TOURIST TRANSPORTATION PREFERENCE IN BROMO MOUNTAIN

By:

DIO BAGUS BRAMANTYO

NIM. 105020107121005

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TOURIST TRANSPORTATION PREFERENCE IN BROMO MOUNTAIN

(A Case Study in Taman Nasional Bromo Tengger Semeru (TNBTS))

Dio Bagus Bramantyo

WildanSyafitri, SE.,ME.,Ph.D

Faculty of Economics and Business

Diobramantyo19@gmail.com

ABSTRACT

This study is aimed to analyze the factors affecting tourist transportation preference in Bromo Mountain. Using linear logistic model on 100 respondents including domestic and international tourist, this study divided into three kind of transportation that is used in Bromo, including on foot, horse and car/jeep. Gender, type of tourist, and occupation are significant to choose on foot as the transportation. Besides, ages, type of tourist, occupation, and purposes is significant to choose horse as the transportation. On the other hand, gender, ages, occupation and purposes are significant to choose car as the transportation.

Keywords: Tourist transportation preference, bromo

INTRODUCTION

The Indonesian tourism objects have big economic potency which spread from Nangroe Aceh Darussalam to Papua Province. The diversity of tourism object, culture, art, and convenience facilities attract domestic or foreign visitors to visit these objects. These Domestic and foreign visitor have imposed positive impact on the increase of national income.

It is undeniable that tourism sector is one of the dominant economic sectors that is important for developing the economic level of a nation, including Indonesia. It is supported by data from Indonesian GDP that tourism sector in 2013 has significantly increased the national GDP. By the increasing number of the foreign visitor by 7.3 %in 2013 than 2012 scored 8.637.275 than 8.04 million visitors in 2012. From this total number of visitor, the tourism sector income in 2013 scored USD 9.87 Billion than USD

9.12 Billion in 2012or increased by 8.17%. Besides, this sector has provided employments of for 10.18 million persons in 2013 or increased by 8.89% than in 2012 (Republika.co.id Accessed on January 10th 2014). Tourism sector become an important sector to increase our economic growth.

From to the data presented above, the tourism sector has significantly developed in Indonesia. One of the developed tourism objects is Bromo Tengger Semeru National Park (TNBTS). It is one of the tourism objects in East Java province. This national park is located in four districts in East Java Province including Malang, Pasuruan, Probolinggo and Lumajang. Bromo Mountain is surrounded by 5.290ha exotic desert. From *pananjakan*one of the top of this hill the visitor can enjoy the beautiful view of Semeru, Bromo and Batok Mountain, beside the most awaited moment of sunrise(www.jatimprov.go.id).

LITERATURE REVIEW

Fundamental Theory

In this part, the writer would like to discuss about the concept of consumer preferences and factors that influence consumer preferences. The writer also discuss bout the concept of tourism including the definition of tourist, tourist characteristics and the role of tourism sector into Indonesian economy.

Factors that Influence Consumer Preferences

Consumer preferences to choose a product or service is influenced by several factors. These factors can be controlled and there are some that can be controlled by management. The factors that influence consumer preferences in using the product or service is the price, in terms of service and commodity attributes (Hidayat, 2008).

1.Price is the amount of money that must be paid by consumers to obtain the product. Price is a variable that can change quickly due to changes in constituent factors. To achieve the goals of an organization, the determination of the price level must be adapted to the consumers' views about its value, so that consumers do not switch to a competitor.

2. Service aspect is that the service can be provided to consumers of products and services. Good service will have an impact on consumer preference and satisfaction.

3 Attributes commodities are important elements in a product or service that is used as a basis for decision-making of consumers.

In this study raise a number of factors that influence preference / traveler decisions in the use of means of transportation area of Bromo Tengger Semeru National Park (TNBTS) is the price of transportation to tourist attractions, transportation security, the facilities provided by the manager of the vehicle.

Tourist Characteristics

Of the various groupings, each individual travelers have unique properties and can be viewed from different approaches, which are as follows (Ismayanti 2011: 41):

1. Travelers based on psychographic characteristics. In psychograph, sorted travelers travelers based on personality, lifestyle and social class travelers travelers.

2. Characteristics of travelers based on socio-economic aspects. In the socio-economic aspects of travelers are classified and differentiated based on demographics, ie age, educational background, income, gender and family cycle.

3. Characteristics of travelers based on aspects of geography. Travelers differentiated by region of origin arrival, travelers as the place of origin is an

important aspect in understanding the characteristics of travelers as it relates to culture, values, attitudes and belief systems.

4. Characteristics of travelers based on travel patterns. Every tourist when making the tour has unique characteristics and can be distinguished Based on the benefits of travel, purpose of visit, purpose of visit, the facility is used, the maturity of the trip, the level of loyalty and usage levels.

The Factors that Influence Tourist to Visit Tourism Place

A tourist will make a trip to a place of course there are influences, so that tourists visiting the tourist spots. According Dwiputra (2013), there are two aspects that can affect tourist tourists travel travelers are motivated travelers and travel patterns.

1. Travelers motivation is fundamental before doing a trip. Because motivation is the trigger of the tour. There are several motivations that drive trips, the physical motivation, cultural motivation, social motivation and motivation is because fantasy is to give psychological satisfaction.

2. Travelers'travel pattern is that people who travel in conjunction with the travel industry. Factors that influence is (a) the distance to tourist attractions; (b) where travelers stay home; (c) the intention of tourists to visit the destination whether for vacation, study, meet with family or others; (d) mode of travel or the mode of transportation, it is necessary to know the route to the tourist attractions transport what used to take. Modes of transport can be distinguished between the air, land and sea.

The Purposes of Tourist to Visit Tourism Object

Tourist according to UN-WTO in Ismayanti, (2011:7) has three destination category related the tourist destination, such as:

1. *Leisure and recreation*

The main activities in this category are the activities of a walk, and eat around town supporting activities in this category, is to visit relatives, attend conferences, business and shopping. Travelers who aim to have fun and leisure travelers as vacancy. Technical travel is organizedby themselves or using the help of a travel agency. Travel theme in this category can vary ranging from nature, culture to sports.

2. *Business and profesional*

The main activity in this category is closely related to the job. Travelers who aims to perform job duties visits referred by business travelers. Supporting activities in this category is to visit relatives, leisure shopping, entertainment and others. Travelers in this category always use the services of a travel agency for organizing trip. Tourist spot choice tends to be concentrated in large cities.

3. *Other tourism purpose*

Activities conducted under this category is for insight and knowledge, a medical examination, social activity and strengthening faith.

The Definition of Tourism Facilities

Tourism is a system, which has many elements that are interrelated to each other. The existence and the relationship of these elements illustrate the tourism system. If one element is missing or weak, then it certainly will be uninterrupted or haltits activities. Therefore, it is required a manager who are truly reliable to manage Tourism (Aaron, 2009).

The Facilities of Tourism Place

Shape of tourism facilities is a tool to support all the needs required by travelers. Tourism facilities are divided into three parts, namely (1) the principal means of

tourism is a company that lives and life is very dependent on the flow of tourists; (2) a complementary tool of tourism, namely provide places for recreation facilities whose function is not only the principal means to make the tourism but tourists can stay longer; and (3) a means of supporting tourism, the companies that support supplementary facilities and basic facilities that serve not only to make tourists stay longer, but more aimed at efforts to increase spending or spending money in places he visited (Aaron, 2009).

Hypothesis

According to the literature review above, the writer makes some hypothesis includes:

1. Gender is significantly influence the decision of people to choose transportation in Bromo.

2. Ages are significantly influence the decision of people to choose transportation in Bromo.

3. Tourist Origin is significantly influence the decision of people to choose transportation in Bromo.

4. Occupation is significantly influence the decision of people to choose transportation in Bromo.

5. Stay Decision is significantly influence the decision of people to choose transportation in Bromo.

6. Purpose to visit is significantly influence the decision of people to choose transportation in Bromo.

RESEARCH METHODOLOGY

Types of the Study

This study uses quantitative and descriptive analysis methods. Descriptive analysis used to summarize the data as the result of survey in socioeconomic characteristic. Descriptive analysis is used to find out the variables including summary of data tabulation and figuring out the percentage of frequency in each class. For the quantitative analysis, the linear probability and logistic model are used in this study. The quantitative analysis used to understand the factors that are influence the tourist preferences to choose which transportation they are used in Bromo Mountain.

$$Y_1 = \beta0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + error$$

$$Y_2 = \beta0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + error$$

$$Y_3 = \beta0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + error$$

a. Logistic Model

$$LN \; \frac{Yi}{1-yi} = \beta0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + error$$

Where:

1. A is constant

2. Y is type of transportation

3. Ln is natural log

4. X_1 is gender

5. X_2 is age

6. X_3 is type of tourist

7. X_4 is occupation

8. X_5 is stay decision

9. X_6 is the purpose of visit

10. β is constant

11. e = rate of error

FINDINGS AND DISCUSSION

Empirical Model of Logistic Regression

The findings of the influence between gender, ages, tourist origin, occupation, stay decision, and the purpose of visiting to the decision of choosing transportation are shown by the table bellow:

Table 4.12
Empirical Model of Logistic Regression

Independent Variable	Transportation					
	On foot		Horse		Car/jeep	
	B	Odd Ratio	B	Odd Ratio	B	Odd Ratio
Intercept	1.855		-0.617		4.706	
Gender	3.187*	24.204	0.007	1.008	-2.124*	0.120
Ages	0.264	1.302	-1.156*	0.315	-1.656*	0.191
Type Tourist	-2.285*	0.102	2.401*	11.032	1.676	5.344
Occupation 1	1.876	6.530	3.332*	27.988	2.112	8.267
Occupation 2	-3.033*	0.048	2.292*	9.895	3.194*	24.386
Stay Decision	-1.955	0.142	-0.775	0.461	-0.687	0.503
Purpose 1	-3.518*	0.030	-1.635	0.195	-3.543*	0.029
Purpose 2	-0.122	0.885	1.987*	7.290	-3.376*	0.034

Source: On research, SPSS, 2014
*Significant

Empirical model of "on foot" that is resulted by logistics regression analysis:

$$y = ln\left(\frac{p_i}{1 - p_i}\right)$$

$$= 1.855 + 3.187X_1 + 0.264X_2 - 2.285X_3 + 1.876X_4 - 3.033X_5$$

$$- 1.955X_6 - 3.518X_7 - 0.122X_8$$

The estimation model shows that:

1. Coefficient variable of gender is 3.187with 24.204odd ratio, it is indicate that male has opportunity to choose on foot 24.204 times more bigger than female.

2. Coefficient variable of age is 0.264 with 1.302 odd ratio. It indicates that the increasing of age by 1 year, the opportunity to choose on foot is increased by 1.302 times. But, age doesnot influence the decision to choose on foot that is stated by partial. This means that the increasing or decreasing of ages will not influence the decision to choose on foot as the transportation

3. Coefficient variable of the type of tourist is 2.285 with 0.102 odd ratios. It indicates that foreign tourist opportunity to choose on foot is 0.102 times bigger than domestic tourist.

4. Coefficient variable of occupation 1 (State employee-student) is 1.876 with 6.530 odd ratios. It is indicate that the state employee has opportunity to choose on foot as the transportation 6.530 times larger than student. But, occupation 1 (state employee-student) doesnot influence tourist to choose on foot that is stated in partial test.

5. Coefficient of occupation 2 (employee-student) is -3.033with 0.048odd ratios. It indicates that student opportunity 0.048times bigger than employee to choose on foot as their decision of transportation.

6. Coefficient variable to stay is -1.955 with 0.142odd ratios. It indicates that person who does not spend the night in BromoMountainhas opportunity of 0.142 times bigger than people who spend the night in BromoMountain.But, stay decision does not influence the decision to choose on foot as the transportation. It is stated in partial test. This means that the person who spends the night in Bromo has the same opportunity with the person who does not spend the night in Bromo.

7. Coefficient variable purpose 1 (holiday-business) is -3.518 with 0.030 odd ratios. It indicates that people who have purpose to do business has opportunity of 0.030 times bigger that the people who have the purpose for holiday.

8. Coefficient variable of purpose 2 (culture-business) is -0.122with 0.885odd ratios. It indicates that people who have purpose to do business has the opportunity of 0.885 times bigger to choose on foot than the people who are visiting for culture. But, purpose 2 (culture-business) does not influence the decision to choose on foot as the transportation. This means that people who have culture and business purposes are both have the same opportunity to choose on foot.

Empirical model of "by horse" as the findings of logistics regression analysis is:

$$y = ln\left(\frac{p_i}{1 - p_i}\right)$$

$$= -0.617 + 0.007X_1 - 1.156X_2 + 2.401X_3 + 3.332X_4 + 2.292X_5$$

$$- 0.775X_6 - 1.635X_7 + 1.98X_8$$

The model shows that :

1. Gender coefficient is 0.007 with 1.008 odd ratios. It is indicate that male has 1.008 times bigger opportunity to choose horse as the transportation than female. But, gender is not influence the decision of tourist to choose horse as the transportation. Therefore, male and female have same opportunity to decide horse as the transportation.

2. The coefficient variable of ages is-1.156with 0.315odd ratios. It indicates that increasing of age 1 year, it will decrease 0.315 times the opportunity of the decision of choosing horse as the transportation..

3. The coefficient variable of tourist is 2.401 with 11.032 odd ratios. It indicates that domestic tourist has 11.032 times bigger opportunity to choose horse than the international tourist

4. The occupation 1 (State employee – student) coefficient variable is 3.332 with 27.988 odd ratios. It indicates that state employee has 27.988 times bigger opportunity to choose horse as the transportation than student.

5. The occupation 2 (employee – student) coefficient variable is 2.292 with 9.895 odd ratios. It indicates that employee has 9.895 times bigger opportunity than student to choose horse as the transportation.

6. Coefficient stay decision has -0.775 with0.461 odd ratios. It indicates tourist who did not spend the night in Bromo has 0.461 times bigger opportunity than tourist who spend the night in Bromo. Furthermore, the findings of partial test shows that stay decision did not influence people to choose horse as the transportation. Therefore, people who spend the night in Bromo and people who did not spend the night in Bromohas the same opportunity.

7. The coefficient purpose 1 (holiday – business) is -1.635 with 0.195 odd ratios. It indicates that people who have business purposes has 0.195 times bigger opportunity than people who have holiday purposes to choose horse as the transportation. But, the findings of the partial test show that purposes 1 (holiday-business) did not influence the decision to choose as the transportation in Bromo.

8. The coefficient variable of purposes 2 (culture-business) 1.987with 7.290odd ratios. It indicates that people who have cultural purposes has 7.290times bigger opportunity than people who have business purposes to choose horse as the transportation.

Empirical models of "Car / jeep" according to logistic regression analysis:

$$y = ln\left(\frac{p_i}{1 - p_i}\right)$$

$$= 4.706 - 2.124X_1 - 1.656X_2 + 1.676X_3 + 2.112X_4 + 3.194X_5$$

$$- 0.687X_6 - 3.543X_7 - 3.376X_8$$

The models show that :

1. Coefficient variable of gender is-2.124 with0.120odd ratios. It indicates that female has 0.120times bigger opportunity than male to choose car / jeep as the transportation.

2. Coefficient variable of ages is -1.656 with0.191 odd ratios. It indicates that the increasing 1 year of ages, it will decrease 0.191 times opportunity to choose car / jeep as the transportation to reach Bromo Mountain.

3. Coefficient variable of type tourist is 1.676 with 5.344 odd ratios. It indicates that domestic tourist5.344 times bigger than international tourist to choose car / jeep. But, the findings of partial test show that type tourist did not influence the decision to choose car / jeep. Therefore, the domestic and international tourist have the same opportunity to choose car / jeep.

4. Coefficient variable of occupation 1 (State employee-student) is 2.112 with 8.267 odd ratios. It indicates that state employee has 8.267 times bigger opportunity than student to choose car / jeep as the transportation. But, the findings of partial test shows that occupation 1 is not influence the decision to choose car / jeep as the transportation. Therefore, the state employee and student has same opportunity to choose car / jeep as the transportation.

5. Coefficient Variable of occupation 2 (employee-student) is 3.194 with 24.386 odd ratios. It indicates that employee 24.386 times bigger opportunity than student to choose car / jeep as the transportation.

6. Coefficient variable of stay decision is -0.687 with 0.503 odd ratios. It indicates that people who did not spend the night in Bromo has 0.503 times bigger opportunity than people who spend the night in Bromo to choose car / jeep. But, the findings of partial test show that stay decision did not influence the decision to choose car / jeep. Therefore,

people who spend the night in Bromohas the same opportunity with people who did not spend the night in Bromo to choose car / jeep.

7. Coefficient variable of purpose 1 (holiday-business) is -3.543with 0.029odd ratios. It indicates that people who have business purposes has 0.029times bigger opportunity than people who have holiday purposes to choose car / jeep.

8. Coefficient variable of purpose 2 (culture-business) is -3.376with 0.034 odd ratios. It indicates that people who have business purposes has 0.034times bigger opportunity than people who have culture purposes to choose car / jeep as the transportation.

CONCLUSION AND RECOMMENDATION

Conclusion

According to the findings and the discussion in this study, the conclusion about the influence of gender, ages, tourist origin, occupation, stay decision and visit purposes to the decision of tourist to choose the transportation are as follow:

1. There are several characteristics of tourist that is influence their decision to choose the transportation. The character of tourist based on psychographics that is included lifestyle, personality and social class. Characteristics of travelers based on socio-economic aspectsbased on demographics, ie age, educational background, income, gender and family cycle. Characteristics of travelers based on aspects of geography that is differentiated by region of origin arrival, travelers as the place of origin is an important aspect in understanding the characteristics of travelers as it relates to culture, values, attitudes and belief systems.Characteristics of travelers based on travel patterns. Every tourist when making the tour has unique characteristics and can be distinguished Based on the benefits of travel, purpose of visit, purpose of visit, the facility is used, the maturity of the trip, the level of

loyalty and usage levels. Based on this definition, the writer attempts to acknowledge the characteristics of tourist based on gender, ages, tourist origin, occupation, stay decision and visit purposes.

2. Partial test is needed in this study in order to understand the relationship between those factors that may influence the decision to choose the transportation in Bromo. This test need level of significance (α) that is used as a standard to determine is this variable have significant influence or not. The 0.05 significance level (α) is actually used in partial test. If probability level < level of significance (α), it means that ages, gender, stay decision, occupation, level of education, tourist origin and the purpose of visit are partially influence the decision of choosing the transportation.

3. Tourist that come to Bromo prefer to choose jeep as their favorite transportation in Bromo. This is because, jeep is more comfortable than the others transportation. On the other hand, the jeep track to reach Bromo is fully adventurous that gives different experience for the visitor.

4. On foot, it is one of the alternatives that is chosen by tourist to reach Bromo Mountain. On foot is the cheapest accommodation that can be chosen by visitor in BromoMoutain. Male, international tourist, and student are dominant to choose on foot as their favorite transportation. This is because male and international have stronger body endurance. On the other hand, student choose on foot because this is the cheapest accommodation that is suitable to their budget.

5. The other transportation is horse that available in Bromo. Horse is favorite transportation for young people, domestic tourist, employee, and people who have cultural purposes. This is because horse is more challenging for young people, efficient, and cheaper for employee and domestic tourist. People who have cultural

purposes like horse as their transportation because they can enjoy every condition directly from the horse.

6. For visitor who wants more comfortable transportation, they can choose car/jeep as their transportation. Car/jeep can facilitate them more comfortable. Although, they should pay more to enjoy it. Female, young visitor, employee and people who have business purposes are choose car as their favorite transportation. Female is more dominant to choose car as the transportation than male. This is because car/jeep is more comfortable, efficient, faster, easier and more inconvenient transportation in Bromo.

Recommendation

According to the discussion and the conclusions reached by the writer, therefore the recommendation or suggestions about this study are:

1. For tourist that have to choose which kind of the effective transportation in Bromo, they can choose horse, jeep, or on foot as the way to reach Bromo. But, they should pay more to use jeep or horse. It is more healthy to choose on foot.

2. For government, most of tourist choose jeep as their favorite transportation in Bromo, therefore the government should build the facilities on jeep tracking. The government should build the convenience road in order to add the comfortable level of tourist that is chooses jeep as their transportation. On the other hand, the government should provide parking lot for jeep in *pananjakan*. But, it is not only for jeep, the governments also concern about the other kind of transportation such as on foot and by horse. The government should built the comfortable track for people who choose on foot or horse as their transportation. The improvement of facilities especially in transportation, are needed in order to attract more tourist to visit Bromo Mountain. To

many travelers who walk the government must provide the facilities of adequate feet , an example of the way for pedestrians , the availability of the area for pedestrians , the place of rest in every 100 meters , and to improve the tourists who visit bromo , the government must provide transportation facility that attracts many tourists for example the government makes a means of transportation that is not in bromo.contoh the government make a cable railway from the village cemorolawang to the crater of mount bromo .It surely will attract a lot of tourists if in doing.

3. For other researcher, this study uses logic regression analysis to understand the factors that influence tourist to choose transportation methods. The other researcher can try to makes research with different element that exist in Bromo that could attract tourist to visit Bromo Mountain.

4. For Investor, Bromomountain is potential tourism object that can attract a lot of tourism around the world to come. This is why, it is become valuable tourism object that can be good for investor to invest their money. Investor has important roles to develop Bromo Mountain become the tourism object with excellent facilities. In hopes, the government and investor can build the joint ventures in order to build Bromo as the best tourism object in the world.

LIST OF BIBLIOGRAPHY

Aaron, Saenz. 2009. *Augmented Reality Does Time Travel Tourism*. (Online), (singularityhub.com/2009/11/19/augmented-reality-does-time-travel-tourism, Accessed on August 2014)

Dwiputra, R. (2013). Preferensi Wisatawan Terhadap Sarana Wisata Di Kawasan Wisata Alam Erupsi Merapi . *Jurnal PErencanaan Wilayah dan Kota, Vol. 24 No. 1*, 35-48.

Ismayanti. (2011:3). *Pengantar Pariwisata.* Jakarta: Grasindo.

www.jatimprov.go.id. (t.thn.). Taman Nasional Bromo Tengger Semeru. *http://www.jatimprov.go.id/site/taman-nasional-bromo-tengger-semeru/*.