

DEVELOPING SAFSERV: A SCALE MEASURING SAFARI TOURISTS' SERVICE QUALITY

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Abstract – The study had two purposes. Firstly, the thesis examined the extant literature pertaining to SERVQUAL analysis (Parasuraman, Berry & Zeithml, 1988) , customer satisfaction and the South African safari tourism industry with a view to propose additional elements to SERVQUAL analysis. Secondly, the soundness and rigour of the SAFSERV scale was tested. Data was gathered by use of a structured, pre-tested and validated questionnaire on factors that affect the quality of safari game-viewing and accommodation services that are provided to tourists from five different continents and countries namely South Africa, United States of America, Britain, Australia and China. The sample size of the study was equal to n=625 tourists. Stratified random sampling was used as a sampling technique. Examples of variables on which data was gathered are as follows: reliability, assurance, tangibility, empathy, responsiveness, accessibility, price, authenticity, communication, corporate image, safety and security, transparency, hygiene, climatic conditions, attitude, tourists' personality, tourists' knowledge, tourists' past experience, motivation, eco tangibles, level of education, and income. Data analyses was performed by using cross-tab analyses, SAFSERV analysis based on 21 dimensions and 121 items, factor analysis, Structural Equations Modelling (SEM), and logit analysis. The study was designed in order to test the degree to which the 21 dimensions and 121 items of SAFSERV were helpful in accounting for service quality in the South African safari tourism industry.

The results showed that more variables besides the original five dimensions of service quality propounded by the above authors, could be used for measuring service quality in the South African safari tourism and game viewing industry. The study also rigorously interrogated later versions of the adapted SERVQUAL model such as Service Performance by Cronin and Taylor (1992). The results showed that such models were inadequate based on a thorough review of the relevant literature and empirical results estimated from data analyses. The results showed that service quality measurement based on the original five dimensions of service quality (reliability, assurance, tangibility, empathy and responsiveness) was not a reliable estimator of the degree of satisfaction of tourists in the South African game viewing context. The study found that the degree of satisfaction of tourists in a game viewing context cannot be restricted to the original five dimensions alone. The study found that there was a statistically significant difference between expected and perceived service quality at Kruger National Park, and that employees and managers working at Kruger National Park do not always satisfy and meet the service quality expectations of the tourists. The study showed that the SAFSERV model is more comprehensive and appropriate as a model for measuring the degree of satisfaction of tourists interested in safari tourism and game viewing. The SAFSERV model could also be used by managers and marketers as a toolkit for branding and marketing services and related products in a safari tourism and game viewing context.

The study showed that the SAFSERV model consisting of 21 dimensions and 121 items was much more robust and useful in comparison with the classic SERVQUAL model consisting of 5 dimensions and 22 items for measuring the degree of satisfaction of tourists interested in safari tourism and game viewing. Results obtained from the study showed that the degree of satisfaction of customers with the quality of services provided to them was significantly influenced by 3 predictor variables. These predictor variables were previous safari experience, availability of all animals of interest, and transparency between service provider and visitors, in a decreasing order of strength.

The degree of satisfaction of tourists with the quality of services provided to them at Kruger National Park was assessed by using a composite index developed by Dolnicar, Coltman and Sharma (2015) for conducting a similar study. The results showed that about 85% of the 625 visitors who were selected for the study were satisfied with the quality of services provided to them by employees of Kruger National Park, whereas about 15% of them were not satisfied with the quality of services provided to them by the standards of Dolnicar, Coltman and Sharma

(2015). The results showed that 112 of the 121 gap scores used for SAFSERV analysis were significant at the 5% level of significance. Only 9 of the 121 gap scores obtained from data analyses were insignificant at the 5% level of significance.

The conclusion drawn from the study was that SAFSERV model is the most appropriate model or scale to measure service quality in wildlife viewing context. All the 121 items on SAFSERV achieved coefficients of more than seventy five (75) percent which proves their validity and reliability to measure service quality in the game viewing environment. There are three (3) predictors of tourists' of tourists' satisfaction in a wildlife viewing context from the structural equation modelling applied in the study which are 'previous safari experience, 'availability of animals of interest' and 'transparency of services' .112 significant gap scores of items on SAFSERV scale show disparity between expected and perceived values with services provided to tourists in Kruger National Park which shows that these items are useful in achieving tourists satisfaction in a wildlife viewing context. Eighty five (85) percent of tourists who visited Kruger National Park were satisfied with services provided whilst fifteen (15) percent of tourists were not. It is recommended that managers, marketers, and owners of game viewing sites apply the SASERV model in their search for tourists' satisfaction in this environment. It is further recommended that management and marketers of Kruger National Park improve the services they provide to the tourists. It is recommended to consider the key predictors of tourists' satisfaction by managers, owners and marketers of Kruger National park and similar game reserves and national parks throughout the world. It is recommended that each activity in tourism sector have its own peculiar service quality scale to accurately measure service quality and customer satisfaction in that particular setting to avoid generalizing measuring service quality in different settings. Furthermore it is recommended that managers and employees of Kruger National Park be upskilled through training to improve their service delivery at all levels.

Areas of future study are replicating this SAFSERV model in other national parks especially in Africa or even elsewhere in the world .Further areas of study emanating from the research will be to develop specific service quality measurement scales for specific different tourism activities, avoiding generalizations of service quality measurement in tourism fraternity. Areas of further research would be to develop specific service quality measurement scales or models for different activities in other service industry settings.

Keywords: Safari tourism, Tourists satisfaction, Service quality, SAFSERV model, Structural Equations Modelling (SEM), Factor analysis, Logit analysis

Introduction

The study was conducted at Kruger National Park in the Provinces of Limpopo and Mpumalanga of South Africa. The objective of study was to assess and evaluate the degree of satisfaction of tourists with the quality of services that are routinely provided to them by employees of the South African National Parks (SANParks)

Data was collected from a stratified random sample of size 625 tourists from the USA, United Kingdom, China, Australia and South Africa (5 countries from 5 continents).

Background of study

The absence of a comprehensive tool for the measurement and assessment of the degree of satisfaction of tourists with the quality of services provided to tourists visiting Kruger National Park. Limitations in SERVQUAL analysis tools as a generic model that could be used for assessment and evaluation necessitated this study Recommendations made by other researchers for the development of a suitable tool for the assessment of the quality of services provided to tourists by employees of Kruger National Park

Objectives of study

To develop an appropriate Safari tourism service quality scale or model for Kruger National Park (specific to game viewing context) that measures satisfaction;

To test the suitability of the questionnaire of study on issues that are related to the assessment of satisfaction with the quality of services provided to tourists who come to visit Kruger National Park; and

To identify and quantify key predictors of satisfaction with the quality of services that are provided to tourists.

Research questions

- What is the most appropriate service quality model for Safari tourists' satisfaction in South Africa in a game-viewing context?
- How reliable is the new Safari service quality model in a game viewing and accommodation context in South Africa?
- What is the satisfaction level of tourists with the new dimensions in South Africa Safari tourism?
- What are the critical factors of service quality in Safari game viewing and accommodation context?
-

Research hypotheses

The study had 121 research hypotheses that are based on the 121 items used for the assessment of service quality. The 121 items belong to the 21 dimensions used for performing SAFSERV analysis. Each of the 121 null hypotheses was tested by using P-values obtained from the two-sample paired t-test (Hair, Black, Babin & Anderson, 2010) at the 5% level of significance. The null and alternative hypotheses are articulated as shown below along with the decision rule.

- **Null hypothesis:** There is no statistically significant difference between perceived and expected value with regards to item used for the assessment of service quality
- **Alternative hypothesis:** There is a statistically significant difference between perceived and expected value with regards to item used for the assessment of service quality
- **Decision rule:**

At the 5% level of significance, the null hypothesis is rejected if the P-value obtained from the two-sample paired t-test is less than 0.05.

At the 5% level of significance, the null hypothesis cannot be rejected if the P-value obtained from the two-sample paired t-test is greater than or equal to 0.05.

Literature review

According to the World Tourism Organization (2012), there is no single or unique tool that could be used for the assessment of service quality in the safari game viewing sector of tourism. As such, there was a need for the development of a new tool.

Radder and Han (2011:44) have called for the construction of assessment tools that are peculiar to each and every tourism activity and enterprise. This shows that there is a gap in the literature. This is why this research had to be done.

Said, Yakuub, Ayo and Shuib (2013:74) have recommended that assessment must include all ECOSERV attributes and take note of the differences on various variables such as visitors' personality, motivation, past experiences, knowledge, and intrinsic rewards in the conceptualization of another model.

Markovic and Jackovic (2013) have stated that there is no universal agreement on the dimensions, number and nature of measurement tools that are used for the assessment of service quality in the tourism sector.

Methods and materials of study

The study design was descriptive and cross-sectional. It was descriptive because it was exploring factors and qualifying factors that can comprehensively measure tourists satisfaction in a wildlife watching context. It was cross sectional because it was done once and respondents were from across different countries and continents.

The sample size of study was 625 tourists from 5 countries who came to visit Kruger National Park in 2017 (USA, UK, Australia, China, South Africa). Stratified random sampling was used for data collection for 125 respondents from each country. Stratification was done by country of origin.

Data was collected by using a self-administered questionnaire at designated exit points because it is easy to administer and response rate is always very high.

Analysis was done by using the SAFSERV model for the assessment of service quality in the tourism industry, cross tab analysis, Structural equation modelling, logit regression analysis, factor analysis, because they are appropriate for the study and give reliable results .

Dependent variable of study (Y)

The degree of satisfaction of tourists with the quality of services provided to them at Kruger National Park (Y) was assessed by using a composite index developed by Dolnicar, Coltman and Sharma (2015) for conducting a similar study.

The dependent variable of study (Y) had two possible values. These were satisfaction or dissatisfaction with the quality of service delivery provided to visitors and tourists at Kruger national Park. In symbols, variable Y had the following two possible values:

$$Y = \begin{cases} 1 & \text{if service quality is inadequate} \\ 0 & \text{otherwise} \end{cases}$$

X_1, X_2, \dots, X_k are independent or explanatory variables that affect service quality (Y)

Independent variables of study (X1, X2,, Xk)

The following attributes were independent variables country of origin, age, gender, highest level of education, occupation and most importantly, perceptions on 21 service quality dimensions and 121 items .

Results of data analysis

By the standards of Dolnicar, Coltman and Sharma (2015), about 85% of visitors were satisfied with the overall quality of services that are provided to visitors, whereas about 15% of visitors were not satisfied with the quality of services provided to visitors by the same standards.

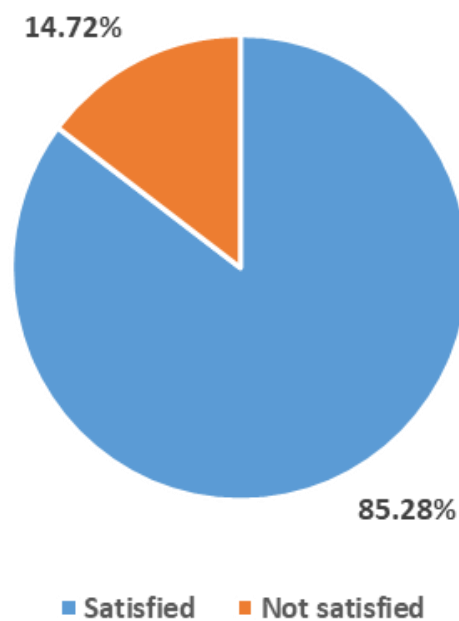


Figure 1.1 Overall Satisfaction of tourist with services provided at Kruger National Park.

Significant crosstab associations (n=625)

| Factors associated with the quality of services | Observed Pearson chi-square value | P-value |
|--|-----------------------------------|----------|
| Previous safari experience | 18.1668 | 0.001** |
| Availability of all animals of interest | 11.2229 | 0.024* |
| Transparency between service provider and tourists | 10.6775 | 0.005** |
| Being courteous to visitors consistently | 9.4898 | 0.009** |
| Providing prompt services to customers | 9.1209 | 0.010*** |
| Safari game reserve attractions | 7.3053 | 0.026* |
| Ability to provide truthful original adventure | 6.9538 | 0.031* |
| Knowledge of good products and services | 6.9267 | 0.031* |
| Intention to visit safari again in future | 6.9267 | 0.031* |
| Positive knowledge of safari | 6.8350 | 0.033* |
| Smart looking employees | 6.8350 | 0.033* |
| Positive past safari experience | 4.4647 | 0.035* |

Legend: Significance levels at * P<0.05; ** P<0.01; *** P<0.001

It is important to note the significance of the results in that the factors had small P-value of below 0.05.

Gap scores of dimensions

| DIMENSION | Item | EXPECTATION MEAN SCORE | PERCEPTION MEAN SCORE | GAP SCORE (P – E) | P-value |
|---|------|------------------------|-----------------------|-------------------|---------|
| Reliability | rel1 | 4.5776 | 4.7088 | 0.1312 | 0.0000 |
| | rel2 | 4.2752 | 4.5552 | 0.280 | 0.0000 |
| | rel3 | 4.3664 | 4.6704 | 0.304 | 0.0000 |
| | rel4 | 4.4080 | 4.6320 | 0.224 | 0.0000 |
| | rel5 | 4.3488 | 4.5792 | 0.230 | 0.0000 |
| Total | | 21.9760 | 23.1456 | 1.1692 | |
| Average gap score [Total of (P – E) / 5] | | | | 0.2338 | |
| Responsiveness | res1 | 4.3856 | 4.8064 | 0.4208 | 0.0000 |
| | res2 | 4.3936 | 4.5648 | 0.1712 | 0.0000 |
| | res3 | 4.6256 | 4.5392 | -0.0864 | 0.0006 |
| | res4 | 4.6923 | 4.8125 | 1.2019 | 0.0000 |

| | | | | | |
|--|-------|----------------|----------------|---------------|--------|
| Total | | 18.0971 | 18.7229 | 1.7075 | |
| Average gap score [Total of (P – E) / 4] | | | | 0.4269 | |
| Assurance | ass1 | 4.7152 | 4.6928 | -0.0224 | 0.1222 |
| | ass2 | 4.4544 | 4.3760 | -0.0784 | 0.0032 |
| | ass3 | 4.6080 | 4.6400 | 0.0320 | 0.1184 |
| | ass4 | 4.8096 | 4.6096 | -0.2000 | 0.0000 |
| Total | | 18.5872 | 18.3184 | 0.2688 | |
| Average gap score [Total of (P – E) / 4] | | | | 0.0672 | |
| Empathy | emp1 | 4.4000 | 4.3552 | -0.045 | 0.0306 |
| | emp2 | 1.1472 | 1.1968 | 0.049 | 0.0157 |
| | emp3 | 1.1664 | 1.2304 | 0.064 | 0.0013 |
| | emp4 | 1.1600 | 2.7808 | 1.621 | 0.0000 |
| | emp5 | 2.5440 | 3.6960 | 1.152 | 0.0000 |
| Total | | 10.4176 | 13.2592 | 2.8416 | |
| Average gap score [Total of (P – E) / 5] | | | | | |
| Tangibles | tan1 | 4.5280 | 4.6080 | 0.080 | 0.0057 |
| | tan2 | 4.7744 | 4.6608 | -0.114 | 0.0000 |
| | tan3 | 4.8288 | 4.7232 | -0.106 | 0.0000 |
| | tan4 | 4.6992 | 4.8096 | 0.110 | 0.0000 |
| Total | | 18.8304 | 18.8016 | 0.0300 | |
| Average gap score [Total of (P – E) / 4] | | | | 0.0075 | |
| Authenticity | aut1 | 4.8224 | 4.8096 | -0.0128 | 0.0324 |
| | aut2 | 4.7712 | 4.7984 | 0.0272 | 0.0194 |
| | aut3 | 4.5856 | 4.4032 | -0.1824 | 0.0000 |
| | aut4 | 4.7328 | 4.6928 | -0.0400 | 0.0339 |
| | aut5 | 4.6752 | 4.5248 | -0.1504 | 0.0000 |
| | aut6 | 4.5616 | 4.7376 | 0.1760 | 0.0000 |
| | aut7 | 4.7152 | 4.3936 | -0.3216 | 0.0000 |
| | aut8 | 4.5392 | 4.5632 | 0.0240 | 0.3220 |
| | aut9 | 2.6848 | 1.1296 | -1.5552 | 0.0000 |
| | aut10 | 1.2464 | 4.2480 | 3.0016 | 0.0000 |
| | aut11 | 4.3088 | 4.6560 | 0.3472 | 0.0000 |
| | aut12 | 4.6912 | 4.7200 | 0.0288 | 0.1364 |
| | aut13 | 4.5920 | 4.7792 | 0.1872 | 0.0000 |
| Total | | 54.9264 | 56.4560 | 1.5296 | |
| Average gap score [Total of (P – E) / 13] | | | | 0.1177 | |
| Accessibility | acc1 | 4.6608 | 4.7776 | 0.1168 | 0.0000 |
| | acc2 | 4.5760 | 4.5648 | 0.0112 | 0.6744 |
| | acc3 | 4.5648 | 4.6800 | 0.1152 | 0.0000 |

| | | | | | |
|--|------|----------------|----------------|---------------|--------|
| | acc4 | 4.5520 | 4.6720 | 0.1200 | 0.0000 |
| | acc5 | 4.5833 | 4.6442 | 0.0609 | 0.0045 |
| | acc6 | 4.5808 | 4.7696 | 0.1888 | 0.0000 |
| | acc7 | 4.6416 | 4.7808 | 0.1392 | 0.0000 |
| Total | | 32.1593 | 32.8890 | 0.7297 | |
| Average gap score [Total of (P – E) /7] | | | | 0.1042 | |
| Communication | com1 | 4.5168 | 4.7264 | 0.2096 | 0.0000 |
| | com2 | 4.5536 | 4.7072 | 0.1536 | 0.0000 |
| | com3 | 4.7056 | 4.7616 | 0.0560 | 0.0003 |
| | com4 | 4.7344 | 4.6560 | -0.0784 | 0.0000 |
| | com5 | 4.6000 | 4.7280 | 0.1280 | 0.0000 |
| | com6 | 4.7632 | 4.7264 | -0.0368 | 0.0261 |
| | com7 | 4.7805 | 4.8253 | 0.0449 | 0.0000 |
| | com8 | 4.7904 | 4.7872 | -0.0032 | 0.7683 |
| Total | | 37.4445 | 37.9181 | 0.4736 | |
| Average gap score [Total of (P – E) /8] | | | | 0.0592 | |
| Hygiene | hyg1 | 4.6448 | 4.7216 | 0.0768 | 0.0001 |
| | hyg2 | 4.6464 | 4.7872 | 0.1408 | 0.0000 |
| | hyg3 | 4.6064 | 4.5344 | -0.0720 | 0.0021 |
| | hyg4 | 4.6816 | 4.6624 | -0.0192 | 0.3491 |
| | hyg5 | 4.6528 | 4.6672 | 0.0144 | 0.3976 |
| | hyg6 | 4.7424 | 4.5040 | -0.2384 | 0.0000 |
| | hyg7 | 4.6512 | 4.7648 | 0.1136 | 0.0000 |
| Total | | 32.6256 | 32.6416 | 0.0160 | |
| Average gap score [Total of (P – E) /7] | | | | 0.0023 | |
| Harmony | har1 | 4.410256 | 4.705128 | 0.295 | 0.0000 |
| | har2 | 4.508800 | 4.689600 | 0.181 | 0.0000 |
| | har3 | 4.755200 | 4.780800 | 0.026 | 0.0454 |
| | har4 | 4.529600 | 4.948800 | 0.419 | 0.0000 |
| | har5 | 4.173077 | 4.955128 | 0.783 | 0.0000 |
| | har6 | 4.142400 | 4.953600 | 0.811 | 0.0000 |
| | har7 | 4.092949 | 4.958333 | 0.865 | 0.0000 |
| | har8 | 4.250000 | 4.910256 | 0.661 | 0.0000 |
| Total | | 34.8623 | 38.9016 | 4.0393 | |
| Average gap score [Total of (P – E) /8] | | | | 0.5049 | |
| Motivation | mot1 | 4.151613 | 4.932258 | 0.781 | 0.0000 |

| | | | | | |
|---|-------|----------------|----------------|----------------|--------|
| | mot2 | 4.166667 | 4.942308 | 0.776 | 0.0000 |
| | mot3 | 4.154093 | 4.945425 | 0.791 | 0.0000 |
| | mot4 | 4.054400 | 4.979600 | 0.923 | 0.0000 |
| | mot5 | 4.107200 | 4.924800 | 0.818 | 0.0000 |
| | mot6 | 4.177600 | 4.936000 | 0.758 | 0.0000 |
| | mot7 | 4.107200 | 4.892800 | 0.786 | 0.0000 |
| | mot8 | 4.142400 | 4.932800 | 0.790 | 0.0000 |
| | mot9 | 4.150400 | 4.926400 | 0.776 | 0.0000 |
| | mot10 | 4.153600 | 4.907200 | 0.754 | 0.0000 |
| | mot11 | 4.129600 | 4.934400 | 0.805 | 0.0000 |
| | mot12 | 4.112000 | 4.942400 | 0.831 | 0.0000 |
| | mot13 | 4.238400 | 4.950400 | 0.712 | 0.0000 |
| | mot14 | 4.144000 | 4.932800 | 0.789 | 0.0000 |
| Total | | 57.9900 | 69.0800 | 11.090 | |
| Average gap score [Total of (P – E) /14] | | | | 0.7921 | |
| Corporate image | cim1 | 4.248000 | 4.934400 | 0.686 | 0.0000 |
| | cim2 | 4.132800 | 4.988800 | 0.856 | 0.0000 |
| | cim3 | 4.182400 | 4.960000 | 0.778 | 0.0000 |
| | cim4 | 4.203200 | 4.987200 | 0.784 | 0.0000 |
| | cim5 | 4.171200 | 4.976000 | 0.805 | 0.0000 |
| | cim6 | 4.132800 | 4.979200 | 0.846 | 0.0000 |
| | cim7 | 4.166400 | 4.968000 | 0.802 | 0.0000 |
| | cim8 | 4.128000 | 4.953600 | 0.826 | 0.0000 |
| | cim9 | 4.136000 | 4.881600 | 0.746 | 0.0000 |
| Total | | 37.5000 | 44.6288 | 7.1288 | |
| Average gap score [Total of (P – E) /9] | | | | 0.7921 | |
| Past experience | pe1 | 4.1440 | 4.9536 | 0.809 | 0.0000 |
| | pe2 | 1.1344 | 4.9872 | 3.353 | 0.0000 |
| Total | | 5.2784 | 9.9408 | 4.6624 | |
| Average gap score [Total of (P – E) /2] | | | | 2.3312 | |
| Price | pr1 | 1.1360 | 4.9616 | 3.826 | 0.0000 |
| | pr2 | 1.1584 | 4.9232 | 3.765 | 0.0000 |
| | pr3 | 1.5280 | 4.9184 | 3.390 | 0.0000 |
| Total | | 3.8224 | 14.8032 | 10.9808 | |
| Average gap score [Total of (P – E) /3] | | | | 3.6603 | |
| Eco tangibles | et1 | 1.1792 | 4.8544 | 3.6752 | 0.0000 |

| | | | | | |
|--|------|----------------|----------------|----------------|--------|
| | et2 | 4.0928 | 4.9744 | 0.882 | 0.0000 |
| | et3 | 4.1344 | 4.9632 | 0.829 | 0.0000 |
| Total | | 9.4064 | 14.7920 | 5.3856 | |
| Average gap score [Total of (P – E) /3] | | | | 1.7952 | |
| Transparency | tr1 | 4.1664 | 4.9424 | 0.776 | 0.0001 |
| | tr2 | 4.1248 | 4.9712 | 0.846 | 0.0000 |
| | tr3 | 4.1648 | 4.9648 | 0.800 | 0.0000 |
| Total | | 12.4560 | 14.8784 | 2.4224 | |
| Average gap score [Total of (P – E) /3] | | | | 0.8075 | |
| Safety and security | ss1 | 4.0912 | 4.9648 | 0.874 | 0.0000 |
| | ss2 | 4.0896 | 4.7904 | 0.701 | 0.0000 |
| | ss3 | 4.7872 | 4.6448 | -0.142 | 0.0000 |
| | ss4 | 4.721 | 4.646 | -0.075 | 0.0003 |
| | ss5 | 4.7872 | 4.6064 | -0.181 | 0.0000 |
| Total | | 22.4762 | 23.6524 | 1.176 | |
| Average gap score [Total of (P – E) /5] | | | | 0.2352 | |
| Tourist knowledge | tk1 | 4.5344 | 4.6816 | 0.147 | 0.0000 |
| | tk2 | 4.6624 | 4.6528 | -0.009 | 0.5874 |
| | tk3 | 4.6672 | 4.7424 | 0.075 | 0.0000 |
| | tk4 | 4.5040 | 4.6512 | 0.147 | 0.0000 |
| | tk5 | 4.7644 | 4.4103 | -0.354 | 0.0000 |
| Total | | 23.1324 | 23.1383 | 0.0059 | |
| Average gap score [Total of (P – E) /5] | | | | 0.0012 | |
| Attitude | att1 | 4.7056 | 4.5088 | -0.197 | 0.0000 |
| | att2 | 4.6896 | 4.7552 | 0.0656 | 0.0001 |
| | att3 | 4.7808 | 4.5296 | -0.251 | 0.0000 |
| Total | | 14.1760 | 13.7936 | -0.382 | |
| Average gap score [Total of (P – E) /3] | | | | -0.1275 | |
| Climatic conditions | cc1 | 4.948800 | 4.172800 | -0.776 | 0.0000 |
| | cc2 | 4.955128 | 4.142628 | -0.813 | 0.0000 |
| | cc3 | 4.953526 | 4.092949 | -0.861 | 0.0000 |
| Total | | 14.8575 | 12.4084 | -2.4491 | |
| Average gap score [Total of (P – E) /3] | | | | -0.8164 | |
| Personality | per1 | 4.958400 | 4.249600 | -0.709 | 0.0000 |
| | per2 | 4.909823 | 4.151369 | -0.758 | 0.0000 |

| | | | | | |
|--|------|----------------|----------------|----------------|--------|
| | per3 | 4.932476 | 4.167203 | -0.765 | 0.0000 |
| | per4 | 4.942308 | 4.153846 | -0.788 | 0.0000 |
| | per5 | 4.945513 | 4.054487 | -0.891 | 0.0000 |
| | per6 | 4.977600 | 4.107200 | -0.870 | 0.0000 |
| Total | | 29.6661 | 24.8837 | -4.782 | |
| Average gap score [Total of (P – E) /6] | | | | -0.7971 | |

Table 5.4.2 shows estimated gap scores for expected and perceived values. A gap score is defined as the difference between the mean of perceived and expected values (Parasuraman, Zeithaml & Berry, 1988: 12-37).

Gap score = Perception mean score – Expectation mean score

$$Average\ gap\ score = \frac{\sum_{i=1}^k (\bar{P}_i - \bar{E}_i)}{k}$$

where k denotes the number of items used for assessment of dimensions.

In this study, the statistical significance of gap scores was assessed by using P-values obtained from the two-sample paired t-test (Hair, Black, Babin & Anderson, 2010). At the 5% level of significance, a gap score is said to be statistically significant if the P-value is less than 0.05. If the P-value is greater than or equal to 0.05, a gap score is said to be statistically insignificant. Table 5.4.2 shows gap scores estimated from analyses. It can be seen from the table that 112 of the 121 gap scores were significant at the 5% level of significance. Only 9 of the 121 gap scores obtained from data analyses were insignificant at the 5% level of significance. According to Parasuraman, Zeithaml and Berry (1988: 12-37), the results show a significant disparity between expected and perceived values. As such, Kruger National Park should improve the quality of services that are provided to visitors.

Communalities extracted for five influential predictors of perception

The principal axis factoring method was used for estimating communalities for 5 influential predictors of perception. Table 5.5.1.2 shows the communalities estimated for the 5 influential predictor variables of perception.

Table 5.5.1.2: Communalities extracted for 5 influential predictors of perception

| | |
|--|--|
| Variable of study | Extraction based on principal component analysis |
| Previous safari experience | 0.703 |
| Availability of all animals of interest | 0.671 |
| Transparency between service provider and visitors | 0.599 |
| Courtesy to visitors | 0.587 |
| Providing prompt services to visitors | 0.559 |

Eigen values estimated from factor analysis for perception

| Variable | Eigen value | Percentage of explained variance | Cumulative percentage of explained variance |
|--|-------------|----------------------------------|---|
| Previous safari experience | 2.808 | 26.229 | 26.229 |
| Availability of all animals of interest | 2.667 | 17.884 | 44.113 |
| Transparency between service provider and visitors | 2.459 | 15.449 | 59.562 |
| Courtesy to visitors | 2.225 | 14.746 | 74.308 |
| Providing prompt services to visitors | 2.119 | 12.448 | 86.756 |

Table 5.5.1.3 shows estimated Eigen values and percentages of explained variation for the 5 key predictors of perception. Based on results obtained from factor analysis for expectations, the expectation of respondents on the quality of services that were provided to them was significantly influenced by 5 key predictors of perception. These 5 predictor variables were previous safari experience, availability of all animals of interest, transparency between service provider and visitors, courtesy to visitors, and providing prompt services to visitors, in a decreasing order of strength. It can be seen from the table that the cumulative variation explained by the 5 influential variables is equal to 78.112%, a figure which is larger than 75%. This indicates that the 5 extracted factors account for variability in perception adequately enough.

Results obtained from logit regression analysis

Logit regression analysis (Hosmer and Lemeshow, 2004) was used in order to identify key predictors of satisfaction with the quality of services provided to visitors at Kruger National Park. This procedure showed that satisfaction in the quality of service delivery was influenced significantly by 3 factors. In logistic regression analysis, the measure of effect is the odds ratio. At the 5% level of significance, significant predictor variables are characterised by odds ratios that differ from 1 significantly, P-values that are smaller than 0.05, and 95% confidence intervals that do not contain 1.

Table 5.7.1: Results estimated from logit regression analysis

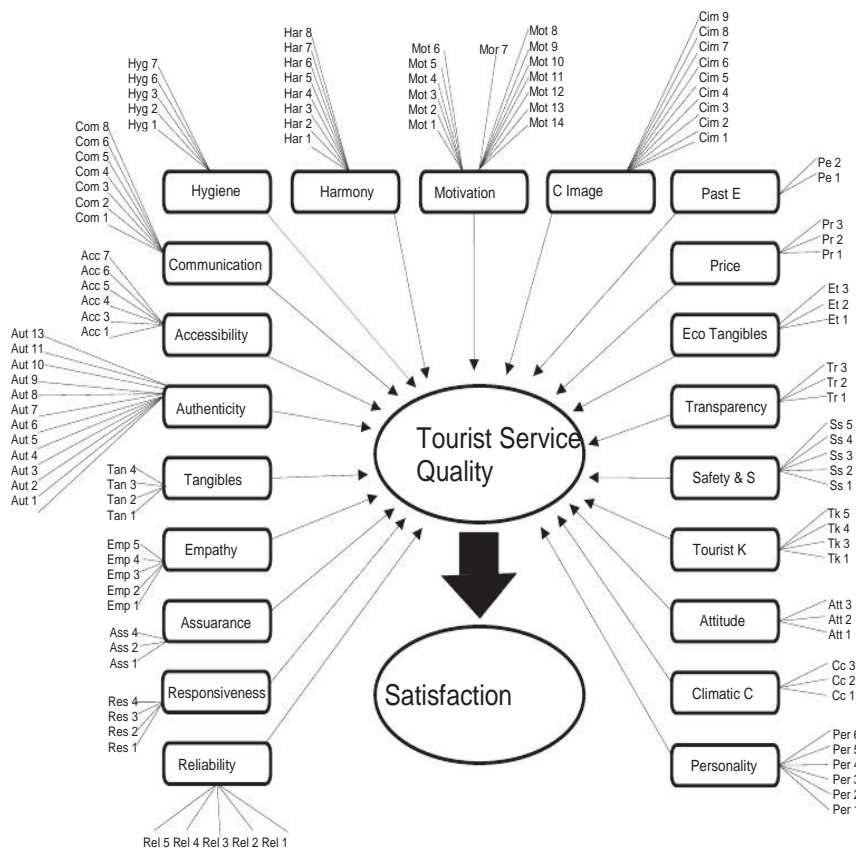
| Predictor variable | Odds Ratio | P-value | 95% C. I. |
|--|------------|---------|--------------|
| Previous safari experience | 3.44 | 0.000 | (2.72, 6.48) |
| Availability of all animals of interest | 2.71 | 0.000 | (2.49, 5.73) |
| Transparency between service provider and visitors | 2.47 | 0.000 | (1.97, 4.65) |

Results obtained from logit analysis showed that the degree of satisfaction of customers with the quality of services provided to them was significantly influenced by 3 predictor variables. These predictor variables were previous safari experience, availability of all animals of interest, and transparency between service provider and visitors, in a decreasing order of strength. The percentage of overall correct classification for this procedure was equal to 78.48%. This shows that the fitted logistic regression model is fairly well reliable (Hosmer & Lemeshow, 2013).

Summary of findings

The study found that the degree of satisfaction of tourists in a game viewing context cannot be restricted to the original five dimensions alone. The study found that there was a statistically significant difference between expected and perceived service quality at Kruger National Park, and that employees and managers working at Kruger National Park do not always satisfy and meet the service quality expectations of the tourists.

The study showed that the SAFSERV model is more comprehensive and appropriate as a model for measuring the degree of satisfaction of tourists interested in safari tourism and game viewing. The SAFSERV model could also be used by managers and marketers as a toolkit for branding and marketing services and related products in a safari tourism and game viewing context.



A SAFSERV framework for measuring service quality in wildlife watching tourism context

Areas of future study are testing and replicating this SAFSERV model in other national parks or provincial game parks or private game parks, especially in Africa or even elsewhere in the world. Further areas of study emanating from the research will be to develop specific service quality measurement scales for specific different tourism activities, avoiding generalizations of service quality measurement in tourism fraternity. Another area of further study could be applying SAFSERV as a marketing and branding toolkit for managers and marketers of National parks, provincial parks, private game parks or protected areas. Areas of further research would be to develop specific service quality measurement scales or models for different activities in other service industry settings.

Recommendations

- Improve the quality of service offered to tourists by improving on each of the 121 items in the study and 21 dimensions
- Adoption of the 112 items of SAFSERV to accurately and comprehensively measure the gap scores between expected and perceived values
- Consideration of park management, marketers and employees of key predictors of perception of tourists in a wildlife watching context which are ; availability of all animals of interest, transparency between the National park staff and tourists and previous safari experience
- SAFSERV model can be used as a marketing and branding toolkit in safari tourism
- Proper tailor-made marketing and communication messages that appeal to visitors and potential visitors the world over to attract or pull them to Kruger National Park
- Concentration of park management, marketers and employees on thirteen (13) most significant items associated with satisfaction of services received from Kruger National Park which are Gender of visitor , Previous safari experience ,Availability of all animals of interest ,Transparency between service provider and tourists, Being courteous to visitors consistently, Providing prompt services to customers ,Safari game reserve attractions ,Ability to provide , Truthful original adventure ,Knowledge of good products and services ,Intention to visit safari again in future , Positive knowledge of safari, Smart looking employees, Positive past safari experience.
- Setting up a comprehensive database of comments and suggestions made by local and international visitors and tourists.
- Proper conservation of the natural Park environment to maintain a natural and friendly eco –tourism facilities and atmosphere
- Provision of original, authentic, adventure, jungle, memorable experiences.
- Consideration of different cultural, demographic, nationality, personal and group origins so that the Park can offer customized services.
- Constant awareness campaigns on safety and security to tourists to avoid facing danger in the Park

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