FACTOR ANALYSIS TO GUEST SATISFACTION DIFFERENTIATED BY INCOME SEGMENT

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Abstract

Currently fast growing researches on the factors of customer satisfaction, especially in the services sector and tourism. Indonesian as a famous tourism market is going through a period of great change in the current era in term of the demand for tourism destination attraction. One of the tourism destination is Ragunan Zoo Park. To get more market, management should be more pay attention to visitor by increasing in visitor's satisfaction so that they become a loyal visitors and they will bring more customers to visit Ragunan. The Ragunan's visitors income can divide in two segment: first, The visitors that have income more regional salary rate (UMR), second, The visitors that have income under regional salary rate. The objectives in this research are: to know are there any variables that differentiation visitor's satisfaction. Variables that being used base on the customers satisfaction dimension and overall destination product. Data processing and analyzing use Discriminant Analysis. This method was hoped could answer the research objectives. Over all, The research shows any significant differentiation between two groups. Variables that make different are: games ticket, food and beverages price, education image, access, parking facility and count of animals.

Keywords: tourism destination, satisfaction, discriminant analysis

Abstrak

Saat ini tengah berkembang berbagai penelitian tentang kepuasan pelanggan, khususnya di sektor layanan dan turisme. Indonesia sebagai pasar wisata terkenal akan melalui periode perubahan besar di era saat ini dalam hal permintaan untuk daya tarik wisata. Salah satu tujuan wisata yang ada adalah kebun binatang Ragunan.Agar dapat memperoleh lebih banyak pengunjung, pihak manajemen harus lebih memperhatikan kepuasan pelanggan sehingga dapat menjadi pengunjung yang loyal dan mengajak pelanggan lain ke kebun binatang Ragunan. Pengunjung Ragunan dapat dibagi menjadi dua segmen, yaitu pengunjung yang memiliki pendapatan di atas upah minimum regional (UMR), dan pengunjung yang berpendapatn di bawah UMR. Tujuan penelitian ini adalh untuk mengetahui ariable yang dapat menjadi pembada kepuasan pelanggan. Variabel yang digunakan merujuk pada dimensi kepuasan pelanggan dan keseluruhan produk tujuan. Secara keseluruhan penelitian ini menunjukan perbedaan yang signifikan antar dua kelompok. Variabel yang menjadi pembeda adalah tiket permainan, harga makanan dan minuman, citra pendidikan, akses, fasilitas parkir dan jumlah binatang.

Kata kunci: tourism destination, satisfaction, discriminant analysis

1. Introduction

Tourism is the world's fastest rapid growing industry (WTO, 2000), and one of the famous tourism destination is Indonesia which has scenic and natural attraction country and as the biggest archipelago country with 17,508 islands dan length of coastal 81,000 km (Aryanto, 2008). DKI Jakarta as the capital city of Indonesia has international tourist growth 4.06% and national tourist growth 17.40% in 2007. There are principal destinations on the tourism market,

and one of them is Ragunan Zoo / *Taman Margasatwa Ragunan* (TMR), which is growing tourist visit from 2,050,055 in 2005, 2,553,087 in 2006, to 3,392,223 in 2007.

Zoo has special character destination and closest destination from central Jakarta, therefore this tourism as a noTable tourism object, the special character of the zoo are combinations variety of attraction known as its environment and a wider concept that the physical environment considered under sustainability of the destination. The complete elements of attractiveness consist of natural, built, cultural and social attractions. In order to daily operational of these attractions, the zoo face various situations and problems in general, which are: (a) Lack of variation of the tourism product/support, ie in the form of animals and wildlife attractions, programs interactions between animals and humans, good game for adults and children alike, (b) Lack of adequate support facilities, the toilets are clean and free of charge, a resort and playing space for children, available parking especially at times of school holidays and holy days, and (c) Congestion especially when the peak season. This situation make management must improve customer satisfaction program and improve program to increase potential guest. Need to detect the gap between guest's experiences as visitor of the zoo and their willingness.

The purpose of this empirical study is how the degree level of visitor satisfaction by linking it with the minimum wage. Is satisfaction gained visitors will be different between the group of visitors who have incomes above the minimum wage and the groups of visitors who have incomes below the minimum wage? Sequentially, the steps to solving problems in this study purpose to: (a) How to discriminants the factors of destination attraction such as the price of a game ticket, food and beverage process, image education, location accessibility, parking facilities and number of wildlife products. This variables distinguish groups of visitors with an income below the minimum wage and income groups of visitors on the minimum wage significantly, (b) How the level of visitor satisfaction based on variables that have been determined. The average of satisfaction for each variable plots in the diagram will find out visitor satisfaction position to take the right strategy.

2. Literature Review and Hypotheses Development

Basically the purpose of a business is to make a profit. Today's business conditions are not developed solely for profit, but how to archive company goals and meet the needs of target market by creating customer satisfaction more effectively dan efficiently than competitors. Customer satisfaction depends on consumer perceptions of product quality relative value of consumer expectations, as quote: Extend to which product' perceived performance matches a buyer's expectation. If the product performance unsuited to expectation, the buyer is dissatisfied. If performance matches or exceed expectation, the buyer is satisfied or delighted (Kotler, et al., 2006).

In evaluating the satisfaction of a particular firm, the important factors can be used a combination of the determinants of satisfaction with the products and services. Generally the often used aspects from consumer for service, quality of goods or services purchased, and price are: (a) Service quality, as proposed by Zeithaml and Bitner (1996), a company engaged in the service sector is highly depend on the quality of services provided. They argue that the service consists of five dimensions: reliability, responsiveness, assurance, tangibles, and empathy, (b) Quality of products/services, the better the quality of goods will increase customer satisfaction of service that they received, (c) Price, buyers are usually looking at the price as an indicator of the quality of a product or service, especially for services that have a condition where the quality is difficult to detect before the services consumed (Zeithaml and Bitner 1996; Solomon, 1996; Suhartanto, 2001; Setiadi, 2003). This is related to the fact that the nature of the services that have high levels of risk high enough compared to a good product. So consumers usually tend to assume a higher price represents a high quality. Price is also often used as an indicator of consumer satisfaction, if the consumer's perception after consuming the product or service in

accordance with the sacrifice or cost incurred, it will be satisfied consumer. On the other hand, if consumers feel their sacrifice was not in accordance with the results obtained, so dissatisfaction will be felt (Naumann and Giel, 1995).

For tourists, in determining tourist destination affected by factors pullers/ attractions (pull factor) of the factors offered by the tourist attraction. According to Naumann and Giel (1995), factors which are offered in the form of attributes that are dispersed in five components or dimensions of the destination called the "overall destination product" of attractions, facilities, accessibility, image and price.

This study tested some assumptions/hypotheses about the differences found in groups of visitors with an income above the minimum wage and income groups of visitors with a minimum wage below which visit to TMR. Hypothesis developed in this research are: (a) Hypotheses that was developed using factor analysis: there are six variables that distinguish groups of visitors with an income below the minimum wage and income groups of visitors on the minimum wage significantly. The six variables are the price of a game ticket, food and beverage process, image education, location accessibility, parking facilities and number of wildlife products. The subsequent hypotheses developed in this research are: if there are no distinguishing or factors that differentiate factors between the groups of visitor satisfaction with income above the minimum wage and income groups of visitors with below minimum wage in purchasing entertainment services Ragunan Wildlife Park, and (b) Hypotheses that was developed using Importance-Performance Analysis: the level of visitor satisfaction to TMR based on variables that have been determined. The average of satisfaction for each variable plots in the diagram will find out visitor satisfaction position to take the right strategy.

3. Research Method

Data collection of primary and secondary data conducted in *Taman Margasatwa Ragunan* (TMR) at April-June 2009. The timing of research on the weekend with reason, the number of visitors is more dense than other days. Sampling method was conducted (a) Convenience sampling, a non-probability sampling technique in which visitors who are not selected at random (random) from the frame population (Singarimbun, 1995), but determined there was deliberate and accidentally, when they came to visit the TMR on the designated day, and (b) Determining the required sample size based on one assumption in the analysis of the factors required for adequate sample 2 times the number of variables, but the sample size is preferable for 4 – 5 times from the number of variables (Naumann and Giel, 1996), c) 25 variables, 4 X 25 = 100 samples. This is also in accordance with the maximum Likelihood method where the number of samples meet the "goodness of fit" for 100-200 samples.

Data processing using office program and special statistical program processing, which is the results will be presented in the standard output or other processing results. To get information from the variables used scale values ranging from 1 to 10 on each question with a Likert scale. Analysis of data analysis using (a) Two Groups Discriminant Analysis, to see is there any difference in satisfaction between the 2 groups based on used variables, and (b) Important-Performance Analysis, to find out how much the level of visitor satisfaction.

Based on the identification of several variables and indicators, can be constructed a model that describes the relationship between the variables and indicators as in Figure 1.
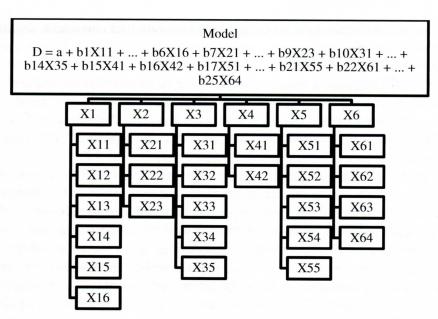
Model

$$D = a + b1X11 + \ldots + b6X16 + b7X21 + \ldots + b9X23 + b10X31 + \ldots + b14X35 + b15X41 + b16X42 + b17X51 + \ldots + b21X55 + b22X61 + \ldots + b25X64$$

X1	X2	X3	X4	X5	X6

X11	X21	X31	X41	X51	X61
X12	X22	X32	X42	X52	X62
X13	X23	X33		X53	X63
X14		X34		X54	X64
X15		X35		X55	
X16					

Figure 1. Variable Identification

Description:
X1 = Price
X2 = Product/attractions
X3 = Facilities/physical
X4 = Location
X5 = Service staff
X6 = Image

X11 = HTM
X12 = Ticket game
X13 = Ticket animal performance
X14 = Ticket supporting tourism
X15 = Other facility rentals
X16 = Price of food/beverage

X21 = Animal species
X22 = Number of animals
X23 = Wildlife attractions

X31 = Picnic/playing Location
X32 = Public facilities and hygiene
X33 = Condition of sTable
X34 = Parking
X35 = Supporting facilities

X41 = Accessible location
X42 = Strategic location

X51 = Reliability employees
X52 = Responsiveness of employees
X53 = Confidence employees
X54 = Physical appearance of employees
X55 = Empathy of employees

X61 = Ability of innovation
X62 = Element of education
X63 = Clean air
X64 = Security

Determination to groups of visitors based on the Minimum Wage scale DKI Jakarta (UMP DKI Jakarta) in 2009. Based on the Regulation of the Governor of DKI Jakarta No. 101 of 2008 mentioned in article 1 UMP in 2009 in Jakarta area is Rp1,069,865. While revenue measured in wages / income received during the month. So grouping of visitors into as follows: (a) Visitors with incomes below the minimum wage, (b) Visitors with incomes above the minimum wage, and (c) The number of samples for each group defined by 50 (fifty) people.

4. Results And Dicussions
4.1. Results

Processing analysis are divided into two stages. The first stage test the validity and reliability of questions used for research. At this stage the variables that analysis results considered invalid and unreliable are excluded from the model. The second stage to perform discriminant analysis on the variables considered to have valid and reliable. In a validity test, r_{Table} shows that at $\alpha = 0.05$ with degrees of freedom df = number of cases - 2, in this study the number of cases (respondents) was 50, so that degrees of freedom is 48, then r (0.05; 48) in test one-way = 0.1848, this is shows that questions on any variables that presented to respondents are all valid. In reliability test, which measured variables that r_{alpha} generated has a value greater than r_{tabel} is 0.1848, so that every questions that are used are considered reliable.

Discriminant analysis used in this study to test whether there is a significant difference in satisfaction between groups of visitors with an income above the minimum wage and income

groups of visitors with below minimum wage during visit to the TMR and determine what variables are the difference between the two classes this visitor. Analysis technique used is discriminant analysis of two groups (Supranto, 2004). At the output of the F test results can be seen among groups variables that proved any significant difference. Table below should explain it.

Tabel 1. F test Among Groups

Variable	Wilks' Lambda	Significant
X11 = htm	0.998	0.656
X12 = Ticket of game	0.768	0.000
X13 = Ticket of animal perform	0.953	0.030
X14 = Ticket of supporting tourism	0.957	0.039
X15 = Price of other facility rentals	0.958	0.040
X16 = Price of food / beverage	0.799	0.000
X21 = Animal species	1.000	0.907
X22 = Number of animals	0.956	0.037
X23 = Wildlife attractions	0.960	0.047
X31 = Picnic / playing Location	0.963	0.054
X32 = Public facilities and hygiene	0.989	0.303
X33 = Condition of sTable	0.999	0.732
X34 = Parking	0.965	0.064
X35 = Supporting facilities	0.918	0.004
X41 = Accessible location	0.945	0.019
X42 = Strategic location	0.990	0.321
X51 = Reliability employees	0.992	0.391
X52 = Responsiveness of employees	0.999	0.741
X53 = Confidence employees	0.996	0.523
X54 = Physical appearance of employees	1.000	0.975
X55 = Empathy of employees	1.000	0.870
X61 = Ability of innovation	0.999	0.761
X62 = Element of education	0.906	0.002
X63 = Clean air	0.993	0.424
X64 = Security	0.947	0.021

Test results as shown in Table above resulted there are variables that distinguish groups of visitors with an income below the minimum wage and income groups of visitors on the minimum wage on the assessment of the TMR. This difference is seen in the variables that have value-F test significance <0.05. In stepwise statistic output results can be determined which variables are eligible to be included in the analysis. These variables are: (a) the variable price, which comes from the indicators: the price of a game ticket, food and beverage prices, (b) Variable image, derived from indicators: education image, (c) Variable location, derived from indicators: ease of access, (d) Variable facility, which comes from the indicator: parking facilities, and (e) Variable products/attractions, which comes from the indicator: the number of animals.

Based on the analysis of research data with stepwise method shown there are six variables that distinguish groups of visitors with an income below the minimum wage and income groups of visitors on the minimum wage significantly. The six variables are the price of a game ticket, food and beverage process, image education, location accessibility, parking facilities and number of wildlife products. To see the formed model can be identified through standardized canonical discriminant function coefficients such as the Table below:

Tabel 2. Standardized Canonical Discriminant Function Coefficients

Variable	Function
	1
X12 = Ticket of game	0.421
X16 = Price of food / beverage	0.405
X22 = Number of animals	0.325
X35 = Supporting facilities	-0.507
X41 = Accessible location	0.475
X62 = Element of education	-0.492

From Table above, it can be made discriminant function as follows:

$$D = 0.421X_{12} + 0.405X_{16} + 0.325X_{22} - 0.507X_{35} + 0.475X_{41} - 0.492X_{62}$$

To see the indications that significant differences in the model of discriminant between groups of visitors with an income below the minimum wage and income groups of visitors on the minimum wage can be seen in Table below:

Table 3. Output Results of Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	Df	Significant
1	0.537	59.127	6	0.000

From Table above can be made a test phase to see the differences between the 2 groups as follows:

Stage 1: Define H_0: There are no distinguishing factors between the groups of visitor satisfaction with income above the minimum wage and income groups of visitors with below minimum wage. And Define H1 (H alternative): There are factors that differentiate between groups of visitor satisfaction with income above the minimum wage and income groups of visitors with below minimum wage.

Stage 2: Determining the level of significance/level of confidence of $(1.\alpha)$ is 95% so that the error type 1 (α) of 5%.

Stage 3: Seeing the value of significance, this research obtained significance value of 0.000.

Stage 4: After comparing the value of α (0.05) with a significance value, result 0.000 <0.05 or highly significant. This indicates that there are significant differences between groups of visitors with income below the minimum wage and income groups of visitors on the minimum wage in the discriminant model. That means between groups can be distinguished from a combination of free variables that null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted.

Importance-Performance Analysis (IPA) is used to see how much the level of visitor satisfaction to TMR based on variables that have been determined. Then the average of satisfaction for each variable plots in the cartesius diagram to find out visitor satisfaction position to take the right strategy.

Based on the processing of Importance-Performance Analysis (IPA) known the total satisfaction of visitors from 6 variables derived from 25 indicators for: the average performance / average interest = 6.77 / 7.85 * 100 = 86.24%, meaning if linked to the disconfirmation paradigm 86.24 < from 100% (satisfied), then the satisfaction of TMR is still below the (negative disconfirmation), as follow:
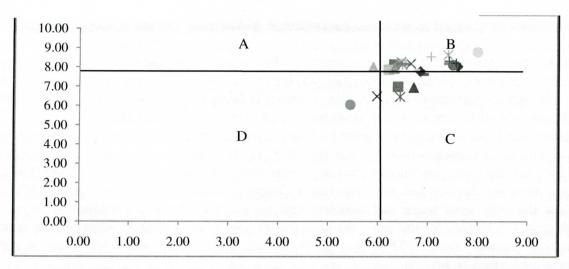
Figure 2. Cartesius Diagram for Customer Satisfaction of TMR

Quadrant A shows of the image can be seen still many variables that need to be prioritized by the management improvement. This is because visitors are still not satisfied because of the lack of performance as they regard these things is very important for them. From this quadrant of the 10 indicators: from the facility variables include: public facilities and cleanliness, condition of animal cages, information facilities/pointer direction, and parking. Service variables include all service indicators are: reliability, responsiveness, confidence, physical appearance, and employee empathy. One more to get management's attention is the image problem is a lack of innovation from TMR to develop new products to attract more visitors.

Quadrant B shows the achievements that need to be maintained and even increased again by TMR management, because visitors more satisfied with the performance of a very good management and match their expectations. This quadrant of the 8 indicators: variables include the price of admission price. Variable products/attractions include: the existing species and the number of animals. Variable locations include: ease of access and strategic of location. Image variables include: the elements of education, the clean air and safety.

Quadrant C shows of high satisfaction from visitor while they evaluate these indicator less important, it impress management too over do on give satisfaction for visitor. That variables is: variable product/attraction include: various animal attraction. Variable of facilities include: picnic and playing facilities.

Quadrant D shows the indicators that have a low priority for management. The reason is for visitors feel less management performance but actually they consider it less important indicator. These variables are: Price variables include: game ticket prices, ticket prices for animal performances, ticket prices to support tourism, other facility rentals and food and beverage prices.

4.2. Conclusions and Recommendations

The conclusions from this research are: (a) The level of visitor satisfaction TMR 86.24% (dissatisfied), (b) apparently there are differences in satisfaction between groups of visitors on the minimum wage income with an income below the minimum wage in buying entertainment services of TMR, (c) the factors that most distinguishes are: game ticket prices, the price of food and beverages, education image, ease of access, parking facilities and number of animals, (d) The strategy must be prioritized on the variables shown in quadrant A to increased visitor satisfaction with the improvement of: public facilities and hygiene, animal cage conditions, information facilities/pointer direction, parking facilities, reliability, responsiveness, confidence, physical appearance, empathy of employees, and innovation, (e) The strategy must be maintained in the quadrant B that shown include: the price of admission, type of animals there,

the number of animals, ease of access, strategic of location, the educational element, clean air and safety, (f) The strategy is considered good enough because visitors are very satisfied even though they are considered less important. This is shown in quadrant C include: variety of wildlife attractions. picnic facilities and playing arena, and (g) No specific strategies in quadrant D, although its performance is considered less it is because the assumption is not too important indicator. Variables are shown in quadrant D includes: game ticket price, ticket prices of animal performances, ticket prices to support tourism, other facilities rentals, food and beverage prices.

The recommendations from this research are: (a) Variables in quadrant A should receive priority for the management of increasing overall visitor satisfaction, (b) Manager TMR should focus more on the six variables that the difference between visitor satisfaction with income below the minimum wage and visitors with an income above the minimum wage, so that differences between groups may minimalized or more innovating in offering the appropriate products segment, and (c) TMR must develop their competitive advantage compare with other tourist attractions in Jakarta.

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