



FACTORS INFLUENCING TOURISM COMPONENTS ON TOURIST VISITS USING FACTOR ANALYSIS (Case Study: Teluk Makmur Puak Beach, Dumai City)

Mira Hafizhah T*, Agung Alviansyah, Puji Astuti

Program Studi Perencanaan Wilayah dan Kota, Fakultas Teknik, Universitas Islam Riau, Jalan Kaharuddin Nasution 113 Marpoyan, Pekanbaru Propinsi Riau, Indonesia- 28284

*Corresponding Author: mirahafizhah@eng.uir.ac.id

Article Info	Abstract
<p>Article history:</p> <p>Received : Oct 22, 2023 Revised : Nov 10, 2023 Accepted : Nov 20, 2023</p>	<p>The Puak Bay Makmur Beach Tourism Area is one of the leading natural tourism areas combined with cultural tourism, which is located in the north of Dumai city, precisely in Kel. Teluk Makmur Kec. Medang Kampai, Dumai City. As a tourism area, Teluk Makmur Puak Beach is not supported by the provision of 5 good tourism components, namely tourist attractions, service or service facilities, promotion, accessibility or transportation and information. According to recapitulation data on the number of visitors to the Teluk Makmur Tourism Beach from DISKOPAR, Dumai City, the tourist area of Puak Teluk Makmur Beach from the last four years has experienced a decline in the number of visitors from 2016 to 2019. This study aims to look at the factors that influence the tourism component of tourist visits by using factor analysis in the tourist area of Teluk Makmur Puak Beach. This study uses a qualitative descriptive method to identify the provision of tourism components and quantitative descriptive methods to identify the factors that influence the tourism component of tourist visits in the tourist area of Teluk Makmur Puak Beach using the results of a measured questionnaire. by using factor analysis with the help of the SPSS Statistics application. After identifying what factors are dominant in influencing the tourism component of tourist visits. The results of this study indicate that in the tourist area of Teluk Makmur Puak Beach, the provision of tourism components is still not fulfilled and adequate. Based on the results of factor analysis, for the most dominant factors in influencing the tourism component of tourist visits in the tourist area of Teluk Makmur Puak Beach, there are 3 factors, namely the service factor or service facilities (with a KMO index value of 0.545), promotion factors (with an index value of 0.533) and attraction factor (with an index value of 0.516).</p> <p>Keywords: Beach, Component Tourism, Factor affection, Tourist visit,</p>

1. INTRODUCTION

Tourism provision must consist of man-made or natural features that exist without human intervention for their procurement to offer visitors a complete experience. As per Gunn (2002) cited in Syarif (2010), it is important to maintain objectivity in evaluating the provision. The researcher states that tourism supplies are composed of attractions, services, transportation, and information and promotion. It is important to avoid redundancy in using the term "services" twice. Moreover, tourism supplies are composed of attractions, services, transportation, and information and promotion in [10].

Puak Teluk Makmur Beach is a prominent natural and cultural tourist attraction situated in northern Dumai. Specifically located in Teluk Makmur Village, Medang Kampai District, it covers an area of around 230 hectares. The Puak Beach in Bay Makmur possesses a distinctive charm due to its location within the Malay tourist village, adjacent to the Rupert Island and the Malacca Strait.

According to data compiled by the Department of Youth, Sports, and Tourism of Dumai City in 2020, the tourist area of Puak Teluk Makmur Beach welcomed a total of 20,020 visitors. In 2016, Makmur Bay Puak Beach attracted 60,127 visitors, and in 2017, it saw an increase of tourists. The total number of visitors in the Puak Beach tourist area Teluk Makmur was 49,061 people in the initial year followed by 42,132 visitors in 2018 and 42,080 visitors in 2019. This demonstration indicates that the number of tourists visiting the area has decreased in the last four years, specifically from 2016 to 2019.

Furthermore, the provision of tourism amenities in the Teluk Makmur's Puak Beach tourism area is unsatisfactory due to the lack of support from five crucial tourism components, including the absence of additional types of tourist attractions and inadequate service facilities. Accommodation facilities are also not available. The lack of restaurant or stall facilities, insufficient provision of public toilets, and poor hygiene create problems for tourists visiting Puak Teluk Beach. While there are public toilets onsite, their maintenance standards are inadequate, resulting in some damaged doors and unclean conditions. Additionally, some toilets lack sufficient clean water flow. Another issue is the unavailability of health facilities in the area. The health facilities in the Puak Teluk Makmur Beach tourist area are lacking. Additionally, there has been destruction of several gazebos, including permanent and semi-permanent ones, as well as damaged huts and poorly maintained areas. Furthermore, the play area has not been properly maintained, resulting in several damaged and rarely used spaces, particularly for children.

2. RESEARCH METHOD

The study utilised a qualitative research method, definition as outlined in [1], which aims to comprehend the phenomenon of the research subject's experiences, such as behaviour, perception, motivation, and action. Research participants' experiences, such as their behaviour, perceptions, motivations, and actions, are analysed holistically through descriptions using words and language, within a unique natural context, and with various natural methods utilized. The descriptive qualitative analysis method, as described by I Made Winartha (2006), involves the analysis, description, and summarization of the data. The qualitative analysis method involves analysing, describing, and summarising different conditions and situations based on data collected through interviews or observations about the problems studied in the field. It also comprises observations related to the issues explored in the field.

Furthermore, the research employs quantitative research methods as highlighted by [3]. This method constitutes a means of acquiring knowledge by utilising numerical data to discover information pertaining to our research objectives.

The participants in the present study were multiple tourists who visited the Puak Bay Makmur Beach tourism site. Non-probability sampling was utilised to select participants, which involves selecting elements or groups without ensuring equal opportunity or representation. Sampling techniques that do not offer equal chances for every element or member of the population to be selected as a sample should be avoided. It is important to ensure fairness and impartiality in the process of selecting samples in Siyoto dkk (2015)

These techniques include systematic sampling, quota, incidental, purposive, saturated, and snowball sampling. The authors utilised the purposive sampling technique in this study. As indicated by [4], purposive sampling involves careful consideration of the sample selection process. Given this understanding, the authors selected their sample intentionally and with specific criteria in mind. To facilitate research, the authors have identified the properties and characteristics utilized in this study. The sample size chosen for the study includes individuals aged 15 years and above who are tourists.

The sample size corresponds to the number of visitors to Puak Bay Makmur Beach in Dumai City between the years 2016 and 2019, which is considered the population (N). Specifically, there were 193,400 tourists during that time (Dinas Kepemudaan, Sports and Tourism of Dumai City, 2020). So, to ensure suitability, a maximum of 10% leeway has been applied in the calculation of the required sample size. The research sample can be determined as follows:

$$n = \frac{N}{1 + N(e^2)}$$

$$n = \frac{193.400}{1 + 193.400 (10\%)^2}$$

$$n = \frac{193.400}{1 + 193.400 (0,1)^2}$$

$$n = \frac{193.400}{1 + 193.400 (0,01)}$$

$$n = \frac{193.400}{1.935}$$

$n = 99,94$ dibulatkan menjadi = 100

When identifying the various factors that impact tourism components for visitors to the Puak Teluk Beach tourism area, Makmur employed a questionnaire that was evaluated using factor analysis. This analytical technique examines numerous observations and examines their interconnectedness. This study employs primary data obtained via questionnaires featuring descriptive respondent data and simple table questions. This study employs primary data obtained via questionnaires featuring descriptive respondent data and simple table questions. Technical abbreviations will be expanded on their first use. The questionnaire utilises Very Unaffected (STB), Not Affected (TB), Moderate (S), Affected (B), and Very Affected (SB) categories for responses. The Likert scale method is commonly used for providing questionnaire answers. This method assigns categories a value on a scale of 1 to 5 based on the response. Please refer to the table below for further details.

Table 1 Likert Scale Questionnaire Rating

Rating Scale	Interpretation
1	Very Unaffected
2	No Effect
3	Medium
4	Influential
5	Very Influential

Source: Santoso, 2018

After dividing the questionnaire, the weights will be determined through factor analysis using the IBM SPSS Statistics application programme. The analysis results will be presented by preparing a correlation matrix, determining the number of factors, rotating the factors, and interpreting the factors in [7]. After the explanation the results of the analysis, the factors that influence the Tourism in the Puak Bay Beach tourist area in Makmur City, Dumai will be examined. Technical term abbreviations will be explained when first used, and the text will adhere to

conventional academic structure and formatting. Objectivity will be maintained with clear, concise language, avoiding biased or emotional language, and sticking to conventional sentence structure. Grammatical correctness will be ensured, and precise, subject-specific vocabulary will be used when necessary. Additionally, the language will maintain a formal register and avoid colloquial expressions or unnecessary jargon. The study will utilize several variables including Attraction Factors (X1), Service Facilities (X2), Promotion Factors (X3), Transportation or Accessibility Factors (X4), and Information Factors (X5), Transport or Accessibility Factors (X4) and Information Factors (X5). The study considered factors such as transport and accessibility in addition to information provided to tourists. Consistent format, citation and footnote styles are used throughout, with objective, high-level language employed throughout. The data was collected through a questionnaire completed by 100 tourists visiting the Puak Teluk Makmur Beach area.

The respondents rated their level of agreement on the weighted questions. Abbreviations are explained upon first use. The language used is formal, objective, and balanced, and adheres to grammatical correctness, with precise usage of subject-specific vocabulary. The text is structured logically, with causal connections clearly marked. Based on the factor analysis model equation, examining the value of the factor coefficient obtained allows identification of the most influential factors affecting tourism component.

3. RESULTS AND ANALYSIS

Data was collected from 100 questionnaires completed by tourists visiting the Puak Teluk Makmur Beach tourist area. The questionnaire return rate was 100%. The responses from the questionnaire were analysed through the application of factor analysis with SPSS software. The procedure of factor analysis helped summarise and simplify the data. The responses from the questionnaire were analysed through the application of factor analysis with SPSS software. The procedure of factor analysis helped summarise and simplify the data. The outcomes of the factor analysis test on the variables are presented below.

a. Compilation of the Correlation Matrix

Factors affecting tourism in Dumai City can be elaborated as follows. Compilation of Correlation Matrix Results from the indicator test showed correlation coefficients between all variables and factors. Through the KMO (Kaiser Meyer Olkin) value and The Bartlett's Test of Sphericity, 5 variables were obtained, with 3 variables selected with an index of KMO INDEX > 0.5. The three factors considered are 'Service' or the facilities that support it, 'Promotion', and 'Attraction'. Further details on the correlation coefficient value are available in Table 1, which includes the KMO index value (Kaiser Meyer Olkin) and The Bartlett's Test of Sphericity. Sphericity can be observed in Table 2 below.

Table 2. Collation Matrix of Factors Impacting Tourist Visits to Puak Beach Tourism Area, Teluk Makmur, Dumai City.

No	Nama Variabel	Nilai Koefisien Korelasi		Keterangan
		Indeks KMO	The Bartlett's Test of Sphericity	
1	Atraksi	0.516	2.524 df 1 sig. 0.012	Signifikan untuk analisis faktor
2	Servis atau Fasilitas Pelayanan	0.545	72.295 df 55 sig. 0.049	Signifikan untuk analisis faktor
3	Promosi	0.533	2.098 df 3 sig. 0.024	Signifikan untuk analisis faktor
4	Transportasi atau Aksesibilitas	0.500	1.797 df 3 sig. 0.016	Tidak Signifikan untuk analisis faktor
5	Informasi	0.500	0.518 df 1 sig. 0,022	Tidak signifikan untuk analisis faktor

Ket : analisis Faktor bisa dilakukan jika indeks KMO >0,500 (Sarwono dalam Setyawardman, 2009)

The variables with a KMO index > 0.5--Service or Service Facilities with a KMO of 0.545, Promotion with a KMO of 0.533, and Attractions with a KMO of 0.516--are correlated. Bartlett's Test of Sphericity confirms correlation between variables.

b. Determination of the Number of Factors

In this study, the factor analysis method employed utilises the Principal Component Analysis (PCA) technique. The determination of the number of factors is based on the eigenvalue greater than 1 (Magdalena, 2016). The table below presents a total of 5 factors that are determined based on the specified criteria. The table below presents a total of 5 factors that are determined based on the specified criteria. For further information, please refer to the table.

Table 3: Factor Analysis Results Based on Eigenvalues and Cumulative Percentage Of Variance

No	Faktor	EigenValue	Percentage of Variance	Cumulative Percentage Of Variance
1	F1	2.190	10.430	10.430
2	F2	1.753	8.346	18.776
3	F3	1.709	8.136	26.912
4	F4	1.544	7.353	34.265
5	F5	1.480	7.047	41.312

Sumber : Hasil Analisis, 2021

Based on the table above the factors are described as F1 to F5 which the explanation is as follows:

- F1 = Attractions
- F2 = Service or Service Facilities
- F3 = Promotion
- F4 = Transport or Accessibility
- F5 = Information

c. Factor Rotation

Varimax rotation was utilized for factor rotation due to its superior performance compared to other techniques. This method enables effective analysis of the 5 factors being studied. By the variables in the analysis. Additionally, only variables with a minimum factor loading of 0.5 have been included in this analysis. The results can be viewed in the table below.

Table 4. Varimax Rotation Factor Analysis Results

Nama Faktor	Cumulative Percentage Of Variance	Variabel yang Termasuk Dalam Faktor	Faktor Loading	Eigen Value
Faktor 1 Atraksi (X ₁)	10.430	X ₁ 1	0.606	2.190
		X ₁ 2	0.755	
Faktor 2 Servis atau Fasilitas Pelayanan (X ₂)	18.776	X ₂ 1	0.481	1.753
		X ₂ 2	0.492	
		X ₂ 3	0.568	
		X ₂ 4	0.623	
		X ₂ 5	0.736	
		X ₂ 6	0.560	
		X ₂ 7	0.672	
		X ₂ 8	0.597	
		X ₂ 9	0.656	
		X ₂ 10	0.634	
Faktor 3 Promosi (X ₃)	26.912	X ₃ 1	0.675	1.709
		X ₃ 2	0.718	
		X ₃ 3	0.648	
Faktor 4 Transportasi atau Aksesibilitas (X ₄)	34.265	X ₄ 1	0.616	1.544
		X ₄ 2	0.720	
		X ₄ 3	0.667	
Faktor 5 Informasi (X ₅)	41.312	X ₅ 1	0.670	1.480
		X ₅ 2	0.539	

Sumber : Hasil Analisis, 2021

Based on the table presented above, it is evident that a factor loading value greater than 0.5 indicates a strong relationship between the variables in the factor. On the other hand, a factor loading value below 0.5 signifies a relatively weak relationship between the variables. The variables associated with the factor are shown in the table. loading factor value greater than 0.5 almost all except X₂_1 which has a factor loading value of 0.481 and X₂_2 which has a factor loading value of 0.491.

d. Factor Interpretation

Factor interpretation involves grouping variables with a factor loading of at least 0.5, while those with a factor loading of less than 0.5 are not included in the model. To ensure clarity and logical structure, technical terms will be explained upon first use. Consistent citation and footnote formatting will be maintained in adherence to style guides. Biased or emotional language will be avoided, and a formal register will be used throughout. Additionally, sentence and paragraph structure will create a cohesive flow of information and grammatical correctness will be ensured. Factor interpretation involves grouping variables with a factor loading of at least 0.5, while those with a factor loading of less than 0.5 are not included in the model.

From the correlation matrix table of factors affecting tourism in the Puak Bay Makmur Beach tourist area in Dumai City, it is evident that three variables have a KMO index value greater than 0.5 out of five factors, with a cumulative percentage variance of 41.312%. This indicates the significant influence of these factors on tourist visits. Specifically, the model accounts for 41.312% of these factors, whilst the remaining 58.688% is attributed to other unexamined factors. The study elucidates the factors that impact tourism components on tourist visits in Puak Teluk Makmur Dumai City.

Based on the factor analysis results, it is evident that the tourism components affecting visits to Puak Teluk Makmur consist of a service factor or service facility (X₂) with a KMO index value of 0.545, a promotion factor (X₃) with a KMO index value of 0.533, and the Attraction Factor (X₁) with

a KMO index value of 0.516. Based on the factor analysis results, it is evident that the tourism components affecting visits to Puak Teluk Makmur consist of a service factor or service facility (X2) with a KMO index value of 0.545, a promotion factor (X3) with a KMO index value of 0.533, and the Attraction Factor (X1) with a KMO index value of 0.516. Other factors are only considered supporting factors. Technical term abbreviations are explained upon initial use. Correct spelling, grammar, and punctuation are in place as well as the correct footnote style and formatting features. While other factors may serve only as supporting factors, further details can be found in the table below. The table outlines the order of variables based on their KMO Index value, which is greater than 0.5.

Table 5. Variable Order Based on KMO Value

No	Nama Variabel	Nilai Indeks KMO	Keterangan
1	Servis atau Fasilitas Pelayanan (X2)	0.545	Signifikan untuk analisis faktor
2	Promosi (X3)	0.533	Signifikan untuk analisis faktor
3	Atraksi (X1)	0.516	Signifikan untuk analisis faktor
4	Transportasi atau Aksesibilitas (X4)	0.500	Tidak signifikan untuk analisis faktor
5	Informasi (X5)	0.500	Tidak signifikan untuk analisis faktor

Sumber : Hasil Analisis. 2021

Thus, to explain the factors that influence the tourism component Tourism Components on Tourist Visits in the Puak Teluk Beach Tourist Area Makmur can be seen from services or service facilities, promotions, and attractions.

CONCLUSION

Based on the results of the identification of the provision of tourism components in the tourism components in the tourism area of Puak Teluk Makmur Beach, it can be seen that Provision of tourism components in Puak Bay Makmur Beach tourism area Makmur Beach tourist area is still not fulfilled and adequate. Then, based on the results of identifying the factors that influence the tourism components on tourist visits using factor analysis. The results, namely there are 3 factors that influence the tourism component on tourist visits. Tourist visits in the tourist area of Puak Bay Makmur Beach, Dumai. The 3 factors are service factors or service facilities (with a KMO index value of 0.545), promotion factors (with a KMO index value of 0.533) and the attraction factor (with a KMO index value of 0.516). Factor reduction. This factor reduction can help to explain the factors that influence tourism components on tourist visits to the tourism area Puak Bay Makmur Beach.

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