



The different effects of dis-satisfier, satisfier and delighter attributes: Implications for Oktoberfest and beer festivals

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ABSTRACT

The Oktoberfest in Munich is the largest beer festival worldwide; for the first time, a third party was allowed to do a visitor survey as part of the festival. The study's aim was to assess the role of attribute performance on overall satisfaction. Before this assessment; the relevance of attributes was unclear leading to beer tent operators' planning based on their own assumptions. To minimize earlier weaknesses, the study used moderated regression, included key control variables (gender, age and repeat visitors), and used a three-factor model of attribute categories. 1268 questionnaires were completed; the 16 attributes investigated in this study resulted in 11 defined as satisfiers, two dis-satisfiers and three delighters. In general, findings indicated traditional culture and party atmosphere were anticipated basic elements. The 11 satisfiers were also anticipated but required high perceived performance to enhance overall satisfaction as well as to allow unanticipated delighters to impact satisfaction.

1. Introduction

Festivals are an important economic driver and segment of tourism; Oktoberfest is an international festival with a long history, strong name recognition and an important economic driver of tourism in its own right. The Oktoberfest name serves as an “identifier” (e.g. brand name) that creates meaning to consumers as to expected benefits that range from problem-solving benefits (e.g. entertainment) to core aspects (e.g. food and drink) to, seemingly, non-essential attributes (e.g. Bavarian culture) (e.g., Brechan, 2006). The Oktoberfest festival can be described as part of a growing but under researched area of beer tourism defined as “when an individual purposefully travels to experience beer culture (Bradley, Maples, Lewis, & Berend, 2017: 153)”. In addition to beer culture, Oktoberfest identifiers also include traditional culture, specialty beer, and a party atmosphere as key expectations of the experience.

The experience derived from attendance at Oktoberfest or other festivals is a complex phenomenon impacting satisfaction, positive word-of-mouth and loyalty (Manthiou, Lee, Tang, & Chiang, 2014). Earlier research has indicated that businesses should use the concept of an experience as a method to devise memorable events for guests (Pine & Gilmore, 1999). This experience approach addresses the shift from spending based on physical goods to various experience products

and services (Palmer, 2005). Thus, the need for festivals and businesses to create a desirable experiential environment has been deemed essential to customer loyalty, satisfaction and competitive advantage (Manthiou et al., 2014).

This experience approach demands an understanding of the effect of both functional and experiential attributes on satisfaction and dissatisfaction (Brechan, 2006). Recent research on the economics of Oktoberfest indicated that each year for more than two decades patrons consumed more beer overall and per person – even with higher prices each year. This relationship changed starting in 2013 resulting in a more normal link between still higher beer prices but a change to lower beer demand (Ferdman, 2015). As the study pointed out, it is unclear if this relationship was the beginning of Oktoberfest beer moving from a ‘giffen good’ (where people buy more of it as it becomes more expensive) to a ‘normal good’ - or if this outcome was the result of more overall changes in beer consumption. From an experience perspective, it could be argued that overall beer consumption at Oktoberfest is but one aspect of a bundle of activities that impact perceptions of value and satisfaction. And, the impact among price, consumption and satisfaction on the holistic Oktoberfest beer tent experience may be a function of a hierarchical relationship among core (functional) attributes (e.g. Oktoberfest beer) and experiential attributes (e.g. Bavarian culture, tent

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atmosphere, etc.).

While several recent hospitality and tourism studies have used varying methods to assess the relationship between attribute quality and overall satisfaction, most lack 1) validity in utilizing Kano, Seraku, Takahashi, and Tsuji's (1984) model (Mikulić & Prebežac, 2011), 2) use methods that don't accurately model theorized attribute-satisfaction relationships (Chen, 2012; Lin, Yang, Chan, & Sheu, 2010), or 3) lack an articulation of the non-linear and potentially hierarchical relationship of attribute type (Brechan, 2006; Mikulić & Prebežac, 2011).

The purpose of this study was to assess the relationships among Oktoberfest beer tent attribute quality and the effect on overall satisfaction with the experience while minimizing some of the limitations of the differing methods. Rather than using Kano's model specifically, this study builds on earlier work that described the attribute quality-satisfaction relationship as hierarchical in nature and attribute categories are described as dis-satisfiers, satisfiers and delighters (Brechan, 2006). Second, this study builds on earlier research that uses moderated regression approaches (Chen, 2012; Lin et al., 2010) with the interacting effect of performance level and controls for mixed segments of customers that are likely to impact classification of attributes by type or make categories insignificant. This process enhances our understanding of the Oktoberfest experience and identifies drivers of positive customer outcomes. Additionally, while the findings in this study are not fully generalizable to other beer-related events, the assessment process used provides an important tool for management decision making and future resource allocations. Given the continual increase of breweries in the US and elsewhere (Bradley et al., 2017), it stands to reason that a clearer understanding of the attribute-satisfaction relationship in a beer tourism context will be beneficial.

2. Background

Prior to the analysis, the following sections provide background information on Oktoberfest, gaps in earlier research, and methods used in this study.

2.1. The Oktoberfest experience

Each year Oktoberfest provides a positive impact for the hospitality sector in Munich and surrounding areas. The total number of arrivals and overnights in the Bavarian capital is substantially higher than other German tourist destinations during the Oktoberfest time period. The amount of total arrivals grew from 3.74 million in 2000 to 6.59 million in 2014. The similar development shows the rise of overnights from 7.76 million in 2000 to 13.45 million in 2014. The distribution of arrivals and overnights in Munich is still dominated by inland travelers (Germany and Europe) but has become more balanced over the years. In 2014, 49.5% of all overnight stays in Munich were by foreign travelers with 50.5% being inland travelers (arrivals indicated a similar distribution) (Papke, 2015).

In 2015, the 182nd Munich Oktoberfest opened at noon in traditional fashion with the most important event 'the Anstich' or tapping of the first keg by Munich's mayor (Oktoberfest.info, 2016). The 2015 Oktoberfest in Munich covered 85 acres with 14 festival 'hallst', also known as beer tents. These festival beer tents had an overall seating capacity for about 119,000 visitors. The beer was a special Oktoberfest beer that had a slightly higher alcohol content than a traditional lager or 'Helles'. The beer served came only from one of the six major Munich breweries (Augustiner, Hacker-Pschorr, Löwenbräu, Paulaner, Spaten and Staatliches Hofbräuhaus). The price of beer in 2015 was 10.00–10.40 Euro/l, up from 9.70 to 10.10 Euro in 2014.

Traditional delicacies such as roasted chicken, radishes, Obatzta (Bavarian cheese spread), sausages, grilled fish, roasted ox and, of course, Brezn (large Bavarian pretzel) were served up from 144 caterers. The festival was still organized by the City of Munich and employed a total of 13,000 staff. It also featured 175 rides and shows that

entertained a variety of tastes or interests.

In 2015, 5.9 million people visited Oktoberfest, down from 6.3 million in 2014. A total of 7.3 million liters of beer were consumed (down by 400,000 l from 2014 although beer consumption per attendee was slightly higher in 2015) and the amount of ox consumed was 114, up two from 2014. The largest contingent of visitors was from Munich and Bavaria, followed by patrons from other parts of Germany. Other notable nationalities included Italians and the USA with 17% and 14%, respectively. Attendees 30 and older made up 53% of attendees and 49% of all attendees were women. This diversity made the Oktoberfest a very international event where people from every age group are welcomed and can feel comfortable (Papke, 2015).

For the first time in Oktoberfest history, a third party was allowed to do a visitor survey as part of the 2015 festival. The research survey involved research teams from two universities in the region. The research teams developed a survey instrument to measure the motivation, expectations, and satisfaction in attending a beer tent at the Oktoberfest. This was done in cooperation with the City of Munich's Municipal Department of Labor and Economic Development and Peter Inselkammer, Inc. Therefore, while previous studies have assessed opinions on primary elements of various festivals around the globe (i.e. Manthiou et al., 2014; Morgan, 2009), to the authors' knowledge, no study to date has systematically analyzed the festival experience of Oktoberfest in Munich. Because of this, previous research was unavailable to reasonably predict outcomes for attribute classification. With this said, the Oktoberfest identifier projects several experiences that are likely to be anticipated and thus fall into the dis-satisfier or satisfier category. An inspection of the official website for the Oktoberfest in Munich indicated the following common images and text depicting Bavarian culture, beer consumption, crowds and a festival atmosphere. Therefore, beer tent attributes centered on these concepts are likely to be anticipated and either 'must-be' aspects (dis-satisfiers in not present) or those that impact satisfaction-dissatisfaction depending on level or quality (linear satisfiers).

While the importance of festivals in the tourism industry has been well-established as both attractions, economic drivers and image builders for local communities of a destination, questions remain in this regard for Oktoberfest given limited access by researchers to collect data during the festival and defined elements that drive satisfaction based on target markets defined by demographic and lifestyle characteristics.

2.2. Gaps in methods and models of attribute-satisfaction relationships

Kano's model (1984) of attribute types and relationship between attribute quality and overall satisfaction has been used as a germinal theory but has been criticized for several weaknesses. The primary objective of Kano's model was to objectively assess functional and dysfunctional product attributes and the impact on customer satisfaction. Weaknesses in the method proposed by Kano et al. (1984) include a time-consuming and costly process, weak methods in practice (allocation to attribute categories based on frequencies), reliability and validity not thoroughly tested, and earlier studies supporting a three-factor model (rather than the five-factors proposed) (Arbore & Busacca, 2009).

More user-friendly methods have been proposed and tested with mixed results. Two types include importance-performance analysis (IPA) and penalty-reward-contrast analysis (PRCA). Both of these methods supported a three-factor model but 1) lack sufficient validity, 2) lack theory behind the method, 3) (typically) have a small amount of overall satisfaction explained, and 4) data collection lacks control over the provision/non-provision of an attribute as defined by Kano's original theory (Arbore & Busacca, 2009; Mikulić & Prebežac, 2011).

Several studies in the area of hospitality and tourism have been criticized for using case-based studies and applying the Kano model with inappropriate assessment methods that are unable to identify

attribute categories (Mikulić & Prebežac, 2011). For example, Mathe-Soulek, Slevitch, and Dallinger (2015) combined IPA and PRCA to assess Kano's model. In the study, they also supported a three-factor model (basic, performance and excitement types) in the QSR sector. While the study integrated qualitative and quantitative data, a weakness of the approach was a rather simplistic assessment that lacked the introduction of interaction effects and potential asymmetric relationships to accurately assess attribute categories.

Several studies and theories have supported the notion of a three-factor model of attribute categories described similarly but using differing terms. Rust, Zahorik, and Keiningham (1996) described the three factors as dis-satisfiers (basic/must-be), satisfiers (articulated/performance) and delighters (excitement/wow factors). Brechan (2006) followed Rust et al.'s (1996) approach and notion that the three types followed an hierarchical format but described them as primary (dis-satisfiers), secondary (satisfiers) and tertiary (delighters) factors. The notion of hierarchy of attributes follows the argument that basic attributes fulfill functional (utilitarian) needs, secondary (satisfiers) fulfill non-essential but anticipated hedonic needs, and delighters fulfill unanticipated hedonic needs that are experiential in nature (Brechan, 2006). Following these concepts, the current study used the following terms and definitions for a three-factor model of event attribute categories: dis-satisfiers (essential functional features), satisfiers (anticipated desired features of an event) and delighters (unanticipated, hedonic features that delight already satisfied event participants).

Researchers testing this three-factor model have tried varying methods to more accurately assess attribute categories related to satisfaction and account for asymmetrical and non-linear relationships. Several studies have pointed out the importance of considering the level of attribute performance as well as perceived attribute quality on overall satisfaction outcomes to more accurately assess attribute categories (Chen, 2012; Lin et al., 2010; Mathe-Soulek et al., 2015). Following these recommendations, the current study used a moderated regression approach proposed by Lin et al. (2010) to account for non-linear impacts and provide superior predictability as shown in earlier study.

While event, service or product attributes are likely to be specific to the particular sector or entity, the methods demonstrated in the current study are likely to be useful to assess relationships consequential for resource allocation decisions. Thus, the items used in the questionnaire were developed based on specific interests by both the Oktoberfest professionals and research faculty. The resulting items of interest involved a bundle of key attributes specific to the Oktoberfest experience constructs and their resulting impact on perceived attribute performance and overall satisfaction. Thus, the Oktoberfest attributes used in this study reflect the physical, social and cultural aspects of the experience as defined by a review of earlier research and a synthesis of experts in tourism and Oktoberfest events.

2.3. Attributes and satisfaction

A widely held belief that credits customer satisfaction as a marker of business and destination performance often ties satisfaction to a profit chain based on greater profits associated with higher intentions to return, sales, overall demand and other indicators of success (Mathe-Soulek et al., 2015; McDowall, 2011). While little agreement has been found on primary drivers of festival attendee satisfaction, this lack of agreement may be due to the vast differences in festival context, measurement methods and a lack of connection to theoretical support (Manthiou et al., 2014). The context of the festival experience has been described as a “complex phenomenon” that requires a systematic and comprehensive approach to better understand indicators of satisfaction, loyalty and other successful outcomes (Manthiou et al., 2014: 22; Getz, 2007). Therefore, the capacity to recognize key attributes that are drivers of satisfaction to a festival, such as Oktoberfest, can be a valuable tool for allocation of resources, marketing mix strategies and

modifying offerings to fit group needs or enhance the general experience.

While the successful delivery of satisfactory experiences has been shown to have 1) long-term effects on competitiveness (Ritchie & Crouch, 2003), 2) revisit intentions, 3) recommendations to friends and other actors as well as other forms of positive word-of-mouth (Arbore & Busacca, 2009; Ferguson, Paulin, & Bergeron, 2010; Tung & Richie, 2011), several theories suggest differing methods or connections to assess customer satisfaction. Expectancy theory has been a popular concept of the relationships among prior expectations, actual performance outcomes and satisfaction. While there is dissent on how the components of the expectation-disconfirmation framework interconnect in a tourism context (Smith & Costello, 2009), a basic definition proposes that customers bring a priori expectations of tourism services that impact post purchase satisfaction based on whether actual performance exceeds, meets or does not meet expectations (Pizam & Milman, 1993).

Studies testing the impact of festival attributes, category assessment, and the impact of asymmetric performance on attendee satisfaction have been limited. As pointed out by others, studies considering the relationships among attributes and satisfaction in tourism have had many shortcomings (Mikulić & Prebežac, 2011). To address these shortcomings, Mathe-Soulek et al. (2015) used a research framework adapted from Mikulić and Prebežac (2011) that utilized an importance grid, PRCA and qualitative inquiry for assessing attributes of a QSR drive-through service. While the Mathe-Soulek et al. (2015) study provided several improvements over earlier studies to sort out meaningful attribute relationships, it had several weaknesses. As the authors pointed out, a key weakness was that they ignored the moderating effects in the attribute–satisfaction relationship. The weakness has been shown to inaccurately classify variables (Chen, 2012; Slevitch & Oh, 2010). Other studies have validated the need to utilize a moderated regression approach to classify attributes into quality factors in order to sort out flaws when using more simplistic dummy coding methods and to better understand relationships with satisfaction (Lin et al., 2010). Further, due to the limited access to patrons during Oktoberfest, earlier studies provided little guidance on attribute performance impact on overall satisfaction in the Oktoberfest context.

Therefore, to address gaps in the festival literature, the current study used a moderated approach to assess the impact of Oktoberfest attributes on patron satisfaction. Also, to control for expectation-disconfirmation relationships, the study used a measure of whether or not expectations were met (not met at all to exceeded expectations for each attribute) rather than attribute satisfaction or other performance indicators. This method was used based on the following assumptions. First, it is assumed that tourists or festival attendees select to participate in events based on the importance of attributes of the experience and that they have a priori expectations (Arbore & Busacca, 2009). Further, these a priori expectations are assumed to impact performance perceptions based on individual assessments of whether expectations were not met, met or exceeded (e.g., Pizam & Milman, 1993). Thus, it is assumed that this conceptualization of a festival experience provides a more meaningful understanding of attribute performance and the impact on festival success.

To address identified weaknesses of ignoring moderating effects, the current study also followed the approach proposed by Lin et al. (2010) to more accurately assess key attribute quality categories, to allow a more straight-forward data collection process, and to increase the validity of the classification findings.

2.4. Moderated regression approach

Following three-factor model of attribute types (dis-satisfiers, satisfiers and delighters), the study used a moderated regression format. A common analysis used in early studies was PRCA; the approach simplifies attribute variables into high and low performance categories and

regress overall satisfaction on these dummy variables (Mathe-Soulek et al., 2015). This approach simplifies the method of assessment and interpretation but lacks to fully model potential non-linear relationships based on performance level and artificially minimizes variability in responses (changes data to discrete data points [0 or 1] rather than continuous scale data) resulting in a greater likelihood for miscalculation of attribute categories (Chen, 2012; Lin et al., 2010; Slevitch & Oh, 2010).

Further, a gap remains in the festival literature for assessing quality factor types or the use of expectation fulfillment level as a measure of performance rather than more tautological performance measures either directly measured as attribute satisfaction or closely associated constructs (Chen, 2012; Mikulić & Prebežac, 2011). Thus, the current study used the approach proposed by Lin et al. (2010); this approach addresses flaws of dummy coding methods. Specifically, the moderated approach assesses the moderating effect of perceived attribute quality level, lessens the misclassification of attributes, simplifies the data collection process, minimizes the effects of biased data (the majority of responses being above average in performance) and includes the average (common) attribute performance level, thus, minimizing skewed results due to excluded responses (Chen, 2012; Lin et al., 2010; Mathe-Soulek et al., 2015). Regression model definitions are provided in the Methodology section.

It should be noted that several potential extraneous variables are likely to be present that could impact relationships between the independent variables of interest and the dependent variable (satisfaction) if not partialled out. This gap in earlier assessment has been the lack of control for mixed segments of customers that are likely to misclassify attributes by type or make categories insignificant. Thus, for this study, gender, age, and how often the attendee has been to Oktoberfest were included as controls.

3. Methodology

The study used survey methodology and a three-step moderated regression process. The survey process, measures and analysis are described in the following sections.

3.1. Questionnaire

The survey was carried out in the Armbrustschützenszelt, a beer tent opened in 1895, which has been run by the Inselkammer family since 1990. The questionnaire was available in English and in German and three pages in length (the English version is provided in the Appendix). The questionnaire consisted of items measuring prior expectations, satisfaction based on the beer tent experience, overall experience questions, and demographics. 16 students and two faculty members carried out the survey, in 21 three-hour shifts directly in the tent, from noon until early evening. The beer tent has a large main open area in the middle, different VIP boxes along bordering the main area, as well as a second floor balcony overlooking the main area. The questionnaires were completed by people sitting at beer tables in all areas of the tent. In total 1268 questionnaires were completed, 778 in German and 490 in English. Survey data was collected during the 2015 Oktoberfest from September 20 through October 4, 2015.

A convenience sample was used and has been frequently used in this type of festival research (e.g., Gursoy, Spangenberg, & Rutherford, 2006; Thrane, 2002). While convenience sampling has a number of advantages (expedited collection, cost effective, etc.), it does have limitations such as the ability to draw concrete conclusions and the potential for biased results. To minimize the potential for these limitations, the current study collected the sample from multiple locations in the tent, multiple times of the day, day of week and across different days of the festival. Additionally, key demographic and attendee visitation frequency variables were included in step one of the regression process to partial out these effects from the effects of interest (defining

attribute categories without the effects of age, gender and return visits).

Given a population of 119,000 (total beer tent capacity for the entire festival [8500 average per beer tent]), margin of error ($p = 0.05$) and confidence interval of 95%, this study's sample size was more than adequate to detect effects when present. Second, post hoc effect sizes using partial eta-squared ranged from small to large in size (0.04 to 0.22); observed power was 1.00 well above the minimum of 0.80.

The majority of participants were male (58.3%) vs. female (41.7%); age groups were grouped into five categories: 16–21 years (11.3%), 22–35 years (57.7%), 36–46 years (13.9%), 47–60 years (11.4%), and 60+ (5.6%). 59.7% were from within Germany, 20.6% from other parts of Europe, and 19.4% from outside Europe.

3.2. Measures

The survey instrument included four main sections: 1) number of times attending, 2) tent attribute performance, 3) measures of overall satisfaction and 4) respondent background. Items included in the survey instrument were based on 1) recommendations by research faculty with expertise in tourism and festival research, 2) a review of the literature, and 3) a sample of industry experts in the Oktoberfest field. Thus, construct validity appears strengthened by ensuring items included in the Oktoberfest beer tent experience construct are attributes deemed to be key experiential elements for attendees by a sample of experts. The operationalization of attribute performance follows Oliver's questionnaire approach (1980) adapted for the Oktoberfest event. Satisfaction is a common and long held construct to assess consumer approval (Bowen & Chen, 2001).

Table 1 provides a list of Oktoberfest attributes included in the final survey and the current study. Participants were asked to rate whether the attribute did not meet, met or exceeded expectations. The scale ranged from 1 to 5 with the following anchors: not met at all = 1, somewhat met = 2, met expectations = 3, exceeded expectations = 4, and greatly exceeded expectations = 5. This approach follows relationships expressed in expectancy-disconfirmation theory (Oliver, 1980) where a relationship with satisfaction is proposed based on an evaluation of whether a priori expectations of performance are met, unmet or exceeded. In this study, Oktoberfest attribute performance is defined as how well expectations were met in comparison to a priori expectations for each Oktoberfest attribute. A measure of internal consistency of this section provided good evidence of consistency or reliability with a Cronbach's alpha of 0.87.

The next section of the survey inquired about attendee satisfaction

Table 1
Survey items and coding.

Attribute coding	Complete item wording	Mean (SD)
BavCult	Finding Bavarian culture on the Oktoberfest	3.46 (1.08)
Atmosp	Enjoying the overall atmosphere of the Oktoberfest	3.91 (0.98)
Tradition	Getting in touch with Oktoberfest traditions in the tent	3.75 (1.06)
PartyEnv	Party environment in the tent	3.74 (1.05)
MusicQual	Quality of live music in the tent	3.56 (1.13)
NumPeople	High amount of people in the tent	3.49 (1.09)
Dirndl	Finding lots of people in Dirndl or Lederhose	3.88 (1.04)
NewPeople	Meeting new people	3.47 (1.18)
FunGrp	Having an excellent and fun group experience	4.00 (1.04)
Flirting	Flirting and getting in touch with women or men	3.19 (1.25)
Beer	Drinking a lot of beer without being exposed	3.58 (1.20)
TntAccess	The tent is easy to reach/fast access to the tent	3.69 (1.19)
FoodQual	Food quality in the tent	3.53 (1.07)
BevQual	Beverage quality in the tent	3.83 (1.01)
Shopping	Shopping and special souvenirs in the tent	2.94 (1.19)
Staff	Staff friendliness and competence in the tent	4.10 (1.01)
OverallSat	How would you rate your overall satisfaction with the Oktoberfest tent experience?	4.07 (0.87)

level with the overall event. For this question, the survey used a 5-point scale with 1 = not at all satisfied and 5 = extremely satisfied.

Likert data is frequently skewed due to the discrete nature of the data and the majority of service responses being above average in performance (Lin et al., 2010). In looking at the survey items for skewness, all items were within the range of approximately symmetric to moderately skewed range with the exception of friendliness of staff which was slightly outside the rule of thumb of ± 1. The standard error used to calculate the test statistic indicates a high probability that the population is skewed as well. In addition, the survey items appear to be slightly negative indicating the sample is slightly flatter than a Gaussian distribution. Given the use of regression in this study, there is no assumption of normal distribution of the data but instead assumes homogeneity of variance. An inspection of the residual plots indicated no evidence of violations to this assumption as well as no evidence of serial correlation demonstrated by the Durbin-Watson statistic. During the testing process, Durbin-Watson statistics were run to assess auto-correlation. The statistic for each of the full models ranged from 1.83 to 1.92; these values fall within the critical values of 1.5 < d < 2.5 so we can assume there was no first order auto-correlation in our multiple regression data.

3.3. Control variables

Respondent characteristics have been shown to impact perceptions of satisfaction, quality and other behaviors. Hence, these characteristics are likely to influence relationships between attribute performance and overall satisfaction. While a number of variables could impact results; this study focused on three key variables as controls to partial out these effects from overall attribute performance and the interaction with performance level. To assess these pure relationships, gender, age and times attending Oktoberfest were included in the regression equation first (step 1) to remove their influence (Wiklund & Shepard, 2005). While demographic variables such as gender and age have commonly been shown to influence perceptions in tourism and hospitality settings (Harrington, Ottenbacher, Staggs, & Powell, 2012), differences of first time visitors compared to repeat visitors has also been shown to impact quality and satisfaction perceptions (Harrington, Ottenbacher, & Treuter, 2015; Ryu & Han, 2011). Given the definitions of attribute categories being based (in part) on an anticipated or un-anticipated experience, controlling for the impact of previous event attendance was deemed appropriate.

For this analysis, gender was dummy coded with 0 for female and 1 for male. Age were defined as one of five groups and coded in an ascending fashion (16–21 years = 1, 22–35 years = 2, 36–46 years = 3, 47–60 years = 4, and 60+ = 5). Of those that participated, 30.1% were attending for the first time in 2015; 27.1% of respondents had attended 1–3 times, 9.7% 4–6 times, 5.3% 7–9 times and 28.2% ten times or more. These were coded from 1 to 5, respectively, for the analysis.

3.4. Analysis

Hierarchical moderated regression was used to test Oktoberfest experience attributes as dis-satisfiers, satisfiers, and delighters.

Table 2
Classification of Oktoberfest attributes using moderated regression.

Categories	Change in coefficient R2 in Step 3	Regression coefficients of interaction term
Delighters	Significant	> 0
Satisfiers	Non-significant	NA
Dis-satisfiers	Significant	< 0

Statistical analysis was completed using SPSS 24 statistical software. This study's approach followed the one proposed and tested by Lin et al. (2010) with the addition of important control variables. The hierarchical approach has been shown to be appropriate when testing multiplicative terms in regression analysis (Bagozzi, 1984); the validity has been demonstrated mathematically (Cohen & Cohen, 1983) and with computer simulations (Stone & Hollenback, 1984). In this study, we used a three step process: 1) control variables were run first, 2) the direct effects of each Oktoberfest experience attribute were included in step 2, and 3) the interaction term of Oktoberfest attribute performance × level of performance was calculated (as described in the regression model definitions section) (e.g. Lin et al., 2010) and was included in step 3. To provide clarity in the process used in the analysis, regression model definitions are outlined in the following paragraphs.

With the exception of control variables (described in the following section), a moderated regression model was used in this study and follows the proposed model of Lin et al. (2010):

$$X_{ij} < m$$

$$CS_i = \alpha + \beta_{1j}^* X_{ij} + \beta_{2j}^* X_{ij} \times Z_{ij} \quad \text{where } Z_{ij}, = X_{ij} = m$$

$$X_{ij} > m$$

CS_i denotes the *i*th customer's overall satisfaction using a 5-point Likert-type scale ranging 1 [very low] to 5 [very high].

α = this constant is the average of all reference groups with regard to the DV of interest.

X_{ij} = the performance (non-fulfillment/fulfillment) of the Oktoberfest attribute *j* as perceived by the *i*th customer. Fulfillment level was based on a five-point scale ranging for 1 (expectations not met at all) to 5 (exceeded expectations).

Z_{ij} = the moderator variable designed to confirm the moderated effect for performance of the *j*th attribute from the *i*th Oktoberfest attendee. The character *m* is the average (or in this case when expectations were “met” but neither exceeded nor negatively disconfirmed). Therefore, if the *i*th customer's fulfillment rating for the *j*th attribute was 1 or 2 on the five-point scale, the value was coded as 1. If rating was 3 (of 5), it was coded as 2 and if a rating of 4 or 5 – coded as 3, resulting in three performance levels.

β_{1j} = is the impact of the *j*th attribute on CS_i.

β_{2j} = the coefficient representing the interaction effect of attribute performance and perceived performance level.

Following the recommendations of Hair et al. (2006) and Lin et al. (2010) to avoid collinearity issues, the following steps were used in the regression analysis:

1. The initial regression model (Step 1) included three control variables to partial out their direct influence and compute R².

$$CS_i = \alpha + \beta_{1gder}^* X_{1gder} + \beta_{2age}^* X_{2age} + \beta_{3nber}^* X_{3nber} \quad (1)$$

2. The initial regression model (Step 2) was developed and run to assess direct effects of experience attribute performance and compute ΔR².

$$CS_i = \alpha + \beta_{1gder}^* X_{1gder} + \beta_{2age}^* X_{2age} + \beta_{3nber}^* X_{3nber} + \beta_{4j}^* X_{ij} \quad (2)$$

3. The regression model was revised to include the interaction term (Step 3); The moderated regression was run and ΔR² computed.

$$CS_i = \alpha + \beta_{1gder}^* X_{1gder} + \beta_{2age}^* X_{2age} + \beta_{3nber}^* X_{3nber} + \beta_{4j}^* X_{ij} + \beta_{5j}^* X_{ij} \times Z_{ij} \quad (3)$$

Once regression models were run, the sign and significance of the regression coefficients were used to classify each attribute as a dis-satisfier, satisfier or delighter element (e.g., Lin et al., 2010; Rust et al.,

1996). Table 2 provides an outline of attribute category decision using the proposed method.¹

Following the moderated method tested by Lin et al. (2010) shown in Table 2, the significance of the change in R^2 and direction of the regression coefficient of the interaction term were used as indicators to classify attributes into categories. This classification scheme compares favorably to dummy coding with greater accuracy and less distortion (Lin et al., 2010; Mathe-Soulek et al., 2015). For delighter classification, the change in R^2 must be significant and the beta coefficient greater than zero. Satisfier classification were those that have significant direct effects but non-significant interaction term (based on ΔR^2). Dis-satisfier classification were attributes with a significant change in R^2 (step 3) and beta coefficient less than zero.

4. Results

The moderated regression analysis determined that all 16 Oktoberfest attributes could be classified into three quality types.² For ease of presenting the results, Tables for the Oktoberfest attributes are organized by types. Additionally, the control variables indicated some significant relationships with overall satisfaction.

4.1. Controls

In step 1 of the regression analysis, gender, age group and number of times attending Oktoberfest were included to assess the direct effects and partial out these effects from each attribute and attribute/level of performance interaction term. The three control variables explained just 2% of the variation in overall satisfaction ($p < 0.001$). The coefficient for gender was non-significant. The age group coefficient was significant and positive ($\beta = 0.06$, $p < 0.05$) indicating that older attendees generally had higher overall satisfaction. The number of times attending had the largest coefficient. In this case, there was a negative relationship with the number of times participants had attended Oktoberfest and overall satisfaction ($\beta = -0.12$, $p < 0.001$).

4.2. Satisfiers

The moderated regression analysis determined that 11 out of the 16 Oktoberfest attributes could be classified as satisfiers (Table 3). As shown in Table 2, satisfiers are so defined when the attribute has a significant, direct effect on overall satisfaction that is not moderated by the level of perceived performance. Thus, these attributes can be visualized as one-dimensional or linear relationship between perceived quality and overall experience satisfaction. Of the satisfiers, staff friendliness and competence explained the most variation in overall satisfaction at 22% (Δ in $R^2 = 20\%$) when included in the model ($\beta = 0.46$, $p < 0.001$). The attribute explaining the second highest variation in satisfaction was atmosphere in the tent at 19% (Δ in $R^2 = 17\%$, $\beta = 0.42$, $p < 0.001$). Beverage quality ($\beta = 0.35$, $p < 0.001$) and a fun group experience ($\beta = 0.35$, $p < 0.001$) attributes explained 14% variation each (Δ in $R^2 = 12\%$). Two other attributes also explained the same amount of variation when included in the model; these were experiencing the Bavarian culture (Δ in $R^2 = 10\%$, $\beta = 0.32$, $p < 0.001$) and the quality of music (Δ in

$R^2 = 10\%$, $\beta = 0.30$, $p < 0.001$). The remaining five satisfier attributes were as follows: Food quality explained 10% variation (Δ in $R^2 = 8\%$, $\beta = 0.29$, $p < 0.001$), people in dirndl/lederhose and meeting new people explained 8% (Δ in $R^2 = 7\%$, $\beta = 0.24$ [$p < 0.001$] and $\beta = 0.26$ [$p < 0.001$], respectively), number of people in the tent explained 6% of variation (Δ in $R^2 = 5\%$, $\beta = 0.22$, $p < 0.001$), and tent access explained 6% (Δ in $R^2 = 4\%$, $\beta = 0.21$, $p < 0.001$).

4.3. Dis-satisfiers

The moderated regression analysis determined that two out of the 16 Oktoberfest attributes could be classified as dis-satisfiers (Table 4). Dis-satisfiers are so defined when the attribute and the interaction term with level of perceived performance is significant and negative. This type of attribute can be described as increasing satisfaction at a decreasing rate with higher levels of quality but increasing dis-satisfaction as an increasing rate when quality is sub-par or the attribute is not present as anticipated (Lin et al., 2010). In the full model with party environment in the tent, the model explained 14% in overall satisfaction. The party environment coefficient was significant and positive ($\beta = 0.67$, $p < 0.001$) while the interaction term with level of performance was significant and negative ($\beta = -0.33$, $p < 0.05$). The attribute described as Oktoberfest traditions in the tent explained 14% of variation in satisfaction in the full model (step 3). The Oktoberfest traditions coefficient was significant and positive ($\beta = 0.59$, $p < 0.001$) and the interaction term was marginally significant and negative ($\beta = -0.25$, $p < 0.10$).

4.4. Delighters

The moderated regression analysis determined that three of the 16 Oktoberfest attributes could be classified as delighters (Table 5). Delighters are so defined when the attribute and the interaction term with level of perceived performance is significant and positive. This type of attribute are largely unanticipated to create a wow factor or effect; delighters increase satisfaction at an increasing rate when present but have little effect on dis-satisfaction when quality is sub-par or the attribute is not present (Lin et al., 2010). In the full model with the attribute “flirting and getting in touch with women or men”, the model explained 6% in overall satisfaction. Interestingly, the flirting environment coefficient was significant and positive in step 2 ($\beta = 0.22$, $p < 0.001$) but changed to non-significant with the addition of the interaction term in step 3, which was marginally significant and positive ($\beta = 0.23$, $p < 0.10$). The attribute described as “drinking beer without being exposed” explained 6% of variation in satisfaction in the full model (step 3). The beer consumption coefficient was significant and positive in step 2 ($\beta = 0.19$, $p < 0.001$) but changed to non-significant with the addition of the interaction term in step 3, which was marginally significant and positive ($\beta = 0.26$, $p < 0.10$). Finally, the full model with the attribute “shopping and special souvenirs in the tent” explained 5% in overall satisfaction. The shopping coefficient was significant and positive in step 2 ($\beta = 0.17$, $p < 0.001$) but changed to non-significant with the addition of the interaction term in step 3, which was significant and positive ($\beta = 0.23$, $p < 0.05$).

5. Discussion

This study embarked on assessing the role of various Oktoberfest attributes performance on overall satisfaction of attendees of the 2015 Oktoberfest in Munich, Germany. This process adds to literature in several ways. First, as is commonly perceived and empirically supported in the literature, a variety of attributes create a multi-dimensional construct of product or service quality (Chen, 2012; Slevitch & Oh, 2010). Further, earlier studies have supported the concept that all attributes do not equally impact customer satisfaction or

¹ A three-factor model was used in this study (dis-satisfiers, satisfiers, and delighters). It should be noted that in Kano's model and earlier study (Lin et al., 2010) a fourth category is thought to be present – the indifferent factor. These are defined as having no impact on satisfaction (positive or negative). Therefore, indifferent attributes have no significant main effect relationship with overall satisfaction. In this study, all attributes could be categorized into the proposed three-factor model.

² While the term “factor” was used here, the findings do not reflect factor analysis in the traditional sense. While the authors conducted a separate exploratory factor analysis; the results did not fully match the attribute category classification. This was not surprising due to the impact of significant interactions with level of perceived performance and its relationship with overall satisfaction.

Table 3
Satisfier category IVs with overall satisfaction as DV.

	Step 1: control variables		Step 2: model with attribute		Step 3: with interaction		Category
	β	S.E.	β	S.E.	β	S.E.	
Gender	-0.01	0.05	-0.01	0.05	-0.01	0.05	Satisfier
Age	0.06 ⁺	0.02	0.04	0.02	0.04	0.02	
Number	-0.12 ^{***}	0.02	-0.06 ⁺	0.02	-0.06 ⁺	0.02	
BavCult			0.32 ^{***}	0.02	0.42 ^{**}	0.11	
BavCult × Level					-0.10	0.03	
R ²	0.02 ^{***}		0.12 ^{***}		0.12 ^{***}		
Adj. R ²	0.02 ^{***}		0.12 ^{***}		0.12 ^{***}		
ΔR^2	0.02 ^{***}		0.10 ^{***}		0.00		
Gender			-0.02	0.05	-0.02	0.05	
Age			0.06 ⁺	0.02	0.06 ⁺	0.02	
Number			-0.07 ^{**}	0.01	-0.07 ^{**}	0.01	
Atmosp			0.42 ^{***}	0.02	0.63 ^{***}	0.12	
Atmosp × Level					-0.21	0.03	
R ²			0.19 ^{***}		0.19 ^{***}		
Adj. R ²			0.19 ^{***}		0.19 ^{***}		
ΔR^2			0.17 ^{***}		0.00		
Gender			0.01	0.05	0.01	0.05	
Age			0.05 ⁺	0.02	0.05 ⁺	0.02	
Number			-0.11 ^{***}	0.01	-0.11 ^{***}	0.02	
MusicQual			0.30 ^{***}	0.02	0.22 ⁺	0.11	
MusicQual × Level					0.08	0.03	
R ²			0.12 ^{***}		0.12 ^{***}		
Adj. R ²			0.12 ^{***}		0.12 ^{***}		
ΔR^2			0.10 ^{***}		0.00		
Gender			0.01	0.05	0.01	0.05	
Age			0.06 ⁺	0.02	0.06 ⁺	0.02	
Number			-0.09 ^{***}	0.02	-0.09 ^{***}	0.02	
NumPeople			0.22 ^{***}	0.02	0.18	0.12	
NumPple × Level					0.03	0.03	
R ²			0.06 ^{***}		0.06		
Adj. R ²			0.06 ^{***}		0.06		
ΔR^2			0.05 ^{***}		0.00		
Gender			0.02	0.05	0.02	0.05	
Age			0.05 ⁺	0.02	0.05 ⁺	0.02	
Number			-0.09 ^{***}	0.02	-0.09 ^{***}	0.02	
Dirndl			0.24 ^{***}	0.02	0.31 ⁺	0.12	
Dirndl × Level					-0.06	0.03	
R ²			0.08 ^{***}		0.08		
Adj. R ²			0.08 ^{***}		0.08		
ΔR^2			0.07 ^{***}		0.01		
Gender			-0.01	0.05	-0.01	0.05	
Age			0.05 ⁺	0.02	0.05 ⁺	0.02	
Number			-0.14 ^{***}	0.02	-0.14 ^{***}	0.02	
NewPeople			0.26 ^{***}	0.02	0.44 ^{**}	0.11	
NewPple × Level					-0.19	0.03	
R ²			0.08 ^{***}		0.08		
Adj. R ²			0.08 ^{***}		0.08		
ΔR^2			0.07 ^{***}		0.001		
Gender			-0.01	0.05	-0.01	0.05	
Age			0.07 ^{**}	0.02	0.07 ^{**}	0.02	
Number			-0.10 ^{***}	0.01	-0.10 ^{***}	0.01	
FunGrp			0.35 ^{***}	0.02	0.37 ^{**}	0.12	
FunGrp × Level					-0.02	0.03	
R ²			0.14 ^{***}		0.14		
Adj. R ²			0.14 ^{***}		0.14		
ΔR^2			0.12 ^{***}		0.00		
Gender			0.01	0.05	0.01	0.05	
Age			0.04	0.02	0.04	0.02	
Number			-0.07 ^{**}	0.02	-0.07 ^{**}	0.01	
TntAccess			0.21 ^{***}	0.02	0.27 ⁺	0.12	
TntAccess × Level					-0.05	0.03	
R ²			0.06 ^{***}		0.06 ^{***}		
Adj. R ²			0.06 ^{***}		0.06 ^{***}		
ΔR^2			0.04 ^{***}		0.00		
Gender			-0.01	0.05	-0.01	0.05	
Age			0.04	0.02	0.08 ^{**}	0.02	
Number			-0.09 ^{***}	0.02	-0.09 ^{***}	0.01	
FoodQual			0.29 ^{***}	0.02	0.08	0.11	
FoodQual × Level					0.21	0.03	
R ²			0.10 ^{***}		0.10 ^{***}		
Adj. R ²			0.10 ^{***}		0.10 ^{***}		
ΔR^2			0.08 ^{***}		0.002		

(continued on next page)

Table 3 (continued)

	Step 1: control variables		Step 2: model with attribute		Step 3: with interaction		Category	
	β	S.E.	β	S.E.	β	S.E.		
Gender			- 0.01	0.05	- 0.01	0.05	Satisfier	
Age			0.05 ⁺	0.02	0.05 ⁺	0.02		
Number			- 0.08**	0.01	- 0.08**	0.01		
BevQual			0.35***	0.02	0.15	0.12		
BevQual \times Level					0.21	0.03		
R ²			0.14***		0.14***			
Adj. R ²			0.14***		0.14***			
Δ R ²			0.12***		0.002			
Gender			- 0.03	0.04	- 0.03	0.05		Satisfier
Age			- 0.02	0.02	- 0.02	0.02		
Number			- 0.08**	0.01	- 0.08**	0.02		
Staff			0.46***	0.02	0.38**	0.09		
Staff \times Level					0.08	0.02		
R ²			0.22***		0.22***			
Adj. R ²			0.22***		0.22***			
Δ R ²			0.20***		0.00			

* p < 0.05.
 ** p < .01.
 *** p < .001.

Table 4
 Dis-satisfier category IVs with overall satisfaction as DV.

	Step 1: control variables		Step 2: model with attribute		Step 3: with interaction		Category	
	β	S.E.	β	S.E.	β	S.E.		
Gender	- 0.01	0.05	0.01	0.05	0.01	0.05	Dis-satisfier	
Age	0.06*	0.02	0.08**	0.02	0.08**	0.02		
Number	- 0.12***	0.02	- 0.13***	0.01	- 0.13***	0.01		
Tradition			0.35***	0.02	0.59***	0.11		
Tradition \times Level					- 0.25 ⁺	0.03		
R ²	0.02***		0.14***		0.14***			
Adj. R ²	0.02***		0.14***		0.14***			
Δ R ²	0.02***		0.12***		0.002 ⁺			
Gender			0.01	0.05	0.01	0.05		Dis-satisfier
Age			0.05 ⁻	0.02	0.05 ⁻	0.02		
Number			- 0.13***	0.01	- 0.13***	0.01		
PartyEnv			0.35***	0.02	0.67***	0.12		
PartyEnv \times Level					- 0.33*	0.03		
R ²			0.14***		0.14***			
Adj. R ²			0.14***		0.14***			
Δ R ²			0.12***		0.004*			

* p < 0.05.
 ** p < 0.01.
 *** p < 0.001.

value; thus, considering resource limitations for maximizing performance, it is important for festival destinations and managers to better understand the impact of specific attributes on satisfaction and designate priorities for investment. Because direct feedback of the Oktoberfest experience by attendees in beer tents in Munich has been non-existent, this study contributes greatly to an understanding of these relationships in the context of Oktoberfest or festivals that tap into similar experiences for attendees.

Second, this assessment used a moderated regression approach that addresses many weaknesses of previous methods used in hospitality research and elsewhere (Mathe-Soulek et al., 2015). This method reduces the risk of miscoding due to statistical biases associated with small numbers of low performance levels, which has a tendency to over classify attributes into delighters (Lin et al., 2010). In the case of the Oktoberfest data, low performance (1 or 2 on a 5-point scale) had a small number of relative responses (20% overall) and ranging from 9% to 47% for each attribute. By coding the performance levels at three possible outcomes (1, 2 or 3) to serve as the interaction term, the moderated approach minimized the effect of bias data (high average performance) and was consistent with three-factor models supported in

earlier research assessing linear and non-linear relationships (Arbore & Busacca, 2009).

Third, this current study included three extraneous variables that were held constant to separate their effects on satisfaction from the direct and interacting effects of the 16 attributes of interest. Interestingly, gender had no impact on Oktoberfest satisfaction while older attendees had higher satisfaction on average and attendees that have attended Oktoberfest more often were less satisfied. Therefore, the inclusion of age and the number of times attending a festival are important to be considered when classifying attribute quality or performance.

The 16 attributes investigated in this study were defined into three of the types: dis-satisfiers, satisfiers and delighters. Satisfiers have also been described as one-dimensional; this type of attribute creates a direct relationship between satisfaction-dissatisfaction and can be conceptualized as a straight-line relationship. In other words, when the attribute is provided and of good quality, customers are satisfied, whereas, customers will be dissatisfied if it is not provided or of lesser quality. These attributes have also been defined as primary attributes and are linked to customer requirements to resolve a problem (whether

Table 5
Delighter category IVs with overall satisfaction as DV.

	Step 1: control variables		Step 2: model with attribute		Step 3: with interaction		Category
	β	S.E.	β	S.E.	β	S.E.	
Gender	-0.01	0.05	-0.01	0.05	-0.01	0.05	Delighter
Age	0.06*	0.02	0.06*	0.02	0.06*	0.02	
Number	-0.12***	0.02	-0.15***	0.01	-0.15***	0.02	
Flirting			0.22***	0.02	-0.01	0.09	
Flirting \times Level					0.23 ⁺	0.02	
R ²	0.02***		0.06***		0.07***		
Adj. R ²	0.02***		0.06***		0.06***		
Δ R ²	0.02***		0.05***		0.002 ⁺		
Gender			-0.02	0.05	-0.02	0.05	Delighter
Age			0.07**	0.02	0.07**	0.02	
Number			-0.11***	0.02	-0.11***	0.02	
Beer			0.19***	0.02	-0.07	0.11	
Beer \times Level					0.26 ⁺	0.03	
R ²			0.05***		0.06***		
Adj. R ²			0.05***		0.05***		
Δ R ²			0.03***		0.003 ⁺		
Gender			0.02	0.05	0.02	0.05	Delighter
Age			0.04	0.02	0.04	0.02	
Number			-0.11***	0.02	-0.11***	0.02	
Shopping			0.17***	0.02	-0.05	0.09	
Shopping \times Level					0.23*	0.02	
R ²			0.05***		0.05***		
Adj. R ²			0.04***		0.05***		
Δ R ²			0.03***		0.003*		

* p < 0.05.
** p < 0.01.
*** p < 0.001.

defined by the customer as entertainment, quenching thirst, social interaction, etc.) or are essential in fulfilling requirements (Brechan, 2006).

In the current study, 11 attributes were categorized as satisfiers. These included staff friendliness and competence, tent atmosphere, beverage quality, fun group experience, music quality, Bavarian culture experience, food quality, meeting new people, seeing traditional attire, an appropriate number of people in the tent and tent access. Thus, locations that feature Oktoberfest or similar festivals should ensure that these attributes are of good quality due to the direct linear relationship on a dissatisfaction-satisfaction continuum and are anticipated due to the Oktoberfest identifier.

Dis-satisfiers are also described as ‘must-be’ attributes; with this type, customers will accept the service when this attribute is provided but will feel dissatisfied if it is not provided. The delighters have been described as ‘attractive’ and ‘wow’ factor.

Many researchers have described attribute categories to be grounded in Hertzberg’s two-factor work on job satisfaction (i.e., Hertzberg, 1967; Mathe-Soulek et al., 2015). These two quality factors appear to also fit within a combined framework based on both the disconfirmation paradigm (Oliver, 1980) and the notion of prospect theory (Kahneman & Tversky, 1979), indicating that the potential for satisfaction losses loom larger than gains when customers experience a loss (not getting what was anticipated) vs a gain (getting something not anticipated). But, others have supported a three-factor model as tested in the current study (Arbore & Busacca, 2009; Brechan, 2006; Lin et al., 2010). This three-factor model supports other research considering relationships among higher satisfaction and the impact on behaviors such as customer loyalty and positive word-of-mouth (e.g. Bowen & Chen, 2001) with an implicit connection between delighters-higher satisfaction-loyalty.

In the current study, we used the disconfirmation paradigm to measure attribute performance (based on a priori expectations - if unmet or met). Further, the differentiation between a dis-satisfier and a delighter was operationalized based on a progressively decreasing (dis-satisfier) or increasing (delighter) slope with increasing levels of

performance. In other words, for dis-satisfiers, “the slope is relatively steep at a low performance level ..., but turns [relatively] flat at a high performance level” (Lin et al., 2010: 258). This relationship indicates, while this attribute type is ‘must-be’ in nature, that improvements in the attribute beyond acceptable basic levels have a minimal effect on customer satisfaction. In contrast, with delighters, customers do not have high a priori expectations and these attributes serve as favorable surprises that are believed to delight the customer (Brechan, 2006). This type is operationalized as a flat slope at no or low performance with a progressively increasing slope that coincides with increasing performance levels (Lin et al., 2010: 258). Following prospect theory, researchers have suggested that not getting what you anticipated (dis-satisfiers and satisfiers) will have a larger impact on satisfaction than getting an attribute (or bundle) that you did not anticipate (delighters) (Brechan, 2006: 444). Of course, others have argued that paying attention to and providing these delighters assist in creating a perception of uniqueness and, ultimately, competitive advantage (Mathe-Soulek et al., 2015).

The dis-satisfiers of the Oktoberfest experience included Oktoberfest traditions and party environment in the tent. While these are expected by attendees (explicit in Oktoberfest promotional materials) and, hence, are required to achieve customer satisfaction, exceeding expectations (higher performance levels) did not provide a payoff with substantially higher levels of overall satisfaction for Oktoberfest. Thus, provisions of authentic Oktoberfest traditions and party experience are necessary but higher investments beyond what is expected are unlikely to provide sufficient return on investment in the form of higher guest satisfaction.

In contrast, the delighters were unexpected attributes that impacted satisfaction in a positive way but would not lead to dissatisfaction if not present. Oktoberfest delighters included three items: 1) flirting and getting in touch with women or men, 2) the ability to consume beer without being exposed to worries about driving under the influence of alcohol, etc., and 3) shopping and special souvenirs available in the tent. These features were generally not expected by Oktoberfest attendees indicating these are attributes specific to the Oktoberfest tent experience and have/or have the potential to create ‘wow’ factors for

attendees, a unique bundle of experience attributes, and a competitive advantage for the Oktoberfest brand. In the hierarchy of product or service attributes, these types of features have been called augmented features or tertiary attributes (unanticipated, non-essential features) (Brechan, 2006). Researchers have proposed differing impacts of delighters on customer outcomes. Rust et al. (1996) suggested that delighting the customer by delivering more than expected impacts intentions to return/purchase and positive word-of-mouth. Following the operationalization of delighters, these additional behaviors are believed to be possible only if the customer is already satisfied. This points to the importance of ensuring that dis-satisfiers and satisfiers are of good quality for delighters to impact satisfaction. In other words, if dis-satisfier and satisfier attributes are of poor quality, it is unlikely that delighters will positively impact satisfaction and other behaviors (i.e. loyalty). Thus, there appears to be somewhat of a hierarchical relationship of attribute types to impact on customer satisfaction: 1) dis-satisfiers, 2) satisfiers, and 3) delighters (e.g., Brechan, 2006; Rust et al., 1996).

6. Conclusions

The current study provided a better understanding of Oktoberfest attribute classification using a moderated approach to assess the impact of performance level and partial out main effects of gender, age and repeat attendance. The approach has been validated in other service settings (Lin et al., 2010) and was operationalized based on descriptions for a three-factor model. This process addresses concerns and weaknesses in earlier studies in hospitality or food & beverage (Chen, 2012; Mathe-Soulek et al., 2015) and weaknesses of the original process described by Kano et al. (1984). Results determined three categories of attributes that are important for considering resource allocation priorities of a region or firm. As a whole, it is apparent that festival attributes are likely to follow a hierarchical process for their impact on customer satisfaction.

The dis-satisfiers are those that are anticipated to be present and lead to dissatisfaction if not present. However, when present and expectations are met or exceeded, customer satisfaction increases but at a decreasing rate. This finding indicates that their presence is needed to reduce dissatisfaction whereas more spending is unlikely to achieve a substantial return on investment in the form of higher satisfaction. Therefore, the Oktoberfest attributes of Oktoberfest traditions and party environment in the tent are foundational attributes necessary to minimize the potential for attendee dissatisfaction and to facilitate greater satisfaction via satisfiers and dis-satisfiers.

The second category of attributes in the hierarchy comprises satisfiers which are thought to exist on a dissatisfaction-satisfaction continuum. This category of attributes is also anticipated and needs to be of good quality to create satisfaction. In contrast to dis-satisfiers, the allocation of resources for attributes that can be classified into this category are likely to positively impact satisfaction by exceeding expectations in attribute quality. To assess the proper distribution of resources to allocate to the Oktoberfest attributes, satisfiers identified in this study can be divided into three components: 1) traditional hospitality/food & beverage attributes, 2) authentic cultural attributes, and 3) social attributes.

Three elements of attributes are generally thought to impact customer perceptions in food and beverage settings of hospitality. These include the physical environment, food & beverage quality and service quality (Ryu, Lee, & Gon, 2012). The physical environment includes tangible elements and more general aspects of the atmosphere. Satisfiers identified in this area of the Oktoberfest experience include the atmosphere in the tent, the quality of live music, the number of people in the tent, and the physical location of the tent (accessibility). Food quality, beverage quality and staff quality were also shown to impact satisfaction in the Oktoberfest setting. It should be noted that attributes included in the satisfier category explained the highest proportions of

variation of attendee satisfaction, indicating their role and the potential for increased satisfaction when expectations are met or exceeded.

Two attributes in the satisfier category could be described as authentic cultural attributes. These included experiencing Bavarian culture and seeing attendees in traditional attire such as dirndl or lederhose. As with the more common hospitality attributes, authentic cultural attributes are anticipated but satisfaction is enhanced when expectations are surpassed. Also defined in the satisfiers, two attributes are related to social elements of the Oktoberfest experience. An encounter that facilitates a fun group experience and the opportunity to meet new people was likely to enhance satisfaction of attendees.

The third category of factors in this hierarchy included three attributes which are described as delighters. These were unanticipated elements of the Oktoberfest experience and included flirting opportunities, the ability to consume beer without being exposed to legal or ethical constraints, and unique shopping/souvenirs being available in the tent. These pleasant surprises in the experience increased overall satisfaction at an increasing rate (of higher performance/quality) but only if attributes defined as dis-satisfiers and satisfiers are present and of good quality. If this is the case, these delighter attributes provide valuable opportunities for a tent to set itself apart from the competing tents at the festival. The conclusions of this study can be materially beneficial to future Oktoberfest events. On the basis of the results precise strategies can be developed by beer tent operators how to maximize customers' satisfaction.

While the US and global markets for purposeful travel associated with beer culture appears to be on the rise, little research has been completed in the areas associated with beer tourism, which includes festivals as well as visits to breweries, beer trails and brew pubs (Bradley et al., 2017). The current study assists in the effort to fill this gap in two main areas. First, the study provides some initial support for defining beer festival attributes into dis-satisfiers, satisfiers and delighters. Second, the method used minimizes some of the weaknesses of previous research by enhancing the understanding of non-linear relationships in a user-friendly form.

7. Limitations and future research

This study is not free of limitations. Data for the sample was collected in only one out of 14 beer tents of the Oktoberfest. Therefore, the extent to which the results are generalizable across all the Oktoberfest tents is somewhat limited. Future research should consider further beer tents, other types of beer tourism activities and evaluate satisfaction with implications for beer-focused festivals. Another limitation of the study is that the majority of the respondents were under the age of 36 years (70%). While age group was included as a control, future research could separate age groups to determine any differences in attribute classification based on age. While the study used three control variables (age, gender and return visits), future research on the impact of geographic home of attendees, beer involvement level, and other characteristics might also yield important relationships among attributes and type. While earlier studies seem to have focused on attribute quality impact on overall satisfaction, additional research on impacts on other consumer behaviors such as loyalty, use of social media, and positive word-of-mouth activities would also contribute to understanding of the beer tourist and festival attendee.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.tmp.2017.09.003>.

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