

# Factors Affecting Bogor Botanical Garden Visitors' Intention Before and After the One Way System Application

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**Abstract**—The Aims of this research is to determine the factors affecting Visitors' Intention to visit The Bogor Botanical Garden before and after the implementation of a one-way system. The population of this study is Bogor Botanical Gardens' Visitors with a sample of one hundred respondents. Nonprobability sampling used as the sampling method of this research. Data were collected using a questionnaire and analyzed using multiple regression analysis. The result of this research concluded that (1) there are three factors with positive and significant effect on Visiting Intention before the implementation of a one-way system. The factors are Location, Family and Friend Togetherness, (2) there is one factor with positive and significant affect on visiting intention after the implementation of a one-way system is Knowledge. This research also got result that Location, Historical Attractions, Natural Environment and Weather Attraction, Escape Motive, Relaxation, Family and Friend Togetherness, Knowledge, Enjoying Natural Resources have the positive and significant simultan effect on Visiting Intention before and after the implementation of a one-way system (F-count is bigger that F-table).

**Keywords:** customer intention, one way system traffic, botanical garden

## I. INTRODUCTION

Bogor City continues to grow and develop into a very attractive area. Not only for ordinary people, but also for business people who continue to arrive and compete to invest in the city of Bogor. Based on data from the results of the 2016 economic census released by the Central Statistics Agency (BPS) of the City of Bogor, that from 2010 to 2014 the rate of economic growth continued to creep up. The higher economic growth in a city, will have a very big impact on the development of a city, especially the impact on the existing transportation network system in the city, causing the need for traffic movement to increase. To regulate the movement of traffic the need for traffic management.

Therefore, a One-Way System was made in the city of Bogor. A one-way system is a traffic pattern that is carried out by changing two-way roads into one-way streets that serve to

improve the safety and capacity of roads and intersections so as to increase the smooth flow of traffic that is usually applied in urban areas. The Bogor City Government conducted an initial one-way system trial session around the Bogor Botanical Gardens and the Presidential Palace on April 1-4, 2016. Continued with a trial session two on April 5-18, 2016. On April 19, 2016, the City Government (Pemkot) Bogor decided the one-way system around the Botanical Gardens and the Bogor Presidential Palace to be applied permanently. The termination was based on the results of the field study and the results of the study during the SSA trial period starting April 1, 2016.

But it cannot be denied that this One-Way System can affect several places around the One-Way System path. One of them is the Bogor Botanical Gardens which is located right in the middle of the One-way System path. Bogor Botanical Gardens is one of the attractions in the city of Bogor.

The level of tourist visits to Bogor city tourism objects in 2009 experienced a slight decline, but in subsequent years it has always increased. Moreover, if seen, an increase in tourist arrivals is quite high in 2013 and 2014.

There are several factors that can influence the desire or interest of a tourist to visit.

TABLE I. DATA OF TOURIST VISITS TO BOGOR CITY 2008-2014

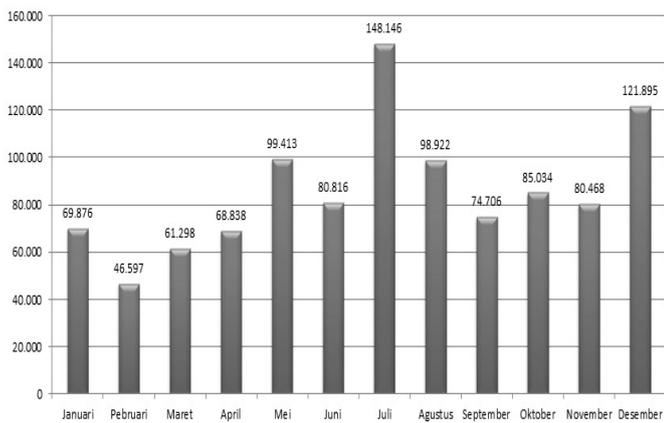
Year	A visit to a tourist attraction		
	Tourist		Total
	Domestic	Foreign	
2008	1 370119,00	18 174,00	1 388 293,00
2009	1 163 110,00	42 377,00	1 205 487,00
2010	1 524 044,00	42 812,00	1 566 856,00
2011	1 630 687,00	43 837,00	1 674 524,00
2012	1 775 580,00	110 975,00	1 886 555,00
2013	3 277 442,00	104 780,00	3 382 222,00
2014	4 148 650,00	202 280,00	4 350 930,00

Source: Badan Pusat Statistik Kota Bogor.

Bogor Botanical Gardens is an international tourism destination in West Java whose name is familiar to local and

foreign tourists. Bogor Botanical Gardens has become the most complete museum of tropical plant life as well as the 13th oldest botanical garden in the world. Bogor Botanical Gardens or Bogor Botanical Gardens is a large botanical garden which covers 87 hectares and has 15,000 types of collections of trees and plants. Bogor Botanical Gardens is one of the tourist destinations of the city of Bogor which is visited by many visitors from within the city and outside the city.

Figure 1. Data on Visits and Guides This January - December 2015 period shows that the number of visitors to the Bogor Botanical Gardens cannot be said to be small. Moreover, when viewed during school holidays, namely in July 2016 that could reach 148,146 visitors and in December 2016 reached 121,895 visitors.



Source : www.krbogor.lipi.go.id

Fig. 1. Visit and guidance data period January - December 2015.

Since the implementation of this one-way system the Bogor Botanical Gardens has experienced many changes, one of which is related to the ups and downs of visitors to the Bogor Botanical Gardens. During the One Way System trial, the second door located on Jl. Juanda or near the post office is no longer functioning, because the lane becomes a fast lane, and worried that it would disrupt the flow of traffic. Not only door two, the main door operation on Jl. Pajajaran is also closed by the Bogor Botanical Gardens because it does not allow for activities in and out of visitors and is very dangerous with unidirectional traffic flow. Bogor Botanical Gardens finally made adjustments including the construction of a tap on the main door near Bogor Market which serves as a point of down and rising visitors.

Based on the background description above, researchers are interested in conducting research with the title "Factors Affecting Interest in Visiting the Bogor Botanical Gardens Before and After the Implementation of the One-Way System ". The objectives of the this study are: to Analyze the influence of factors attracting motivation to travel to the interest in visiting the Bogor Botanical Gardens partially before and after the implementation of the One-Way System, to Analyze the influence of factors driving motivation to travel to the interest in visiting the Bogor Botanical Gardens partially before and after the implementation of the One-Way System, to Analyze

the influence of pull factors and driving motivation for traveling to the interest of visiting the Bogor Botanical Gardens simultaneously before and after the implementation of the One-Way System.

II. RESEARCH METHODOLOGY

This study was conducted in Bogor City between January 2018 – March 2018. The population of research object is All Bogor Botanical Garden Visitors amounted to 955,773 visitors (2015). One hundred visitors were assigned as respondents. Questionnaire used to collect the research’s data.

The data was analyzing with regression analysis. T test was conducted to determine the effect of each independent variable consisting of Location, Historical Attractions, Natural Environment and Weather Attraction, Escape Motive, Relaxation, Family and Friend Togetherness, Knowledge, Enjoying Natural Resources on visiting interests. Simultaneous Significance Test (Test F) used to test the accuracy of the model (goodness of fit). This F test is often referred to as the simultaneous test, which is used to test whether the independent variable used in the model is able to explain changes in the value of the dependent variable or not.

III. RESULTS AND DISCUSSION

Table 2 shows the result of regression analysis (simultaneous and partial).

TABLE II. THE RESULT OF REGRESSION ANALYSIS

Variables	Before			After		
	Coeff.	t	Sig.	Coeff.	t	Sig.
(Constant)	-,090	-,039	,969	-,867	-,396	,693
Lokasi	,214	2,090	,039	,080	,903	,369
Historical Attractions	,160	1,483	,141	,174	1,531	,129
Natural Environment and Weather Attraction	,140	1,057	,293	,185	1,622	,108
Escape Motives	,081	1,049	,297	-,015	-,199	,843
Relaxation	,029	,172	,864	,104	,626	,533
Family and Friend Togetherness	,400	3,225	,002	,191	1,379	,171
Knowledge	,217	1,923	,058	,319	2,482	,015
Enjoying Natural Resources	-,115	-,803	,424	,205	1,301	,197
F Statistical	8,386		,000	8,627		,000

Dependent Variable: Visiting Interest.

Source: The Primary Data Processed.

A. Effect of Relationship between Location and Visiting Interest

Basically the interest in visiting is the feeling of wanting to visit an interesting place or region to visit. Research conducted by Albarq states that the theory of visiting interest is analogous to buying interest, as it equates that the interest of visiting tourists is the same as the purchase interest of consumers [1]. External influences, awareness of needs, product introduction

and alternative evaluations are things that can lead to consumer buying interest [2]. According to Schiffman and Kanuk stated that buying interest is a psychological activity that arises because of feelings and thoughts about an item or service desired [3].

Fitzsimmons explains that location is the choice of a place that determines a production business or service provider based on certain considerations and often determines the success of a business, because location is closely related to the potential market of a business [4]. Lupiyoadi said that location means it is related to where the company must be based and operate to carry out its business activities [4]. Then the researcher can conclude that the location is a place where the company conducts its business activities such as producing goods or services.

1) *Before implementing the one-way system:* This research is based on the results of the statistical test above the first hypothesis which reads that Location has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens before the implementation of the One-Way System is acceptable, this is indicated by the t-value of 2.090 which is greater compared to t-table 1.99 and supported by a significance value of 0.039 smaller than 0.05 which is where the variable has a significant effect on Visiting Interest, then Hypothesis 1 is accepted.

2) *After the implementation of the one-way system:* This research is based on the results of the statistical test above hypothesis 10 which reads that Location has a positive and significant influence on interest in visiting the Bogor Botanical Gardens after the implementation of the One-Way System is rejected, this is indicated by the t-value of 0.903 which is smaller than t-table 1.99 and a significance value of 0.369 which is greater than 0.05 which is where the variable has no significant effect on Visiting Interest, then Hypothesis 10 is rejected.

#### *B. Effect of Relationship Between Historical Attraction and Visiting Interest*

Alghamdi revealed that historical attractions such as interesting buildings and historical or archaeological sites, ancient cult sites (rocks, trees, caves, hills, plantations), ancient burial sites, hills, fortresses, castle ruins, churches, castles, arts and crafts venues, local festivals, and historic cities that attract tourists to tourist destinations [5]. This factor is important for tourists who are motivated to increase knowledge.

1) *Before implementing the one-way system:* This research is based on the results of the statistical test above hypothesis 2 which reads that there is a Historical Attraction has a positive and significant influence on the interest of visiting the Bogor Botanical Gardens before the implementation of the One-Way System is rejected, this is indicated by the t-value of 1.483 which is smaller compared to t-table 1.99 and supported by a significance value of 0.141 greater than 0.05 which is where

the variable has no significant effect on Visiting Interest, Hypothesis 2 is rejected.

2) *After the implementation of the one-way system:* This research is based on the results of the statistical test above hypothesis 11 which reads that there is a Historical Attraction has a positive and significant influence on the interest of visiting the Bogor Botanical Gardens after the implementation of the One-Way System is rejected, this is indicated by the t-value of 1.531 which is smaller compared to t-table 1.99 and a significance value of 0.129 which is greater than 0.05 which is where the variable has no significant effect on Visiting Interest, then Hypothesis 11 is rejected.

#### *C. Effects of Relationship Between Natural Environment and Weather Attraction and Visiting Interests*

Alghamdi mentions that natural environmental factors and weather attractiveness are marked by the availability of certain features in several destinations such as wild forests, national parks, rivers, rural areas and good weather that attracts tourists to come [5]. Smith said that natural environmental factors and weather attractiveness are very significant in determining the attractiveness of an area as a tourist destination [5].

1) *Before implementing the one-way system:* This research is based on the results of the statistical test above hypothesis 3 which reads that there is a Natural Environment and Weather Attraction that has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens before the implementation of the One-Way System is rejected, this is indicated by the t-value of 1.057 which where smaller than t-table 1.99 and supported by a significance value of 0.293, greater than 0.05 which is where the variable has no significant effect on Visiting Interest, Hypothesis 3 is rejected.

2) *After the implementation of the one-way system:* This research is based on the results of the statistical test above hypothesis 12 which reads that there is a Natural Environment and Weather Attraction that has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens after the implementation of the One-Way System is rejected, this is indicated by the t-value of 1.622 which where is smaller than t-table 1.99 and the significance value of 0.108 is greater than 0.05 which is where the variable has no significant effect on Visiting Interest, then Hypothesis 12 is rejected.

#### *D. Effect Escape Motive on Visiting Interest*

Ryan suggested that escape is wanting to escape from the environment that is felt to be tedious, or boredom from daily work [6]. Escape motive is often the reason that encourages someone to recreation into the botanical garden.

1) *Before implementing the one-way system:* This study is based on the results of the statistical test above hypothesis 4 which reads that there is Escape Motive which has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens before the implementation of the One-Way

System is rejected, this is indicated by the t-value of 1.049 which is smaller compared to t-table 1.99 and supported by a significance value of 0.297 greater than 0.05 which is where the variable has no significant effect on Visiting Interest, Hypothesis 4 is rejected.

2) *After the implementation of the one-way system:* This study is based on the results of the statistical test above hypothesis 13 which reads that there is Escape Motive which has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens after the implementation of the One-Way System is rejected, this is indicated by the t-value of -0.199 which is more small compared to t-table 1.99 and a significance value of 0.843 which is greater than 0.05 which is where the variable has no significant effect on Visiting Interest, then Hypothesis 13 is rejected.

#### *E. Effect Relaxation on Visiting Interest*

According to Ryan the desire for recreation or refreshment is also related to motive escape [6]. Crompton defines relaxation as the desire to refresh yourself mentally and physically from everyday stresses [5]. So the researchers concluded that relaxation is a way to forget a moment of anxiety by resting both physically and mentally through a fun activity like recreation to the botanical garden.

1) *Before implementing the one-way system:* This research is based on the results of the statistical test above hypothesis 5 which reads that Relaxation has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens before the implementation of the One-Way System is rejected, this is indicated by the t-value of 0.172 which is smaller than t-table 1.99 and supported by a significance value of 0.864 is greater than 0.05 which is where the variable has no significant effect on Visiting Interest, then Hypothesis 5 is rejected.

2) *After the implementation of the one-way system:* This study is based on the results of the statistical test above hypothesis 14 which reads that Relaxation has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens after the implementation of the One-Way System is rejected, this is indicated by the t-value of 0.626 which is smaller than t-table 1.99 and a significance value of 0.533 which is greater than 0.05 where the variable does not significantly influence the Visiting Interest, then Hypothesis 14 is rejected.

#### *F. Effect of Relationship Between Family and Friend Togetherness and Visiting Interest*

Togetherness with family and friends to strengthen the kinship between family and friends. Ryan argues that this familiar kinship relationship also occurs among family members who do work together, because togetherness is very difficult to obtain in the daily work atmosphere in an industrial country [6]. According to Aghamdi on holiday trips, some tourists interact with friends or family who travel to the same place or live at a tourist destination, or both [5]. With the

explanation above, the researcher concludes that togetherness with family and friends is an interaction activity with family and friends that is difficult to do on a normal day.

1) *Before implementing the one-way system:* This study is based on the results of the statistical test above hypothesis 6 which reads that Family and Friend Togetherness has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens before the implementation of the One-Way System is received, this is indicated by the t-value of 3.225 which where is greater than t-table 1.99 and is supported by a significance value of 0.002 smaller than 0.05 which is where the variable has a significant effect on Interest in Visiting, Hypothesis 6 is accepted.

2) *After the implementation of the one-way system:* This research is based on the results of the statistical test above hypothesis 15 which reads that Family and Friend Togetherness has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens after the implementation of the One-Way System is rejected, this is indicated by the t-value of 1.379 which is where smaller than t-table 1.99 and a significance value of 0.171 which is greater than 0.05 which is where the variable has no significant effect on Visiting Interest, then Hypothesis 15 is rejected.

#### *G. Effect of Relationship Between Knowledge and Visiting Interest*

This factor is the desire to see something new, study people and or other areas, or know other ethnic cultures. Salam says knowledge is the result of human efforts to know [7]. The tofu work is the result of knowing, converting, understanding and being smart. Knowledger will or not encourage recreation to the botanical garden.

1) *Before implementing the one-way system:* This study is based on the results of the statistical test above hypothesis 7 which reads that Knowledge has a positive influence and yet is not significant to the interest in visiting the Bogor Botanical Gardens before the implementation of the One-Way System is rejected, this is indicated by the t-value of 1.932 which is more small compared to t-table 1.99, the significance value of 0.058 is greater than 0.05. Then Hypothesis 7 can be rejected.

2) *After the implementation of the one-way system:* This study is based on the results of the statistical test above hypothesis 16 which reads that Knowledge has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens after the implementation of the One-Way System is received, this is indicated by the t-value of 2.482 which is greater compared to t-table 1.99 and supported by a significance value of 0.015 smaller than 0.05 which is where the variable has a significant effect on Visiting Interest, then Hypothesis 16 is accepted.

#### H. *Effect of Relationship Between Enjoying Natural Resources and Visiting Interest*

Alghamdi says that enjoying natural resources refers to the desire of tourists to enjoy natural resources such as wild forests, national parks/forests, rivers, rural areas and good weather, snow/mountains and so on, which are available at the destination [5].

1) *Before implementing the one-way system:* This study is based on the results of the statistical test above hypothesis 8 which reads that there are Enjoying Natural Resources that has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens before the implementation of the One-Way System is rejected, this is indicated by the t-value of -0.803 which is where smaller than t-table 1.99 and supported by a significance value of 0.864 greater than 0.424 which is where the variable has no significant effect on Visiting Interest, Hypothesis 8 is rejected.

2) *After the implementation of the one-way system:* This research is based on the results of the statistical test above hypothesis 17 which reads that there are Enjoying Natural Resources that has a positive and significant influence on the interest in visiting the Bogor Botanical Gardens after the implementation of the One-Way System is rejected, this is indicated by the t-value of 1.301 which is more small compared to t-table 1.99 and a significance value of 0.197 which is greater than 0.05 which is where the variable has no significant effect on Visiting Interest, then Hypothesis 17 is rejected.

#### I. *Effect of Relationship Between Location, Historical Attractions, Natural Environment and Weather Attraction, Escape Motive, Relaxation, Family and Friend Togetherness, Knowledge, Enjoying Natural Resources Together on Visiting Interests*

1) *Before implementing the one-way system:* This research is based on the results of the statistical test above hypothesis 9 which reads there are Location, Historical Attractions, Natural Environment and Weather Attraction, Escape Motive, Relaxation, Family and Friend Togetherness, Knowledge, Enjoying Natural Resources together have a positive and significant influence on interest in visiting Bogor Botanical Gardens before the implementation of the One-Way System was received, this is indicated by the f-count value of 8.338 which is greater than the 2.04 f-table, and supported by a significance value of 0,000 greater than 0.05. Where these variables together have a significant effect on Visiting Interest, Hypothesis 9 can be accepted.

2) *After the implementation of the one-way system:* This research is based on the results of the statistical test above hypothesis 18 which reads there are Location, Historical Attractions, Natural Environment and Weather Attraction, Escape Motive, Relaxation, Family and Friend Togetherness, Knowledge, Enjoying Natural Resources together have a positive and significant influence on interest in visiting Bogor

Botanical Gardens after the implementation of the One-Way System was received, this is indicated by the f-count value of 8.672 which is greater than the f-table of 2.04, and supported by a significance value of 0,000 greater than 0.05. Where these variables together significantly influence the Visiting Interest, then Hypothesis 18 can be accepted.

Eight exogenous variables have been proposed in the interest model of visiting the botanical garden. Simultaneously these eight variables affect the formation of consumers' visiting interest. Partially there are differences in the factors that affect the interest of visiting consumers when one way system traffic is applied.

The application of one way traffic system makes it inflexible for consumers to access the botanical garden. only knowledge that drives consumers to continue visiting the botanical garden. Whereas before one way traffic system was implemented, location and family togetherness was a variables that influenced consumers' interest in visiting the botanical garden.

Further research needs to add other respondents with different regions and characteristics and include other variables in the model such as the availability of transportation modes and facilities.

#### IV. CONCLUSION

Prior to the implementation of the One-Way System, the Location and Family and Friend Togetherness variables had a positive and real effect on the Interest in Visiting the Bogor Botanical Gardens because it had a greater t-count than the t-table. After the implementation of the One-Way System, the Knowledge variable is the only variable that has a positive and real influence on the Interest in Visiting the Bogor Botanical Gardens because it has a greater t-count compared to the t-table. Both before and after the implementation of the One-Way System, Location, Historical Attractions, Natural Environment and Weather Attraction, Escape Motive, Relaxation, Family and Friend Togetherness, Knowledge, Enjoying Natural Resources Bogor together have a positive and real effect because they have a positive influence. -calculates larger than the f-table.

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