

## Ambient Situation and Customer Satisfaction in Restaurant Businesses: A Management Perspective

Albert Tchey Agbenyegah\*

*Department of Public Management, Durban University of Technology, Riverside Campus,  
Email, [alberta@dut.ac.za](mailto:alberta@dut.ac.za) ORCID, <https://orcid.org/0000-0003-3410-2809>*

Luther-King Junior Zogli

*Department of Public Management, Durban University of Technology, Riverside Campus,  
Email, [Luther-KingZ@dut.ac.za](mailto:Luther-KingZ@dut.ac.za) ORCID, <https://orcid.org/0000-0002-6999-7975>*

Bongani Dlamini

*Department of Public Management, Durban University of Technology, Riverside Campus,  
Email, [dlaminibi@dut.ac.za](mailto:dlaminibi@dut.ac.za), ORCID, <https://orcid.org/0000-0002-8058-9681>*

Nyane Ezekiel MacDonald Mofokeng

*Department of Public Management, Durban University of Technology, Riverside Campus,  
Email, [NyaneM@dut.ac.za](mailto:NyaneM@dut.ac.za), ORCID, <https://orcid.org/0000-0002-3070-0716>*

Martin Mulunda Kabange

*Department of Public Management, Durban University of Technology, Riverside Campus,  
Email, [MartinK@dut.ac.za](mailto:MartinK@dut.ac.za), ORCID, <https://orcid.org/0000-0003-0837-4747>*

\*Corresponding Author

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### Abstract

The current study illustrates the influence of restaurant ambient conditions on customers satisfaction in the tourism and hospitality industries through cluster and simple random techniques. The primary objective was to ascertain the relationship between the restaurant ambient conditions and customer satisfaction in rural restaurants. A closed-ended questionnaires with varying options were designed to collect primary data from randomly selected customers from 11 restaurants from the study settings. Primary data was analysed via the SPSS software based on statistical tools of regression analysis to determine the relationship between the dependent and independent variables. Final outcomes indicated significant relationship between the dependent and independent variables. The restaurant ambient conditions have significant relationship with customer satisfaction. Based on the findings, this study recommends that owner-managers of restaurants in rural areas need to improve the bulk of the ambient situations to attract more customers. This empirical study contributes to existing literature on the tourism and hospitality industry with specific reference to the restaurant businesses.

**Keywords:** Ambient situation, Customer satisfaction, restaurant, environment, and customer expectations

### Introduction

The restaurant industry of South Africa continues to grow as more households shift from the culture of home-eating to eating outside. Providing food and beverage related services continue to heighten the significance of the ambient climate that creates the service climate to be effective to ensure that restaurant businesses become successful (Kotler, 1973). At present the restaurant industry touches almost each household in various ways. A good reflection on the

size and volume of the industry is the prediction that despite its growing customer demands more is required to enhance customer satisfaction to avoid rapid customer decline. Over the years the restaurant industry has experienced great changes which placed customers' expectations and demands first (Ryding, 2011). As the challenges grow in the industry, owner-managers of restaurants are expected to find better means to become competitive. Aside the challenges, the restaurant industry has recently emerged profitable world-wide.

Given the present fierce competitive nature of the restaurant industry, it is important that owner-managers of restaurants become innovative to enhance their ambiance situations. Being competitive in today's economy would not only provide quality products and services but to further enhance growing customer satisfaction (Liu & Jong, 2009a). Through innovation more attractive products unique and conducive dining atmosphere be instituted in restaurants to enhance customer satisfaction. Other preconditions that increase customer satisfaction include general cleanliness of the restaurant environment. The physical setting within which restaurants operate largely influenced its image and act either positively or negatively on customers perceptions based on existing image of restaurants. However, due to numerous constraints such as lack of competitive climate over competitors, the restaurant settings continue to struggle (Choy et al., 2012). As restaurants have turned to be one of the attractions of designed facilities that promotes households dining experiences, the ambient interior and exterior environments need to be outstanding and attractive. For instance, the exterior features of restaurants serve as the initial and last customers interactions. Of more significant to customers is the interior settings of restaurants which widely impact on customer satisfaction. The empirical findings of this study have practical and theoretical implications for the restaurant industries in rural settings. It is essential therefore to comprehend the changes within the restaurant industries from customers' perspective. Understanding the ambient situations that impact customer satisfaction ought to be of utmost significance and provide immeasurable guide to owner-managers of restaurants to offer the rightful services to customers.

Building on past studies, customer satisfaction is very critical (Andaleep & Conway, 2006; Lin & Wu, 2011; McCollough, 2000; Barsky, 1992). Yet not much empirical study on rural restaurants have been published to determine the significant relationship between ambient restaurant facilities as defined in Figure 1 below. For purposes of this study, restaurant ambient situations refer to interior design, tableware, spatial layout, room temperature and ambient light system. This empirical study is aimed to ascertain the relationship between restaurant ambient situations namely (1) interior design (2) table ware (3) spatial layout (4) room temperature (5) ambient light system. To ensure the aims of the study are realized, five null hypotheses were proposed for testing.

## **Theoretical and conceptual framework**

### ***Expectancy-disconfirmation theory (EDT)***

Several frameworks were developed in the past to define customer satisfaction. Frameworks such as Equity Theory, the Value-Percept Theory (VPT), the Attribution Theory as well as the Evaluative Congruity Theory. These frameworks outlined the fact that consumer satisfaction is based on standards. Besides the VPT, posits the notion that customers link satisfaction with the view to add value and desire. EDT on the other hand, the notion of predictive expectations increases customers' satisfaction. Considering all the frameworks, EDT has been certified as widely applicable tool to explain customer satisfaction (Oliver, 1980; Weber, 1997).

The EDT is a concept that provides the theoretical foundation of empirical research regarding specific determinants of satisfaction. Numerous researchers including Oliver (1980) have discussed for years the contributions of EDT to the evaluation of customer satisfaction. It focuses on two distinct concepts of quality and satisfaction. The main tenet of EDT is that it

provides enough source of information to ascertain sufficient meaning to quality and satisfaction. A study by Han et al. (2011) affirmed that the scope of extant literature on disconfirmation of consumers further explains the twin concepts. Quality according to EDT represents cognitive responses to products or services.

On the other hand, satisfaction lack the desired cognitive responses yet establishes higher impact on consumers. Based on empirical and theoretical assessment it can be proven that quality and satisfaction are not interrelated. Within the context of restaurant settings, employees' levels of performance can be widely linked to the functionality of service quality and provisioning of quality food can be linked to technical services. A study by Namkung and Jang (2008) add that perception of making available quality food add to several elements that significantly correlates to customer satisfaction remains paramount to the restaurant industry. Further empirical findings showed that expectations instead of individual desire in comparison with perceived performance should be utilized to determine satisfaction (Sattari, 2007). There is the suggestion that EDT by its nature represents the best substitute. Similarly, it is further stated that the two concepts of desire and customer satisfaction are cognitive thus it remains to be seen which of these concepts provide adequate explanations to customer satisfaction. To ensure adequate customer satisfaction, EDT focuses mainly on the extent to which customers respond to the linkages between expectations and real product performance (Kivela et al., 2000).

According to Grigoroudis and Siskos (2004), evaluating products and services performance within restaurants environments are perceived to be subjective thus, should be associated by conducting vital comparison of standards. Furthermore, EDT is an indispensable framework to be used in restaurants settings since service satisfaction is likely to be perceived as critical function of the interdependencies between expectations at different levels by consuming publics in restaurants and the overall performance. Based on these specifics, customers are likely to attain high levels of satisfaction with the meal in contrast to individual's performance shortfalls.

### ***Operationalising customer satisfaction***

Several scientists have defined customer satisfaction using various terms. According to Hui and Zheng (2010), satisfaction is the general assessment or the extent to which individuals judge products or services on offer. Others were of the view that customer satisfaction entails happiness, delightful, pleasure and acceptance of the food or services. Additionally, customer satisfaction is defined and linked to growing individual patronage and through word-of-mouth and display of loyalty (Park, 2004; Choi & Chu, 2001; Jordaan & Prinsloo, 2001). Due to existing highly competitive nature of the restaurant industry, it is advisable that entities properly manage customer satisfaction to increase the clientele. This could be possible through altering the design features, restaurant layout including lightening, colour, the employee outlook and temperature (Khan et al., 2012). Furthermore, customer satisfaction focuses on meeting individuals' demand and needs (Han & Ryu, 2009).

Existing literature add that customer satisfaction is referred to as the overall performance of services that counters and exceeds expectations (Tit, 2015; Kumar, 2012; Malik & Ghaffor, 2012; Kotler et al., 2006). Oliver (1997) defines customer satisfaction as a significant pleasing act that satisfies consumers judgement about goods and services; thus, it includes various stages of satisfaction and dissatisfaction. Simply put, customer satisfaction is about performing tasks that are favourable and acceptable to customers (Mudie & Pirrie, 2006). Lim (2010) add that customer satisfaction widely impacts on the firm's atmosphere of operation. Thus, creating promising ambient conditions that influences customer satisfaction.

The general ambient characteristics of focus on conditions such as noise, music systems, lightening as well as scent (Zeithaml & Bitner, 2009).

### ***Overview of ambiance situations in restaurants***

Owner-managers of restaurants need to take care of various ambiance situations that stimulate customer satisfaction. A study by Wakefield and Blodgett (1996) emphasized that conditions of spatial layout and restaurants overall roles promote customer satisfaction. By setting enough conditions such as the interior and exterior décor in restaurants further add to satisfaction (Zeithaml & Bitner, 2009). The general functions of restaurants impact customers emotions as well as the overall evaluation of the restaurant (Zeithaml & Bitner, 2009; Liu & Jang, 2009). Every element of ambiance is essential for the survival of the restaurant industry. For instance, customer satisfaction increases given the best form of ambiance in restaurants working climate. Providing sufficient lighting system in restaurants does not only establish a safer customers' environment but as well make customers feel at home. According to Gareth (2011), making available adequate lighting sets positive customers' mood, and uplift their personal feelings in restaurants. Other researchers including Perutkova (2010), Jordan and Prinsloo (2001) were of the view that lighting further create enough assurance in addition to providing quality service. However, Lillicrap and Cousins (2006) argued that by providing lighting in restaurants owner-managers need to find the right balance in terms of the warm atmosphere and better presentation of food. Baron (1990) in a similar study add that the customers are better satisfied in a low lighting environment in contrast to high lighting climate restaurants. Interior designs such as creations in terms of furniture, materials are expected to bear enough relationships with the provisioning of services in restaurants to establish satisfaction (Sabherwall, 2011). Customer satisfaction can be adjusted to attain satisfaction in the interior of restaurants through changes of the lighting system (Steffy, 2008). The appropriate use of the lighting system in restaurants enable customers to have better views of the food served to experience expected pleasure as well as restaurant dinning excitement (Ryu & Hang, 2010). According to Ciani (2010), the general setting of restaurant climate should experience personalized form of atmosphere including the lighting system for adequate satisfaction. The overall lighting system in restaurants should try to create spacious dinning environment (Ciani, 2010). A study commissioned by Watter and Edvardsson (2012) revealed that customers perceive bad lighting system as a form of providing a dissatisfied service. Yet in a similar study it is argued that availing a conducive nature of restaurant climate plays significant role in creating enjoyable dinning customers experiences. (Hoffman et al, 2009). Aside the positive roles play by lighting in the restaurant's climate, other contributory factors such as staff, waiter, the available menu, and the general building layout contributes to customer satisfaction (Ciani, 2010).

Another important element that contributes to customers' satisfaction is the nature of temperature in the restaurant. Food temperature plays significant part in creating customers preferences and decision making (Hung et al., 2014). Customer satisfaction become broadly enhanced once the restaurant displays comfortable temperature within the restaurant's climate. According to Huang et al. (2013). Nonetheless, the diverse expectations of customers as well as the varying temperature conditions in restaurants put enormous burden on operating a sustained restaurant business. Research indicated that by their nature and set ups, restaurants are expected to satisfy customers' demands in various areas including the cooling and ventilation systems, heating and other different customers need to establish a prolong customer dinning habits (Bry-Air, 2012). The research further add that the general level of air conditioning and levels of lower humidity levels create dissatisfaction; thus, allowing customers to seek alternative dinning places. Disruptions in restaurants due to unstable

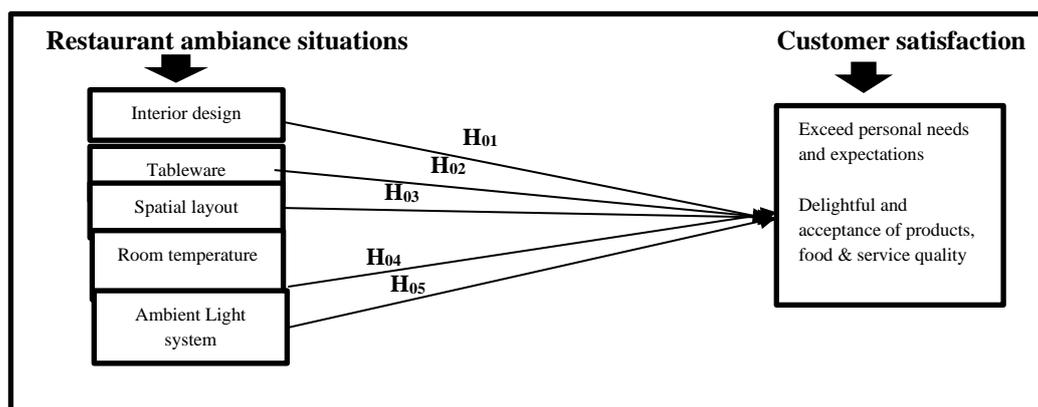
temperature conditions are likely to create customer dissatisfaction and drive potential customers away into competitors' businesses (Huang et al., 2013).

In restaurants efficient plate design especially food texture and flavour influences customer eating experiences. However, the shape of the dinner plate has no significant impact on the intensity of the food. Prior study by Piqueras-Fiszman et al.(2012) support the notion that the restaurant shape lacks the desired impact on customer satisfaction. By intensifying its food provisioning to customers, restaurants contribute largely to the general design of plates (Piqueras-Fiszman et al., 2012). The study further suggests that replacement of tableware in the restaurants' climate is critical to customers satisfaction.

### Conceptual framework and statement of hypotheses

The ambient conditions of restaurants are primary drivers of customers satisfaction and growing high profit margins (Jin, 2015). Based on theoretical background, the extent of ambient conditions or situation namely the physical settings of restaurants create positive impact on customers satisfaction (Polyorat & Sophonsiri, 2010). Improvement to existing ambient conditions in restaurants can enable owner-managers of restaurants to attain customers satisfaction and increase profitability. Hung et al. (2014) add that by creating comfortable ambient temperature in the organization serves to stimulate funding decision making. The conceptual model (see Figure 1) below is based on extant literature consisting of two main variables namely ambient factors and customer satisfaction. Each of the variables are explained with constructs emanating from broader literature. Grounded on extant literature in line with the two constructs of customer satisfaction and ambience conditions, this empirical study developed a conceptual model to determine the relationships between the variables. Figure 1 below depicts the conceptual framework based on extant literature. The framework provides sufficient definitions regarding the dependent and independent variables. Ambient restaurant situations are referred to as five independent variables namely interior design, table ware, spatial layout, room temperature and ambient light system. The dependent variable of customer satisfaction was also explained.

Figure 1: Conceptual model of Ambience variables and Customer satisfaction



Source: Design for the study

### Statement of hypotheses

Emanating from literature and the conceptual framework above, the following null hypotheses were formulated in search of solutions to the research problems.

*H<sub>01</sub>: There is a significant relationship between interior design and customer satisfaction.*

*H<sub>02</sub>: There is a significant relationship between tableware and customer satisfaction.*

*H<sub>03</sub>: There is a significant relationship between spatial layout and customer satisfaction.*

*H<sub>04</sub>: There is a significant relationship between room temperature and customer satisfaction.*

*H<sub>05</sub>: There is a significant relationship between ambient light system and customer satisfaction*

## **Materials and methods**

Formulated hypotheses for the study were tested through quantitative approach (Klees, 2017). For this empirical study, the researcher applied the regression coefficient tool to test the hypotheses. This study employed the regression coefficient tool to assess the significant relationship between restaurant ambient situations (independent variables) namely (1) interior design (2) table ware (3) spatial layout (4) room temperature (5) ambient light system. In total, the survey utilized 17 items to source responses from participants who were asked to indicate individual responses based on the level of agreement. All the 17 items formed part of the Likert-scale questionnaire ranging from (1) strongly agree to (5) strongly disagree. Lastly, the remaining section of the survey was descriptive of participants' profiles based mainly on demographic questions on sex, gender, educational qualifications, and frequency of visit to restaurants.

### ***Research population and sample size***

This empirical study utilized a population of all the customers who were regular patrons of restaurants in the rural settings of the Eastern Cape Province of South Africa. The final customers were randomly selected to constitute the regular study sample. During the sampling process, the researcher adheres to strict requirements of choosing only restaurants that served the communities for over 5 years. Besides, the owner-managers of the restaurants must originate from the study settings. Selecting the sample size was possible through the assistance of the local hospitality and tourism industry in the Eastern Cape Province. Using the sample computation technique of Goubraim and Chakor (2015), an average of 88.7% representing the chosen community members with a population of 140000. These members were regular customers to the 11 restaurants in the study locations. By multiplying the overall regular patrons, the researcher found that 43% preferred to visit the selected restaurants. This percentage further provides tighter measures the overall frequent customer to (240000 x 0.43) 103200 customers to participate in the study. Using the online sample size calculator namely the survey system (2018), the researcher used a confidence level of 95% in addition to a level of confidence interval of 8%, the decision was made to source data from a sample size of 140 participants.

### ***Instrumentation***

To ensure enough gathering of primary data, a closed ended structured questionnaire with different options was employed (Bryman & Bell, 2011). The questionnaire serves as appropriate technique to collect respondents' responses to the questions from wider sample size. The questionnaire employed in this study was earlier used in a similar study by Syed, Andaleeb and Conway (2006). For this study, the questionnaire was amended to include a five-point Likert-type scales ranging from (1) strongly agree to (5) strongly disagree to assess constructs of customer satisfaction, ambiance situations such as the interior design, tableware, spatial layout, room temperature and ambient light system. At least each dimension of the constructs consisted of four to five items that were posed in the form of questions to

respondents for answers. The questionnaire was divided into two sections. Section A dealt with respondents' demographic profiles while section B consisted of questions based on the two main variables of customer satisfaction and ambiance situations (see figure 1). These questions were in Likert-scale format ranging from (1) strongly agree to (5) strongly disagree.

### ***Data collection technique***

Soon after the questionnaires were designed, the researcher employed and trained two local research assistants to provide guidance to participants in the field. The primary tasks of the assistants were twofold; to explain some of the questions to the participants and follow-up on some unclear information provided. Besides, the assistants observed strict anonymity as the field data was collected. Through the efforts of the assistants, data gathering was quick and without errors. Data gathering process only lasted for two weeks. Given the rural nature of the study areas, the assistants spent two weeks to gather the field data. During the process, 30-45 minutes was used in each of the chosen 11 restaurants with the customers. Later the field data was exported to SPSS files through the guidance of qualified analyst.

### ***Data analysis***

The primary objective of this study is to determine the impact of ambiance situations (independent variables) on customer satisfaction (dependent variable) in a rural setting. Only two sections were used to develop the questionnaire. The statistical package for Social Sciences (SPSS) version 16 was applied to make meaning of the primary data. Both descriptive and inferential statistics were conducted. Descriptive tools such as the mean and frequency were performed for in-depth discussions of respondents' profiles (Bryman & Bell, 2011).

In addition, inferences were made based on dependent variable customer satisfaction and independent variables of ambient restaurant situations referred to as interior design, table ware, spatial layout, room temperature and ambient light system. Further inferences were made based on the statistical tool of regression analysis. Besides, the coefficient of variation referred to as  $R^2$  was applied to conduct analysis to determine whether there is variability in respect of the dependent variable (customer satisfaction) on the extent of ambient restaurant situations. The researcher deemed the regression analysis appropriate to determine the relationships between the two variables (2010). To ensure clarity and easy interpretations, data presentation throughout this study was conducted in tabular formats.

### **Data analysis and interpretations**

#### ***Reliability and validity assessment of research instrument***

In order to establish accurate reliability of scales, Cronbach's alpha coefficient was applied to the study constructs. Further reliability assessment was done to ascertain internal consistency as suggested by Heeks (2002). All the items in the questionnaire were valued over 0.74 and certified reliable. Validity of the research questions were measured by means of construct validity as well as the convergent and discriminant validity (Fornell & Lacker, 1981; Yin, 2003). A total of five constructs were utilized to measure customer satisfaction. The alpha values for the five constructs (see figure 2) were in the range of 0.785, 0.849, 0.730, 0.778 to 0.758 respectively. According to Nunnally (1978), a minimum value of 0.7 for each measurement construct represents adequate scale. Besides, face validity and content of the questionnaire was performed through a wider subjective but impressive regarding the questionnaire statements. Pilot study was conducted using only customers from each of the chosen restaurants. The questionnaires were later amended based on suggestions based on the pilot results.

**Table 2:** Test of Reliability using Cronbach

Constructs	Cronbach's coefficient
Customer satisfaction	0.785
Interior design	0.849
Table ware	0.730
Spatial layout	0.778
Ambient light system	0.758

### Test of validity

This study also assesses the validity of constructs as well as the convergent and discriminant validity. Table 3 below depicts all the average variance extracted (AVE) throughout the constructs. The constructs were more than the required 0.50. As such, the convergent validity is attained. Computation of the AVE therefore was based on prescripts of Hair et al (2006).

**Table 3:** Average variance extracted (AVE)

Variables	Average variance extracted (AVE)
Customer satisfaction	0.825
Interior design	0.833
Table ware	0.722
Spatial layout	0.768
Ambient light system	0.748

To ensure more information was collected to determine whether all the scales have discriminant validity, the AVE for the two constructs are expected to be more than the R square of the two constructs. Figure 4 below illustrates the R square values. The Table above depicts the AVE that relates to customer satisfaction and interior design (customer satisfaction 0.825 and interior design 0.833) respectively. The two values of the constructs are greater than the value of R square of 0.804. Similarly, customer satisfaction and table ware as shown in the table above has AVE of 0.825 and 0.722 greater in value as compared to the R square of 0.770. The table further indicated that customer satisfaction and spatial layout were 0.825 and 0.768 greater than the two constructs with R square of 0.661. Customer satisfaction and ambient light system were 0.825 and 0.748 greater than the R square of 0.642. Effectively it can be deduced that the two AVE variables are ranked more in contrast to the two R square variables. As such, there is adequate level of discriminant validity.

**Table 4:** Correlation matrix of R Square values

Variables	Customer satisfaction	Interior design	Table ware	Spatial layout	Ambient light system
Customer satisfaction	1				
Interior design	0.804	1			
Table ware	0.770	0.448	1		
Spatial layout	0.661	0.446	0.395	1	
Ambient light system	0.642	0.426	0.367	0.326	1

### Testing formulated hypothesis

All the null hypotheses used in this study were tested by Regression Coefficient to determine relationship between the dependent (customer satisfaction) and independent variables (restaurant ambient situations) (Chen, 2002). Through the regression analysis, the researcher gained insights regarding how best the proposed conceptual framework fits the primary data (Field, 2009).

*H<sub>01</sub>: There is a significant relationship between interior design and customer satisfaction.*

The beta weight of the Regression coefficient as shown in Table 5 below depicts a value of .950 supported by unstandardised coefficient value of .977 at a  $p=.000$ . The result therefore indicated significant relationship between the interior design and customer satisfaction.

**Table 5:** Regression Coefficient of interior design and customer satisfaction

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.054	.050		1.100	.000
	Interior design	.976	.037	.950	24.760	.000
a. Dependent Variable: Customer Satisfaction						

Besides, Table 6 below have illustrated R square which further explains the relationship between the dependent (customer satisfaction) and independent variables (Interior design). Thus, the predictive power of the model is depicted through moderation of R square value ranked at 0.807. As a result, the model represents a good fit. Roughly 80.7% of the differences in customer satisfaction dependent on interior design.

**Table 6:** R square value showing interior design and customer satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.960 <sup>a</sup>	.807	.900	.163
a. Predictor: (Constant), Interior design				

**H<sub>02</sub>:** There is a significant relationship between tableware and customer satisfaction.

The hypothesis above implies significant relationship between table ware and customer satisfaction. Regression coefficient is used to test the null hypothesis. Table 7 indicates various values to determine the relationship between the variables. Based on standardised coefficient, beta weight of .645 ( $\beta=.520$ ) with a value of .004. Thus, the table suggests moderate relationship between tableware and customer satisfaction. As such, the null hypothesis is accepted.

**Table 7:** Regression Coefficient of tableware and customer satisfaction

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.450	.265		1.629	.000
	Table ware	.520	.100	.645	3.00	.004
Dependent Variable: Customer Satisfaction						

Supporting the results as stated in Table 4.4, the R square in table 8 reveals the value of .770 depicting a higher R square ranking to suggest sufficient relationship between tableware and customer satisfaction. Furthermore, the model as shown in Table 4.4 below add that 77% in terms of variation in dependent variable (customer satisfaction) is due to ambient table ware,

**Table 8:** R square value of tableware and customer satisfaction

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.654 <sup>a</sup>	.770	.098		.490
a. Predictors: (Constant), Ambient tableware					

**H<sub>03</sub>:** *There is a significant relationship between spatial layout and customer satisfaction.*

As revealed in Table 9 below, there is significant relationship between the dependent variable (customer satisfaction) and the independent variables (spatial layout). By means of the standardized coefficient the study revealed that spatial layout in restaurants has significant influence on customer satisfaction. This is illustrated by the beta weight of .813 ( $\beta=.521$ ) at significant value of .000. Based on the R square (table 4.6) below, the hypothesis is accepted. This implies a significant relationship between independent and the dependent variable.

**Table 9:** Regression Coefficients of spatial layout and customer satisfaction

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.395	.077		5.048	.000
	Spatial layout	.521	.043	.813	11.967	.000
a. Dependent Variable: Customer Satisfaction						

The R square value as shown in Table 10 below showed that customer satisfaction (the dependent variable) is influenced by independent variable (spatial layout). According to the “rule of thumb” R square range from 0.1 shows the extent to which independent variables strongly influence to the dependent variable (Burns & Bush, 2010). Table 10 below shows sufficient variation of 66% that impact customer satisfaction. The R square value of .642 moderate relationship between spatial layout and customer satisfaction.

**Table 10:** R square value of spatial layout and customer satisfaction

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.816 <sup>a</sup>	.642	.656		.301
a. Predictors: (Constant), spatial layout					

**H<sub>04</sub>:** *There is a significant relationship between room temperature and customer satisfaction.*

Based on Table 11 below, there is significant relationship between room temperature and customer satisfaction. Based on the results of Standardized coefficient analysis and a beta weight of .813 with significant value of 0.000. The result implies that H<sub>04</sub> hypothesis is accepted meaning there is significant relationship between room temperature and customer satisfaction.

Table 12 below indicates significant relationships between ambient light system and customer satisfaction. Based on the standard coefficient analysis and the beta value of -.914 with a significant value of 0.000. The implication is that H<sub>05</sub> is accepted to indicate significant relationship that exists between the dependent and independent variables.

**Table 11:** Regression Coefficients of room temperature and customer satisfaction

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.385	.077		5.038	.000
	Room temperature	.520	.046	.813	11.957	.000
a. Dependent Variable: Customer Satisfaction						

**H<sub>05</sub>:** *There is a significant relationship between ambient light system and customer satisfaction*

**Table 12:** Regression Coefficients of ambient light system and customer satisfaction

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.386	.078		6.039	.000
	Ambient light system	.523	.047	.914	12.828	.000
a. Dependent Variable: Customer Satisfaction						

The R square value in Table 13 showed that customer satisfaction (the independent variables) is highly influenced by independent variable (ambient light system). As per the rule, the R square that ranges from 0.1 demonstrates the extent to which independent variables strongly influenced the dependent variables (customer satisfaction) (Burns & Bush, 2010). The table further shows significant variation of 66% that impact customer satisfaction. There is a moderate relationship between ambient light satisfaction and customer satisfaction.

**Table 13:** R square value of ambient light system and customer satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.815 <sup>a</sup>	.632	.657	.306
a. Predictors: (Constant), Ambient light system				

## Discussion of results

This study was structured to assess the ambient situation and customer satisfaction. In all a total of five ambient variables of interior design, tableware, spatial layout, room temperature and ambient lighting system. As part of the physical climate of the restaurant businesses, ambient light system of the restaurant businesses has positive influence on customer satisfaction (Ryu et al., 2012). This finding further supports the past study by Bitner (1992) that claimed the state of ambience in restaurants influence the level of clients' satisfaction. The ambient light system according to the study impact positively client perceptions. However, another study by Walter and Edvardsson (2012) found that the dire lack of better lightening system within the restaurant businesses has negative experience on customers perceptions. This means that the existence of the clients depends more on the general atmosphere in the restaurants. Based on the outcomes it can be stated that the layout and design of the restaurant contributes to the customer satisfaction. Other contributory variables that add to the immense customers satisfaction in the restaurant businesses as revealed by the study include tableware, interior design, spatial layout and room temperature. In line with the afore-mentioned outcomes, it can be deduced that owner-manager of the restaurant businesses should focus

more on improving all the contributory variables. However, the ambient light system should be prioritized.

### Conclusions and recommendations

This study aimed to assess significant relationship between the restaurant ambient situations and customer satisfaction in rural restaurants. To satisfactorily achieve the above aim, the regression coefficient was used to test five hypotheses based on literature and conceptual model. In general, the study revealed that providing enough interior design, tableware, spatial layout, room temperature and excellent lighting systems to stimulate the overall customer satisfaction. though all the ambient conditions are known to be contributors to customer satisfaction, it became clear that owner managers of restaurants need to use comprehensive approach to integrate all the ambient situations to enhance satisfaction. Besides, the room temperature as well as the lighting system as part of the interior design need special attention from owner-managers to attract the level of customer patronage. Owner-managers of rural restaurants need to do more in designing the interior of every environment to suit consumer needs. In this study, no specific design was mentioned. However, it is appropriate to provide combinations of furniture taking into consideration the younger rural population. It would be satisfactory to allow the entire rural population to focus on customer comfort. Providing comfort through interior design need to bear relationship with the type of services provided (Sebherwal, 2011).

In sum, the researcher solicited responses on customer satisfaction from owner-managers of restaurants in rural South Africa. Expectations and demands of customers in emerging economy are in stark contrast to those in the developed countries. Thus, there is the likelihood of cultural bias that may inhibit the study activities and its findings. Though the bulk of the themes applied are generic to the services and the restaurant industry, the research was designed to provide answers to the restaurant industry.

This study is an attempt by the researcher to illuminate the distinctiveness of the two constructs namely customer satisfaction and ambient factors. Different approach was employed by operationalizing customer satisfaction based on different factors and each corresponding items as undertaken to determine quality services. The end results show that customer satisfaction and ambient factors exhibit independence and are therefore serves as different constructs based on individual customer perspectives. Furthermore, the study revealed some relationships between the two constructs as emphasized through the regression analysis. The study unearths two concepts such as customer satisfaction and ambient factors and the extent of implications. An intense investigation was conducted to ascertain the causal relationships that exists between the two constructs have not been thoroughly assessed since it is beyond the purview of the current research activity. Further study regarding research model that illustrates causal linkages between the two constructs and their impact on the desired later findings namely customer patronage, lesser complaints and word-of-mouth by customers would assist in providing further insights on the subject.

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