first canonical variable ($\chi_1$), with a coefficients of .896, .852 and .810, respectively. Following by dimension E3, the coefficient was .450, which had moderately correlation with canonical variable 1 ($\chi_1$). Finally, dimension E1 has a low correlation with canonical variable 1 ($\chi_1$), with coefficient of .210. For dependent variables, both dimension V1 and V2 were highly correlated with the first canonical variable ($\eta_1$), with coefficients of .881 and .864, respectively. The canonical correlation of second canonical correlation function ($\chi_2$ and $\eta_2$) was .426 ($F=20.617$, $p=.000$). For covariates, dimension E4 has a moderate relation with the second canonical variable ($\chi_2$), with a coefficient of -.519. The remaining four dimensions, E5, E1, E2, and E3 were low correlated with the second canonical variable ($\chi_2$), while coefficients were .240, -.106, .071, -.051, respectively. For dependent variables, both dimension V1 and V2 were moderately correlated with the second canonical variable ($\eta_2$), with coefficients of -.472 and .503, respectively.

<table>
<thead>
<tr>
<th>Covariates (Consumption Experience)</th>
<th>Canonical Variables ($\chi_1$, $\chi_2$)</th>
<th>Dependent Variables (Experiential Value)</th>
<th>Canonical Variables ($\eta_1$, $\eta_2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feel (E1)</td>
<td>.210</td>
<td>Hedonic (V1)</td>
<td>.881</td>
</tr>
<tr>
<td>Sense (E2)</td>
<td>.852</td>
<td>Utilitarian (V2)</td>
<td>.864</td>
</tr>
<tr>
<td>Think (E3)</td>
<td>.450</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relate (E4)</td>
<td>.810</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Act (E5)</td>
<td>.896</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Var Extract</td>
<td>48.631</td>
<td>% Var Extract</td>
<td>76.199</td>
</tr>
<tr>
<td>Redundancy</td>
<td>27.363</td>
<td>Redundancy</td>
<td>42.875</td>
</tr>
</tbody>
</table>

$p^2 = .563$ \quad $p = .750***$

$*$p<.001
In addition, Table 4 also presents that 76.199% and 23.801% of variance were extracted from the canonical variable $\eta_1$ and $\eta_2$, and 48.631% and 6.919% of variance from canonical variable $\chi_1$ and $\chi_2$. The percentage of redundancy in dependent variables explained by canonical variables was 42.875% and 4.319%, respectively. That is, through the canonical correlation functions, the five consumption experience dimensions of “feel”, “sense”, “think”, “relate”, and “act” were to explain 52.194% of total variance for the two experiential value dimensions of “hedonic value” and “utilitarian value”. Therefore, the two canonical correlation functions could directly explain 74.4% ($0.563 + 0.181$) of total variance for the experiential value construct. Since the values of canonical correlation and redundancy of canonical function 1 obtained was greater than those of canonical function 2. It was suggested that covariates of consumption experience construct had direct effects on the two dependent variables by canonical function 1. The values of consumption experience dimensions, “act”, “sense”, and “relate” for canonical function 1 were all above .70. And, the values of experiential value dimensions were also above .70. It was said that dimension “act”, “sense” and “relate” had significant effects on dimension “hedonic value” and “utilitarian value”. That means, individuals who had higher level of agreement with act, sense, and relate experiences would perceive higher hedonic and utilitarian values than those with low level of agreement.

**DISCUSSION**

Figure 1 shows a path model of canonical correlation analysis. As indicated in the model, the standardized regression coefficients between covariates and canonical factor $\chi_1$ were -.180, .455, -.201, .353, .507 (correlation loadings were .210, .852, .450, .810, .896). It follows that dimension E1, E2, E3, E4, and E5 all had significant effects on canonical factor $\chi_1$. Further, the correlations between canonical factor $\eta_1$ and dependent variables were .881 and .864. Canonical factor $\eta_1$ was highly correlated with dimension V1 and V2. In light of the findings, Dimension E1, E2, E3, E4, and E5 would have significant effects on dimension V1 and V2 through canonical function 1 ($\chi_1 \rightarrow \eta_1$); that is, consumers’ consumption experiences would affect their perceived experiential values through canonical function 1 ($\chi_1 \rightarrow \eta_1$).
In view of the findings of current study, the result of testing indicated that experiential value would be affected by consumption experience, in terms of feel, sense, think, relate, and act experiences through canonical correlation function 1. The canonical analysis suggests that there is a significant relationship between consumption experience and experiential value. This implies that a successful matching of experience and value is possible for a marketing strategy in resort hotel industry. The five variables have matched important value attributes with hedonic and utilitarian. That means the perception of hedonic value and utilitarian value would be affected by the degree of consumption value. For management implication, to find out the solution of quality consistency could effectively reduce consumers’ dissatisfaction after they making decisions, which might be the key factor of manipulate how consumers evaluate their experiential values.

The current study used resort hotel visitors as empirical example to examine the relationship between dimensions of the constructs by using canonical correlation analysis. It is suggested that future study can use other statistic analysis techniques to figure out the relationship of the variables. Meanwhile, other behavioral variables such as satisfaction, purchasing intention, loyalty, and word of mouth can be considered for further investigation toward the model. On the whole, customer relationship quality is the consequence of the service quality, consumption experience, and experiential value. Further investigation can take this into account to examine the cause and effect relationship between each of the variables.

REFERENCES


