An Examination of Perceived Value Dimensions of Hotel Visitors: Using Exploratory and Confirmatory Factor Analyses

Che-Chao Chiang, Assistant Professor, Department of Leisure and Sport Management, Cheng Shiu University, Kaohsiung City, Taiwan
Long-Yuan Lee, Assistant Professor, Department of Leisure and Sport Management, Cheng Shiu University, Kaohsiung City, Taiwan

ABSTRACT

Visitor perceived value can be a dynamic determinant in affecting the selection of tourism consumption experience. Understanding the perceived value as attendant factors in affecting purchase behaviors is significant to make substantial progress in improving the quality of hotel performance. The objectives of the study area to examine the key aspects visitor perceived value. Further, it is aimed to explore the role of the perceived value on the development of effective marketing strategy. The results of the research have provided a clearly explanation to factors that determine long-term profits to tourism industry. A novel research approach of the combined factor analysis (EFA & CFA) was applied in the present study. The results are consequently used to develop potential marketing strategies for the hotel tourism sector. Management implications and recommendations of the research are discussed.

Keywords: Perceived Value, Exploratory Factor Analysis, Confirmatory Factor Analysis, Hotel Industry

INTRODUCTION

The Asia-Pacific region has been recognized as one of the most attractive destinations for marketers, because of the significant growth rates achieved since 1974 (World Tourism Organisation, 1998). According to a recent survey conducted by Pacific Asia Travel Association (2007), approximately 356 million international trips were made to explore destinations within the Asia-Pacific region in 2006, a 5.3% growth over 2005. Evidence on the growth of international travel by a Moodie report (2008) shows that traveler arrivals in 2007 were 3% higher in the Asia-Pacific region compared to 2006. Above statistics suggest that a great opportunity exists within the Asia-Pacific region for better and more effective marketing strategies to attract and retain the attention of the increasing number of international travelers.

Since the Tourism Bureau of the Ministry of Transportation and Communications of Taiwan announced implementation of tourism policy of the five-day work week, which have formed a new trend in the tourism industry, the number of domestic weekend travelers increased from 56.2% in 1999 to 60.9% in 2003. Over the past decades, Taiwan government has attempted to stimulate local tourism industry by investing approximately US$1.018 billion aimed at growing local tourism. The growth of the hotel industry in Taiwan over the past decade has been significant.

It has also been shown that travelers be likely to spend a significant amount of budget on tourism related products during their trips (Heung and Cheng, 2000). Another recent report by the Taiwan Tourism Bureau has shown that, there are 108,129 rooms in 2678 hotels in Taiwan in 2010. By 2010, the total
number of 102 of international and standard tourist hotels was established including large international
tourist hotels, business properties, and boutique hotels which provide a significant economic contribution
to the national economic development in Taiwan by creating a great number of jobs, taxes, and
investments. It has emerged as an important source of revenue that contributes to the economy of host
destinations. This trend has become one of the notable challenges faced by hotel managers to provide a
satisfactory experience for visitors.

With growing academic interest to the hotel tourism industry, an increasing number of studies has
been increasingly addressing to tourist site selection in the hospitality and tourism literature. A review of
the marketing literature suggests that customer perceived value can be a vital determinant in affecting the
selection of tourism consumption experience for tourists (Murray and Howat, 2002; Petrick, 2002). Examining
customer perceived value can help marketers improve their understanding of why people
make the consumption decisions by evaluating perceived benefits from the service or products. Sanchez,
Callarisa, Rodriguez and Moliner (2006) attempts to elucidate the relationship between perceived value as
an antecedent variable and customers’ purchase experience. Their study has suggested that customer
perceived value would include numerous major dimensions such as, functional perceived value of the
travel agency, functional perceived value of the contact personnel of the travel agency, functional
perceived value of the tourism product, functional perceived value price, emotional perceived value, and
social perceived value. Understanding customer perceived value as attendant factors in affecting purchase
behaviors is significant to make substantial progress in improving the quality of hotel performance.
Additionally, during the early years of tourism development, little attempt was made to understand the
visitor perceived value of tourism product. Thus, the research findings could provide insights to
successful marketing and managerial implications by examining dimensions of customer perceived value
significantly influence customer loyalty in the hotel industry.

RELATED LITERATURE

Perceived Value

The perceived value has been examined by various authors as factor which has a great influence on
the decisions making process of customers. Reviewed literature suggests that the perceived value of
customer play a significant role in determining customer satisfaction, decision making and purchase
behaviors (Kuo, Wu and Deng, 2009; Reid, Pullins, and Plank, 2002). In addition, the reviewed study on
perceived value indicates that perceived value is considered as a significant element in affecting
consumers’ consumption and decision making behaviour (Kuo, Wu and Deng, 2009; Eggert & Ulaga,
2002; Reid, Pullins, and Plank, 2002; Cronin, Brady, & Hult, 2000). Among these notions, customer
perceived value can be described as the evaluation of comparing the perception of typical perceived value
and real outcome of purchase experience. On this basis, the tourist is probable to interrelate with various
components of the tourism product, evaluate these tourism experiences and form their impression of the
trip related experience. In fact, in tourism marketing research fields, researchers have shown that creating
customer value has been increasingly considered as helpful antecedent to gain a competitive advantage
(Macdonald, Wilson, Martinez, & Amir, 2011; Wu & Liang, 2009; Sweeney, Soutar and Johnson 1999;
Woodruff 1997).

Many recent studies show that travel experience of actual visitation are actually affected by the
tourist are effective in the perception of perceived value (Tian-Cole, Crompton, & Willson, 2002; Cronin,
Brady and Hult, 2000; Ekinici, Riley, and Chen, 2000). Clearly, the findings from these studies have
added to the customer perceived value can enable service providers to fulfill their expectations and needs associated with various tourism performance. As a consequence of the reviewed studies, the concepts of perceived value in relation to their socio-demographic characteristics have been regarded as the imperative determinants in predicting customer relationship quality and customer loyalty. In this regards, a better understanding of how to creating and delivering value to consumers could help managers to develop more effective strategies. In responding to this concern, the main purpose of the study is to investigate the main components of perceived value to provide insights of delivering supplementary value of tourism performance to prospective customer in the hotel industry.

**METHODS**

**Data Source**

The proposed conceptual model was developed on the basis of the findings of the visitors’ perceived value regarding the hotel industry in previous research. The proposed model in this study should be regarded as a basis provides insights regarding the perceived value in order to improve the efficiency of management in the hotel industry. A multi-item scale was used to obtain an overall estimation of the perceived value of visitor in the hotel industry. Twenty-four questions were designed to determine the importance of each value attribute in relation to the target hotel visitors to Taiwan. A five-point labeled Likert-type scale was used. Respondents were required to give a rating between 1 = not important and 5 = very important for each of the visitor value variables included in the questionnaire. Based on the above review of tourism literature, the measuring items of the perceived value for selecting the hotel during the trip were selected from previous relevant tourism studies (Macdonald, Wilson, Martinez, & Amir, 2011; Wu & Liang, 2009; Nasution & Mavondo, 2008; Sweeney, Soutar and Johnson 1999).

Comrey (1973) recommended a sufficient sample size derived from the entirety of usable questionnaires. He graded a sample size of 100 as being poor, 200 as fair, 300 as good quality, 500 as great and 1,000 as outstanding for conducting studies. In sum, it can be concluded that a sample size of 400 cases should be appropriate for most studies. Hence, the minimum sample size of this present research was N = 369 for conducting statistical analyses. The qualifying question for the study involved the respondent having stayed in a hotel within the past 2 months. Of the 369 visitors achieved to fulfill the questionnaire of a hotel stay within the last year (i.e., 89% net response rate). The questionnaire developed for achieving the purpose of current study consists of two foremost parts. The first division refers to visitor characteristics and contains questions concerning age and educational level of respondents, occupation and Annual household income (NT$) of respondents, the reason of visit, the city they come from, the transportation that they use, their membership statement. The second divisions of the questionnaire are developed to ask them to express the levels of value evaluation, according to a set of the criteria and sub-criteria from visiting the international hotels in Taiwan. A pre-test was subsequently conducted, using a convenience sampling technique on visitors (n = 50) with the purpose of checking on misunderstandings or other problems associated with the questionnaire. It was carried out at the at the YOHO beach resort in Taiwan in September 2012. It was considered as validated for the main survey through a pilot survey. In this study both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were applied in the current study to understand which aspects may constitute underling visitor value dimension.
RESULTS

General Profile of Respondents

The findings regarding demographic information of respondents have indicated that 131 (35.5%) of the respondents were female visitors; 238 were male visitors (64.5%). More than half of the respondents described being single (n=177; 48%); married (n=170; 46%), and others (n=22; 5.9%). Of the total participants, 79 (21%) were ages between 18 and 25 years; 119 (32%) were between 26 and 35; 83 (22%) between 36 and 45; and 92 were others (25%). With regard to respondents’ education levels, the majority of respondents had a bachelor degree (n=132; 35%); followed by high school degree (n=84; 22.8%); and others (n=154; 42%). About 36 per cent (17.8%) of them had an annual income of US$650 to 1,000; followed by US$ 1,001 to 1,350; and others (52%). The results finally demonstrate that majority of respondents were more likely to be female 65%. The age group of 26 to 35 years accounted for 32% of respondents. With respect to occupation, Table 1 shows that respondents were mostly high school degree (approximately 41%), while the most common monthly income level for respondents was US$650 to 1,000 (approximately 36%).

The study has summarized self-reported visitor travel behavior. Viewing visitors travel behaviors in a hotel, 35 (9.5%) of the visitors were recognized as members to the hotel. Of all the respondents, 80.5% were nonmembers. The majority of hotels’ visitors were traveling with their friends or colleagues (41.5%), followed by with partner or family (35.5%), and others (23%). Of all the respondents, 44.4% were searching the information from their family or friends. The majority of respondents (49.9%) were stated to stay 2 – 3 days in the hotel. Respondents (35.8%) who were spending US$100 to 200 per day in the hotel were appeared the most popular expenditure group while during their trips.

Factor Analysis

Exploratory factor analysis (EFA) with varimax rotation was employed to survey data to identify the dimensions of key constructs of the conceptual model. The assumptions of factor analysis were conducted by the Bartlett test of sphericity and the measure of sampling adequacy (MSA). Items with factor loadings of 0.4 or higher were considered as acceptable variables to measure constructs (Tinsley & Kass, 1979; Hair, Anderson, Tatham, & Black, 1998). The factors with Eigenvalues greater than 1.0 were considered significant. An initial step to conducting principal components analysis with orthogonal varimax rotation was to firstly carry out the Bartlett test of sphericity value and the Kaiser-Meyer-Olkin (KMO) overall measure of sampling adequacy, in order to confirm the acceptability of the factor examination. The KMO score of sampling adequacy was reported on 0.942 while the Bartlett test of sphericity had a value of 6392.952, df of 276 (p value = 0.00). Both examinations indicated that factor analysis was suitable for this study. This result showed that the data matrix was appropriate to have factor analysis performed on it. By doing so, this method provides an enhanced understanding of key subordinate dimensions toward perceived value that may more accurately describe the interdependency of the 24 items used to measure perceived value of visitors. Based on the scores of loadings of the factors, those factors derived are labeled as (1) experiential value (eigenvalue =11.833, explained variance =49.512%), (2) physical value (eigenvalue =1.933, explained variance =8.053%), (3) cultural Value (eigenvalue =1.272, explained variance =5.301%), (4) Value for community (eigenvalue =1.086, explained variance =4.524%), and (5) Value for Money (eigenvalue =1.002, explained variance =4.173%). Those five factors with eigenvalues above one were extracted explaining 71.564% of the overall variance associated with visitor perceived value.
The present study employed a reliability analysis to determine the reliability and consistency of the measurement scales used in this study. Cronbach’s alpha was employed to assess the reliability of the measurement scale of the study. Analysis findings indicated that the Cronbach’s $\alpha$ values for the various dimensions were as follows: 0.905 for value for service experience; 0.906 for functional value; 0.911 for cultural value; 0.865 for value for community; and 0.799 for value for money. Because Nunnally (1978) and Nunnally and Bernstein (1994) determined that $\alpha$ values exceeding 0.7 are acceptable, all the dimensions proposed in this study reached appropriate reliability levels.

Table 1: Exploratory Factor Analysis (EFA) of Visitors’ Value in Hotel Industry

<table>
<thead>
<tr>
<th>Dimensions of Visitor Value</th>
<th>Value for Service Experience</th>
<th>Functional Value</th>
<th>Cultural Value</th>
<th>Value for Community</th>
<th>Value for Money</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff knowledgeable that his duties</td>
<td>0.750</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>To provide the accurate service</td>
<td>0.716</td>
<td></td>
<td></td>
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<tr>
<td>To provide prompt service</td>
<td>0.685</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Try to understand my wants</td>
<td>0.676</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff has good professional knowledge</td>
<td>0.659</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To provide constructive service</td>
<td>0.640</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To provide attractive leisure activities</td>
<td>0.574</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good building maintenance</td>
<td></td>
<td>0.766</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-quality furniture</td>
<td></td>
<td>0.745</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean and tidy environment</td>
<td></td>
<td>0.723</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>A high-quality restaurant environment</td>
<td></td>
<td>0.709</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>High-quality food</td>
<td></td>
<td>0.650</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To provide outdoor explanation activities</td>
<td></td>
<td>0.786</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve the quality of life</td>
<td></td>
<td>0.765</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Various dining</td>
<td></td>
<td>0.730</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhance the psychic life</td>
<td></td>
<td>0.692</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhance the educational quality of life</td>
<td></td>
<td>0.617</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive the development of tourism industry</td>
<td></td>
<td>0.823</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhance the local economy</td>
<td></td>
<td>0.820</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Recognition of local culture</td>
<td></td>
<td>0.799</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practical Facilities</td>
<td></td>
<td>0.515</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeling leisurely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.832</td>
</tr>
<tr>
<td>Spend is worth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.764</td>
</tr>
<tr>
<td>Satisfaction of cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.540</td>
</tr>
<tr>
<td>Eigen-value</td>
<td>11.883</td>
<td>1.933</td>
<td>1.272</td>
<td>1.086</td>
<td>1.002</td>
</tr>
<tr>
<td>% of variance explained (Total=71.564%)</td>
<td>49.512</td>
<td>8.053</td>
<td>5.301</td>
<td>4.524</td>
<td>4.173</td>
</tr>
<tr>
<td>Reliability Cronbach’s $\alpha$</td>
<td>0.905</td>
<td>0.906</td>
<td>0.911</td>
<td>0.865</td>
<td>0.799</td>
</tr>
</tbody>
</table>

Kaiser-Meyer-Olkin (KMO)=0.942, Bartlett test=6392.952, D/F=276, p=0.00

Source: Author’s data analysis 2012.

In this study, the structural equation modeling technique was applied to confirm the five-factor model was the best fit for the data. The assessment results of confirmatory factor analysis using AMOS 18.0 were provided in table 2. As this was the first study to examine the factor structure of the perceived value among hotel visitors to Taiwan. Confirmatory factor analysis with maximum likelihood, using MOS18.0 to be conducted, based on the recommendation of Cole (1987) the goodness of fit was evaluated using four criteria: chi-square goodness-of-fit; the goodness-of-fit (GFI), the adjusted goodness-of-fit (AGFI), and the root mean-square residual (RMSR).
The goodness of fit of the proposed model of confirmatory factor analysis is commonly viewed as evaluating a few fit indices (Kline 1998). It has been suggested that the chi square ($\chi^2$) value, which reflects the inconsistency between model-implied covariance and observed sample covariance. The value chi square ($\chi^2$) statistic preferably to be small and insignificant. Additionally, the value of CFI and NFI are suggested to be ideal indices to recognize normed fit index (Bentler 1990). Researchers have suggested that the value of RMSR is examined to evaluate the goodness of fit of a model by testing root mean square residual. All these indices ought to be larger than .90 for the model to be considered as acceptable (Hair et al. 1998).

Chi-square and fit indices were employed to examine the overall fit of the model. The results are shown in Figure 2. The chi-square goodness of fit statistic for 787.317; degrees of freedom was 242, $p=0.00$. The significance of the chi-square indicated that the model reflected the pattern of covariance confined within the raw data. The CFA analysis of the overall pattern and GFI value of 0.847, AGFI value of 0.810 which is close to the criteria of 0.9 as recommended by Arbuckle and Wothke (1999) and SRMR value of 0.036 (<0.1) indicate good fit. Furthermore, fit indices NFI reaching 0.880 and CFI reaching 0.847 as well as $\chi^2$/df reaching 3.253 as (1~5) also indicates good fit. The RMR was 0.036, which slightly minor than the criteria of 0.05 as recommended by Browne and Cudeck (1993). The RMSEA was 0.078 , which slightly minor than the criteria of 0.08 as recommended by Browne and Cudeck (1993).

| Table 2: Estimates of Confirmatory Factor Analysis (CFA) of Visitors’ Value in Hotel Industry |
|---------------------------------|--------|---------|---------|---------|---------|---------|---------|
| $\chi^2$ | $\chi^2$/df | GFI | AGFI | NFI | RMR | RMSEA | $p$ |
| Value   | 787.32 | 3.253 | 0.847 | 0.81 | 0.88 | 0.036 | 0.078 | 0.00 |

Source: Author’s data analysis 2012.
DISCUSSIONS

The results of the research have provided a clearly explanation to value factors at market segment level in the hotel industry. Understanding perceived value is beneficial to marketing managers and researchers as key for developing useful strategies (Cronin, Brady, & Hult, 2000; Eggert & Ulaga, 2002). The finding of the research has indicated that the perceived value is viewed as an effective predict role to determine their selection to the hotels. The study found that components of visitor value including value for service experience, functional value, cultural value, value for community and value for money were significant in determining the hotel selection. These results are similar to the results of Li, Li & Kambele (2012) study.

On the basis of the result, it is suggested that improving the five aspects of visitors’ perceived value should enhance consumers’ positive sentiment of hotel image, as the types of fundamental factor to influence their future intentions of consumption of services. Particularly, it would be useful for hotel manager to provide value concerning service experience attitude and support to local community to visitors.

Overall, the findings of the study offer some empirical insights into visitor segments and advocate that regeneration of key value aspects, through the two states of factor analysis approach, can promote better understanding, as the focus would be more accurate in the hotel industry. The present research should be of value to both destination tourism marketers and event organizers in the context business tourism, particularly in Taiwan. In targeting the hotel visitors, hotel managers may need to consider new marketing campaigns of events at the end of radio or TV commercials to advise potential travelers to come and take part in their events. More extensive tourism information regarding various outdoor tourism activities and cultural attractions in the hotel should be provided by these marketing campaigns.

Because the hotel segment is not homogeneous and relative importance of visitor value attributes in the establishment procedure might differ across nations, more empirical study addressing visitor hotel selection is needed.

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