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## **Cover Page Footnote**

The author owes special thanks to Rosen College of Hospitality Management for the Research Grant that made this study possible. Also, she thanks the editor and the reviewers of JTI for improving the manuscript.

**RESPONDENT RATED IMPORTANCE VERSUS CALCULATED  
SIGNIFICANCE: WHICH IS MORE VALID?**

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## **RESPONDENT RATED IMPORTANCE VERSUS CALCULATED SIGNIFICANCE: WHICH IS MORE VALID?**

### **Abstract**

Importance rating scales are utilized to define the importance of factors for certain behavior of different study populations including consumers. However, the findings on important factors are usually not checked for validity by comparing with different methods. The current study compares a direct measure with an indirect measure: 1) respondents' importance ratings of consumer based brand equity (CBBE) components on their choosing a destination for their next vacation (an indicator of loyalty); 2) calculated significance of the same CBBE components on affecting their likelihood to visit a destination (an indicator of loyalty). Results show that the direct measures, or respondents' importance ratings provided by consumers, may not mirror those of calculated significance by indirect measures such as regression analysis.

**Keywords:** importance scales, gap analysis, consumer-based brand equity, loyalty, value

### **INTRODUCTION**

Importance scales are well-accepted by researchers in many areas of inquiry including tourism and hospitality. Since the introduction of importance-performance analysis (IPA) by Martilla and James (1977), the ratings of attributes of products, personnel, or service has become a common research practice. The specific methodology provided by Martilla and James (1977) has received wide acceptance as well as critiques. However, one issue is overlooked about the measurement of the importance of a concept from consumers' perspective: the truth in respondents' rated importance of a factor. When respondents rate an attribute as highly important in this type of direct measures, would this rating validly imply or predict those related behavior variables?

The purpose of this study is to answer this question by comparing the direct measure, the rated importance, with an indirect or calculated measure, calculated significance. Consumer-based brand equity (CBBE) components were used in the current study for both importance and performance ratings. CBBE is the total meaning of a brand for consumers including familiarity, image, quality, consumer value, brand value and loyalty (Aaker, 1996a,b; Keller, 1993, 2003). With the

logic of loyalty being more likely to be dependent on other factors, loyalty was treated as the dependent variable that is influenced by the other components of CBBE in this study. A popular theme park destination repeatedly visited by both domestic and international visitors, Orlando City of Florida, USA, was used as the study destination.

## **IMPORTANCE SCALES**

Martilla and James (1977) introduced the Importance-Performance Analysis by suggesting that “(a)n easily-applied technique for measuring attribute importance and performance can further the development of effective marketing programs” (p. 77). In this first introduction, they listed a few service attributes to be rated on importance from the respondents’ perspective followed by their rating of the performance of the service provider. Then, based on importance and performance ratings of each item, they suggested placing them on a four quadrants: “concentrate here,” “keep up the good work,” “low priority,” and “possible overkill.”

Many researchers practiced this form of measuring consumer perceptions (e.g. Evans and Chon, 1989; Hawes and Rao, 1985; Jang and Cai, 2002; Kim and Jogaratnam, 2002; Zhang and Lam, 1999). The main purpose of using IPA scales is to measure and compare importance of factors for respondents as opposed to the performance of a product on those factors, with the intention of providing strategic directions for the product, the brand or the firm. When used for this purpose, the same attributes in the importance scale are also used in the performance scales with different anchor labels such as poor-excellent. Depending on the context of the study, this technique typically is used for measuring satisfaction by evaluating the gap between the importance level of an attribute for the respondent and a product’s performance on the same attribute. For example, O’Leary and Deegan (2005) used importance-performance scales to identify the importance of some destination image attributes for a specific segment of respondents and how a destination performs on those attributes for a this segment. The same gap analysis is also used in measuring the perceived quality of products and services. Parasuraman, Berry, and Zeithaml (1988, 1991) developed the SERVQUAL scale that measures the expectation-performance gap, which received much attention from diverse fields.

Despite their popularity, these dual measurement scales received some critiques as well. Some researchers cautioned about depending on the results of the importance-performance scales due to the lack of standards or clear guidelines in definitions of importance as opposed to other concepts such as expectation, in

rated attributes, in directional nature of the scales, in the statistics reported, in placement of attributes on the quadrants and even the practical implications drawn from results (Oh, 2001; Matzler, Sauerwein and Heischmidt, 2003). The SERVQUAL scale also received several critiques because it included many long statements (22 items) with reversed polarity of the items requiring two administrations of the instrument - similar to IPA scales. Researchers were concerned about potential respondent error, boredom, confusion and fatigue due to the scale structure. With the lessons learned from SERVQUAL critiques, Cronin and Taylor (1992) developed a performance-only scale (SERVPERF) to measure the quality of service products.

Thus, depending on the purpose of the study, performance-only or importance-only scales have also become a common practice. Importance scales are used to measure the importance of certain factors for various tourist behavior. One area of research that importance scales are commonly used is travel needs and motivation where researchers endeavor to identify reasons for travel by allowing travelers rate the importance of diverse potential reasons (e.g. Jang and Cai, 2002; Kim and Jogaratnam, 2002; Zhang and Lam, 1999).

The use of *importance* as scale anchors rather than *agreement* or *accuracy* is due to its potential to reveal the predicting power of a factor as a cause of a consumer behavior. For example, if respondents deem a destination attribute as important for visiting a destination, a high rating on that destination attribute may imply high likelihood to visit. With this assumption, Gartner, Tasci and So (2007) used the importance-only method to identify the relative importance of consumer-based brand equity (CBBE) components on influencing intention to visit Macau, (i.e. consumer loyalty for Macau). Such research may provide insights for practitioners in terms of what to focus on for enhancing their marketing metrics. However, respondent ratings may not always represent the reality, and thus, the validity of factors that are revealed as important with descriptive analysis needs to be checked using other analysis techniques.

The purpose of this study is to check the validity of importance ratings on a destination's CBBE components in defining consumer loyalty for the destination by applying a crosscheck between different methods. More specifically, the purpose of the current study is to compare consumers' importance ratings on CBBE components with their significance calculated by ordinary least squares (OLS) multiple regression analysis.

## METHODOLOGY

A cross-sectional survey with a structured questionnaire was used for the objectives of this study. CBBE components including familiarity, image, consumer value, brand value, quality and loyalty were measured twice. Loyalty was used as the influenced factor in both measures. First, respondents rated the importance of each CBBE component as a reason for choosing Orlando for their next vacation. A modified version of CBBE scales developed by Gartner et al. (2007) was utilized in importance ratings, using a 7-point importance scale anchored with 1=very unimportant and 7=very important. Then, respondents rated Orlando on CBBE components including the likelihood to visit Orlando for vacation purposes within the next 12 month, using the 10-point scales, anchored with 1=very low and 10=very high. Orlando's CBBE performance was measured using a slider bar moving between very low and very high for each CBBE component on the Qualtrics setting. Besides, typical socio-demographic questions are included to identify profile of respondents. The survey was designed on Qualtrics and applied to a random sample acquired from Amazon's Mechanical Turk (MTurk), an Internet marketplace of voluntary participants. The survey was administered over an 8-day period to assure diversity in respondents.

A total of 2,475 surveys were collected; however, because of the missing items, the sample ranges between 2388 and 2281 for different variables. SPSS 22.0 was used to analyze the data. Descriptives was performed on 7-point importance ratings of CBBE components and OLS regression was performed on 10-point performance ratings of CBBE components, with loyalty being dependent and all others being independent variables.

## RESULTS

The socio-demographic characteristics of respondents are displayed in Table 1. Respondents were 34 years old on average, equally distributed between males and females, dominated by college/university graduates (54.5%) and single individuals (44%), slightly skewed toward income categories lower than 50K and dominated by White/Caucasian racial background.

The direct measures (respondents' importance ratings) and the indirect measures (calculated significance using regression analysis) were compared to identify the factors influential on consumer loyalty. As can be seen in Table 2 respondents' importance ratings reveal that image, quality and consumer value were the top three most important factors in that order, followed by price premium (brand

Table 1. Sociodemographic profile of the sample

<b>Variables</b>	<b>N=2,388</b>
Age (Years, X)	33.7
Gender (%)	
Male	50.3
Female	49.1
Do not wish to identify	0.5
Level of Education (%)	
High School	20.8
Vocational School/Associate	10.9
College/University	54.5
Master's or PhD	13.4
Other	0.4
Marital Status (%)	
Single	44.0
Married	37.3
Divorced	5.3
Separated	1.1
Living with a partner	11.5
Other	0.8
Family's annual income (%)	
Under 15,000	18.7
15,000 - 24,999	17.3
25,000 - 34,999	14.9
35,000 - 49,999	16.8
50,000 - 74,999	17.9
75,000 - or above	14.5
Race/Ethnicity (%)	
White/Caucasian	74.7
African American	6.6
Hispanic	4.0
Asian	12.1
Others	2.5
Residence- Many different States across the United States	

value), and familiarity as the lowest rated items. However, these results of the rated importance of CBBE factors in choosing Orlando for the next vacation (loyalty) were different from the calculated significance defined by the OLS multiple regression analysis with the likelihood to visit Orlando (loyalty) as the dependent variable and other CBBE components as independent variables.

Table 2. Descriptive statistics of CBBE components as reasons for choosing Orlando for the next vacation (N = 2,342)

Importance of the reasons for choosing Orlando for the next vacation...	Mean*	SD
Image- Orlando's overall image of attractions and activities	5.74	1.311
Quality- Orlando's high quality touristic products and services	5.17	1.393
Consumer Value- Orlando's touristic products offering high value for money	5.13	1.474
Brand Value- Orlando's premium price products and services	4.44	1.575
Familiarity- My familiarity with Orlando	4.28	1.587

\*: 1=Very Unimportant, 7=Very Important

As can be seen from Table 3, except for price premium, all variables were significantly influential on the likelihood of visiting Orlando. In other words, except for brand value, all components of CBBE were significant in explaining travelers' likelihood of visiting Orlando. All coefficients ( $\beta$  values) were positive except for price premium (brand value), which had an insignificant inverse relationship with likelihood to visit. With the largest coefficient (.436), quality perception of Orlando was more influential than all others in explaining likelihood of visiting Orlando, followed by familiarity (.220), image (.153), and consumer value (.093). Familiarity was the least important in the rated importance while it was the second most significant in the calculated significance. Similarly, image was the most important in the rated importance while it is the third on the calculated significance. Stated in a regression function, loyalty for Orlando can be explained by some CBBE components:

$$\text{Loyalty for Orlando (likelihood to visit)} = \text{Constant} + .436\text{Quality} + .220\text{Familiarity} + .153\text{Image} + .093\text{ConsumerValue} + e$$

## CONCLUSIONS

A difference was observed between respondents' importance ratings and calculated significance of CBBE components in influencing consumer loyalty. Respondents' importance ratings revealed image, quality and consumer value, brand value, and familiarity as important, in that order. However, the significance of these CBBE dimensions calculated by the OLS multiple regression analysis revealed that quality perception of Orlando is more influential than all others in explaining the likelihood of visiting Orlando, followed by familiarity, image and consumer value, in that order.

Table 3. Results of regression model test for the relative influence of CBBE components on the likelihood to visit Orlando for vacation purposes within the next 12 months

<b>Model fit Adj.R<sup>2</sup>=0.560 f=589.514 α=0.000</b>						
<b>Dependent Variable: Likelihood to Visit</b>	<b>b</b>	<b>S.E.</b>	<b>β</b>	<b>t</b>	<b>α</b>	<b>T*</b>
<b>Independent Variables</b>						
All measured as a single item with a 10-point scale. 1=Very low, 10=Very high						
(Constant)	-.391	.169		-2.316	.021	
Image	.209	.033	.153	6.320	.000	.324
Quality	.536	.030	.436	18.052	.000	.325
Consumer Value	.126	.024	.093	5.358	.000	.625
Brand Value (price premium)	-.043	.023	-.030	-1.912	.056	.788
Familiarity	.244	.018	.220	13.656	.000	.731

\*: All tolerance values are above the cutoff point of 0.19 (Hair et al. 1998), hence multicollinearity and/or singularity, namely, none of the independent variables have the probability of being a linear combination of other independent variables or have the probability of being dependent highly on other independent variables (Hair et al. 1998).

These differing results put the benefit of importance scales for the purpose of understanding the reasons behind consumer behavior such as, needs and motivation, satisfaction, quality perception, destination image, destination choice or any other factor. Use of importance scales may require careful interpretation of consumers' ratings on factors as important reasons for their behavior, especially when these measures are used to provide strategic directions for specific products, brands and firms. Respondent ratings may need to be double checked through calculated measures for robustness of findings.

Future research is needed to check for the validity of importance ratings in different study contexts. In the context of CBBE components affecting loyalty, importance ratings seem to be questionable based on different results in calculated estimates. However, in other contexts, it may reveal more robust results due to different nature of the construct. For example, in the context of travel needs and motivation, consumers may provide more reliable responses since they would be rating statements about themselves rather than statements about a destination. Also, the current study is conducted on an online platform, where the reliability of responses may be hindered by the nature of the communication medium. These results need to be tested using different communication media such as face-to-face and mail.

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