

# Multivariate Analysis of Ease of Access for AgroTech-Tourism in Wonogiri

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**Abstract.** the AgroTech-Tourism in principle is an industrial activity that expects the arrival of consumers (domestic and foreign tourists) directly at tourist attractions held. Improving the quality of agrotourism can be done by applying demand models and strategies in gaining competitive advantage. The aim to be achieved in this study is to see the effect of convenience on price location. beauty and uniqueness, demand for tourism in organic tourism in Wonogiri and strategies used to gain competitive advantage. The results of the study using SEM analysis with the results of all constructs used to form the research model in the process of confirmatory factor analysis have met the criteria for goodness of fit. The causality test shows that location, uniqueness and price have no significant effect on competitive advantage, while location, uniqueness and price have a significant influence on tourist visits in Wonogiri, Central Java.

**Keywords:** ease to location, price, beauty and uniqueness, tourism demand.

## 1 Introduction

One creative industry that is profitable and has good prospects in the Wonogiri area is the development of AgroTech-tourism, especially organic tourism. Named agrotech because it combines two elements, namely agrotourism, and technology[1]. This tour is located in Nguntoronadi District approximately 30 km from the City of Wonogiri Regency. If tourists enter this area tourists will be treated to a beautiful view that is the charm of Gajah Mungkur reservoir which is surrounded by green agricultural land and forests. Some of the superior commodities that can be served at this location are organic dragon fruit gardens, California papaya, mustard strawberries to beautiful blooming flowers. Agrotourism development will, in turn, create jobs because this business can absorb labor from rural communities so that it can withstand or reduce the increasing urbanization flow at this time[2]. The benefits that can be gained from agrotourism are to conserve natural resources, preserve local technology, and increase the income of farmers/communities around tourist sites. Important assets to attract tourist visits are authenticity, uniqueness, comfort, and natural beauty. Therefore, environmental quality factors become important capital that must be provided, especially in areas that are used for tourists to explore[3].

Observations show that the problems faced by Wonogiri organic tourism area are: First, access to the location. This is indicated by the narrow road leading to locations that can only be traversed by minibusses. Large buses cannot enter the location. Second, is the price. Organic tourism is shopping, especially shopping for agricultural products. From the results of the observation, the prices set by farmers are almost the same as the prices in the city of

Wonogiri. The third problem its uniqueness and beauty. The results of temporary observations indicate that organic tourism objects have not been well arranged. There are still a lot of shrubs around the location so that we should be able to see the natural scenery around the reservoir being closed. Tourism demand is basically people who want to consume travel. One condition that someone wants to visit a tourist destination if the destination has a competitive advantage. The concept of competitive advantage was first put forward by Michael E Potter in 1085, in his article entitled “competitive strategy techniques for analyzing industries competitor“ In a competitive market competitive advantage is at the heart of corporate performance. Competitive advantage is defined as the ability obtained through the characteristics and resources of a company to have a higher performance compared to other companies in the same industry or market. The factors that determine tourists to buy or visit attractions are the first is facilities[4]. The development of the tourism industry requires facilities that have links and very broad relationships and can move other sectors in the economy of a region[5], [6]. Tourism facilities can determine the number and length of stay of tourists, the amount of expenditure, and the pattern of the spread of tourists in tourist areas.

The Second: Location, saturation due to routine and daily activities is the cause of the need for people to excursion/travel. Traveling is one way to release fatigue due to work. “Melancon” or often referred to as traveling is no longer just a lifestyle, but has become a necessity for many people. one of the things that need to be considered before choosing a tourist location includes Easy access.

The Third: Uniqueness, The uniqueness, in this case, is something that is completely different from other attractions. The uniqueness can be in the form of local culture, tradition, and technology where the tourism object is developed. Basically, tourism has the nature of being a unique activity.

The Fourth: Price, Tourism prices, in this case, are the number of admission fees collected by tourism managers, the price of souvenirs and the price of food in tourist locations.

While the fifth factor is Beauty and scarcity of plants. One of the success factors in the development of tourism, including scarcity. If tourists make a tour in a tourist area, they expect treats of plantations or parks that contain elements of scarcity, because these plants are rarely found at tourist attractions.

Besides scarcity, The selection of tourist visits is determined by the beauty in the area to be visited [7]. Tourist destinations that have attractive attractions will increase the demand for these tourism objects.

From the above problems in this study choose the factor of price location and the beauty and uniqueness as factors that influence competitive advantage and demand or tourist visits on organic tourism objects in Wonogiri, Central Java.

## **2 Research Methods**

Data analysis used in this study is the Structural Equation Model (SEM). Before testing the full model, it will first be carried out in stages, namely measurement model estimation with confirmatory factor analysis technique[8].

### **2.1 Confirmatory Factor Analysis**

This analysis is a measurement stage of the dimensions that form a latent variable in the research model. The latent variables or constructs used in this research model consist of 5 variables.

The purpose of this analysis is to examine the validity of the dimensions forming each latent variable. Confirmatory Factor Analysis will be carried out on each latent variable and for the exogenous and endogenous variable constructs.

To form a research model in the confirmatory factor analysis process it is said to meet the criteria of goodness of fit determined if [9], Indicators or dimensions forming each latent variable show good results with the loading factor value greater than 0.5.

## 2.2 Estimation of the Full Model Equation

After the confirmatory analysis, the next step is to do a full structural model estimation that only includes the indicators that have been tested confirmatory.

Structural Equations Modeling (SEM) analysis with SPSS software will determine the effect of independent variables on the dependent variable. The value of the goodness of fit index of the SEM equation one or two values has met the cut-off value, the SEM model can be accepted as an analytical tool [10].

**Table 1.** Model accuracy test

<i>The goodness of Fit Indices</i>	<i>Cut off Value</i>
<i>Chi-Square</i>	Kecil
<i>Probability</i>	$\geq 0,05$
<i>RMSEA</i>	$\leq 0,08$
<i>NFI</i>	$\geq 0,90$
<i>PNFI</i>	$\geq 0,90$
<i>CFI</i>	$\geq 0,95$
<i>GFI</i>	0-1
<i>AGFI</i>	$\geq 0,90$

## 2.3 Structural Model Assumption Evaluation Testing

### 2.3.1 Data Normality Evaluation

Normality evaluation of the data was tested by looking at the criterion of critical ratio skewness value. If the CR data value is in the range between  $\pm 2.58$  at the 0.01 significance level, then the data can still be declared normal.

### 2.3.2 Outlier evaluation

Outlier examination is carried out by observing the Mahalanobis distance (Mahalanobis distance squared) method for each observation. These values are compared with the chi-Square value at the free degree at the level of  $p < 0.001$ .

### 2.3.3 Hypothesis Causality Test

After all, assumptions can be met, then the hypothesis will be tested as proposed in the previous chapter. The research hypothesis testing was conducted based on the Critical Ratio (CR) value of a causality relationship from the results of SEM processing.

### 3. Results and Discussion

#### 3.1 Data analysis and discussion

##### 3.1.1 Estimation of the Full Model Equation

The results of the structural equation model analysis are as follows:

**Table 3.** Goodness-of-fit-Index Full Model

Goodness-of-fit Index	Cut off Value	Hasil Model	Keterangan
Probability	$\geq 0,05$	0.000	Tidak fit
RMSEA	$\leq 0,080$	0.137	Tidak fit
GFI	$\geq 0,90$	0.704	Tidak fit
TLI	$\geq 0,90$	0.776	Tidak fit
AGFI	$\geq 0,90$	0.637	Tidak fit
CFI	$\geq 0,90$	0.802	Tidak fit

**Source:** Primary data processed, 2018

The Chi-Square test results give a Chi-Square value of 1696.940 indicating that the model is not fit, and other criteria are RMSEA, GFI, TLI, AGFI, and CFI do not meet the required values, thus the model can be said to be not fit. To improve the next model is to look at the value of the Modification Index (MI) parameter and correlate parameters that have high MI values so that it will reduce the Chi-Square value while improving the criteria value. These improvements will produce a new model as follows:

The model revision results provide a better overall model fit than the initial model with the following values:

**Table 4.** Comparison of the initial goodness-of-fit index and the revised model

Goodness-of-fit Index	Cut off Value	The result of the Model
Probability	$\geq 0,05$	0.000
RMSEA	$\leq 0,08$	0.071
GFI	$\geq 0,90$	0.862
TLI	$\geq 0,90$	0.939
AGFI	$\geq 0,90$	0.820
CFI	$\geq 0,90$	0.950

The Revised Model result shows that the value of the Goodness of Fit statistical index generated has met the recommended critical value (cut-off value). The smaller the Chi-square value decreases when compared to the Chi-Square value of the table ( $\alpha = 5\%$ ;  $df = 249$ ) of

614,781 shows the better results for the SEM model built by the researcher. The fulfillment of the SEM index value indicates that there is a difference between the model and the observation data. After observing [10] states that if the value of the goodness of fit index of the SEM equation one or two values has met the cut-off value, the SEM model can be accepted as an analytical tool. Thus the SEM model is accepted as an analytical tool to predict causality relationships between research variables.

### 3.1.2 Structural Model Assumption Evaluation Testing

Normality evaluation of the data was tested by looking at the criterion of critical ratio skewness value. If the CR data value is in the range between  $\pm 2.58$  at the 0.01 significance level, then the data can still be declared normal.

Test results for normality of data:

**Table 5.** Assessment of normality

Variable	min	max	skew	c.r.	Kurtosis	c.r.
x25	2,000	5,000	-,211	-1,469	-,762	-2,652
x24	2,000	5,000	-,312	-2,176	-,744	-2,592
x23	2,000	5,000	-,329	-2,289	-,593	-2,066
x22	2,000	5,000	-,300	-2,092	-,494	-1,720
x21	2,000	5,000	-,300	-2,091	-,603	-2,099
x20	2,000	5,000	-,290	-2,018	-,676	-2,353
x19	2,000	5,000	-,239	-1,662	-,451	-1,571
x18	2,000	5,000	-,212	-1,473	-,592	-2,062
x17	2,000	5,000	-,157	-1,091	-,748	-2,603
x16	2,000	5,000	-,365	-2,544	-,675	-2,352
x11	2,000	5,000	-,276	-1,923	-,836	-2,912
x12	2,000	5,000	-,333	-2,317	-,754	-2,624
x13	2,000	5,000	-,306	-2,133	-,672	-2,338
x14	2,000	5,000	-,301	-2,099	-,499	-1,738
x15	2,000	5,000	-,314	-2,189	-,904	-3,148
x6	2,000	5,000	-,286	-1,994	-,661	-2,301
x7	2,000	5,000	-,259	-1,800	-,623	-2,170
x8	2,000	5,000	-,346	-2,411	-,873	-3,041
x9	2,000	5,000	-,192	-1,340	-,888	-3,090
x10	2,000	5,000	-,341	-2,378	-,655	-2,282
x1	2,000	5,000	,033	,231	-,840	-2,925
x2	2,000	5,000	-,091	-,631	-,966	-3,365
x3	2,000	5,000	-,113	-,788	-1,020	-3,551
x4	2,000	5,000	-,308	-2,144	-,602	-2,097
x5	2,000	5,000	-,293	-2,043	-,691	-2,407
Multivariate					24,750	5,745

From the table above shows that the value of the critical ratio skewness value of all indicators is in the range  $\pm 2.58$ , then the research data used is normally distributed.

### 3.1.3 Outlier evaluation

Outlier examination is carried out by observing the Mahalanobis distance (Mahalanobis distance squared) method for each observation. The test results are obtained as follows:

**Table 6.** Test of multivariate outliers

Observation number	Mahalanobis d-squared	p1	p2
273	51,816	,001	,053
265	50,337	,002	,020
287	49,846	,002	,004
268	48,274	,003	,004
274	42,576	,016	,007

**Source:** Primary data processed, 2018

From the table above, only showing 5 samples with the largest Mahalanobis distance (d-squared). These values are compared with the chi-Square value of 25 degrees (number of dimensions) at the level of  $p < 0.001$  is 52.62. From the results of the data processing, it is known that the maximum Mahalanobis distance is 51,816 so that in this analysis there are no multivariate outlier symptoms, meaning that the observed data collects at the centroid point. The results of the calculation of reliability and extract variants can be seen in **table 7.** below:

**Tabel 7.** Reliability test dan Varian Extract

Variables	Reliability	Varian Extract
Location	0.900	0.647
Uniqueness	0.888	0.624
Price	0.871	0.585
Demand	0.873	0.579
Excellence	0.928	0.726

**Source:** Primary data processed, 2018

The test results show that all reliability values are above 0.7, this means that the measurement of the SEM model in this study has met the reliability measurement requirements. The value of Variant Extract shows results above 0.5, meaning that the indicators in this study have well represented the latent construct developed.

### 3.1.4 Hypothesis Causality Test

All assumptions can be met, then the hypothesis will be tested:

Based on the results of hypothesis testing can be explained each path coefficient as follows:

#### **Hypothesis 1:**

Locations have a significant effect on Excellence in Wonogiri Central Java organic tourism.

The test results of path coefficients for the location of the advantages of Wonogiri organic tourism in Central Java have no significant positive effect. This is seen in a positive path coefficient of 0.100 with a value of C.R. amounting to 0.734 and obtained a significant probability (p) of  $0.463 > 0.05$ . So it can be concluded that the location has no significant effect on Excellence, meaning that if the perception of location increases, the advantage will also increase even though the increase is not meaningful. This result rejects the initial hypothesis which means hypothesis 1 in this study.

#### **Hypothesis 2:**

Uniqueness has a significant effect on Excellence in Wonogiri Central Java organic tourism. The results of the path coefficient testing for the uniqueness of the advantages of Wonogiri Central Java organic tourism have a significant negative effect. This is seen in the positive path coefficient of -0.142 with the value of C.R. equal to -1.509 and obtained a significant probability (p) of  $0.131 > 0.05$ . It can be concluded that Uniqueness has no significant effect on Excellence, meaning that if the perception of Uniqueness increases, then Excellence will decrease. This result rejects the initial hypothesis which means that hypothesis 2 in this study is not proven.

#### **Hypothesis 3:**

Prices have a significant effect on Excellence in Wonogiri Central Java organic tourism. The results of the path coefficient test for Price on Excellence in Wonogiri organic tourism in Central Java have no significant positive effect. This is seen in the path coefficient of 0.081 with the value of C.R. amounted to 0.753 and obtained a non-significant probability (p) of  $0.452 > 0.05$ . It can be concluded that Price has no significant positive effect on Excellence, meaning that if the perception of Price increases, the Demand will also increase even though the increase is not meaningful. This result rejects the initial hypothesis which means that hypothesis 3 in this study is not proven.

#### **Hypothesis 4:**

Locations have a significant effect on Demand for Wonogiri Central Java organic tourism. The path coefficient test results for Locations on Demand on Wonogiri Central Java organic tourism have a significant positive effect. This is seen in the positive path coefficient of 0.528 with the value of C.R. amounting to 6,575 and obtained a significant probability (p) of  $0.000 < 0.05$ . It can be concluded that the location has a significant positive effect on demand, meaning that if the perception of location increases, the demand will also increase. This result accepts the initial hypothesis which means hypothesis 4 in this study is proven.

#### **Hypothesis 5:**

The uniqueness has a significant effect on the demand for Wonogiri organic tourism in Central Java.

The results of the path coefficient testing for the Uniqueness of Demand for Wonogiri organic tourism in Central Java have a positive and significant effect. This is seen in the positive path coefficient of 0.163 with the value of C.R. amounting to 3,293 and obtained a significant probability (p) of  $0.000 < 0.05$ . It can be concluded that uniqueness has a positive and significant effect on demand, meaning that if the perception of uniqueness increases, the demand will also increase. These results accept the initial hypothesis which means hypothesis 5 in this study is proven.

**Hypothesis 6:**

Prices have a significant effect on demand in Wonogiri Central Java organic tourism.

The path coefficient test results for Price on Demand for Wonogiri organic tourism in Central Java have a positive and significant effect. This is seen in the positive path coefficient of 0.467 with the value of C.R. amounting to 7,632 and obtained a significant probability (p) of  $0.000 > 0.05$ . It can be concluded that the price has a significant effect on demand, meaning that if the perception of price increases, the demand will also increase. These results reject the initial hypothesis which means hypothesis 6 in this study is proven.

**Hypothesis 7:**

Advantages have a significant effect on Demand for Wonogiri Central Java organic tourism.

The test results of the path coefficients for Excellence on Demand on Wonogiri Central Java organic tourism have a significant negative effect. It was seen in the path coefficient of -0.008 with the value of C.R. amounting to -0.291 and obtained a significant probability (p) of  $0.771 > 0.10$ . It can be concluded that Excellence has no significant effect on Demand, meaning that if the perception of Excellence increases, the Demand will decrease even though the decline is not meaningful. This result rejects the initial hypothesis which means that hypothesis 7 in this study is not proven.

**3.1.4.1 Managerial implications**

**Locations** have a significant effect on Demand for Wonogiri Central Java organic tourism.

The path coefficient test results for Locations on Demand on Wonogiri Central Java organic tourism have a significant positive effect. It was seen in the positive path coefficient of 0.528 with the value of C.R. amounting to 6,575 and obtained a significant probability (p) of  $0.000 < 0.05$ . It can be concluded that the location has a significant positive effect on demand, meaning that if the perception of location increases, the demand will also increase. Efforts that can be made to improve perceptions of the first location improve perceptions so that tourists consider that the distance between their place of residence and the location of Wonogiri organic tourism objects is quite close. Second, it increases the perception that the travel time to Wonogiri organic attractions is not so long and third increases the perception of tourists that Wonogiri organic tourism is easily accessible.

**The price** has a significant effect on the demand for Wonogiri Central Java organic tourism.

The results of the path coefficient testing for prices on demand for Wonogiri organic tourism in Central Java have a positive and significant effect. This is seen in the positive path coefficient of 0.467 with the value of C.R. amounting to 7,632 and obtained a significant probability (p) of  $0.000 < 0.05$ . It can be concluded that the price has a positive and significant effect on demand, meaning that if the perception of price increases, the demand will also increase. The managerial implications are: first, managers must strive to increase the perception of affordable souvenir prices. Secondly, the perception of culinary prices that are quite cheap in Wonogiri organic tourism objects increases and the third increases the perception of freight costs to Wonogiri organic tourism which is quite affordable.

**The uniqueness** has a significant effect on the demand for Wonogiri organic tourism in

Central Java. The results of the path coefficient testing for the Uniqueness of Demand for Wonogiri organic tourism in Central Java have a positive and significant effect. It was seen in the positive path coefficient of 0.163 with the value of C.R. amounting to 3,293 and obtained a significant probability (p) of  $0.000 < 0.05$ . It can be concluded that uniqueness has a positive and significant effect on demand, meaning that if the perception of uniqueness increases, the

demand will also increase. To increase tourist visits to Wonogiri organic tourism objects is by first increasing tourist perception that the existence of Wonogiri organic tourism objects is very helpful, especially the economy of local residents. Second, it increases tourists' perception that the Wonogiri Organic Tourism Object is very suitable to the economic conditions of tourists and thirdly increases tourist perception that the Wonogiri Organic Tourism Object is superior to other tourism objects in Wonogiri.

## **4. Conclusions And Suggestions**

### **4.1 Conclusions**

- 4.1.1** All constructs used to form a research model in the confirmatory factor analysis process have met the criteria for goodness of fit.
- 4.1.2** The Chi-Square test results give a Chi-Square value of 1696.940 indicating that the model is not fit, and other criteria are RMSEA, GFI, TLI, AGFI, and CFI do not meet the required values, thus the model can be said to be not fit. To improve the next model is to look at the value of the Modification Index (MI) parameter and correlate parameters that have high MI values so that it will reduce the Chi-Square value while improving the criteria value. The Revised Model result shows that the value of the Goodness of Fit statistical index generated has met the recommended critical value (cut-off value). The smaller the Chi-square value decreases when compared to the Chi-Square value of the table ( $\alpha = 5\%$ ;  $df = 249$ ) of 614,781 shows the better results for the SEM model built by the researcher.
- 4.1.3** The results of the structural model evaluation test showed that the data was normally distributed, there were no multivariate outliers and the indicators in the study had well represented the latent construct developed.
- 4.1.4** Based on the causality test, the hypothesis shows that location, uniqueness, and price have no significant effect on competitive advantage in Wonogiri Central Java organic tourism, while Location, uniqueness and price have a significant effect on tourist visits in Wonogiri Central Java organic tourism but the competitive advantage has no significant effect on organic tourist visits. Wonogiri, Central Java.

### **4.2 Suggestions**

- 4.2.1** To increase tourist visits to Wonogiri Central Java organic tourism, the perception of location needs to be improved. Efforts can be made to improve site perception. The first, step is to increase the perception that tourists consider that the distance between their place of residence and the location of Wonogiri organic tourism is quite close. Second, increasing the perception that the travel time to Wonogiri organic attractions is not so long and third increases tourists' perception that Wonogiri organic tourism is easily accessible.

- 4.2.2** To increase tourist visits to Wonogiri organic tourism, the perception of prices needs to be increased. The steps that can be taken care by first increasing the perception of tourists that the existence of Wonogiri organic tourism is very helpful, especially the economy of local residents. Second, improve tourists' perception that the Wonogiri Organic Tourism Object is very suitable to the economic conditions of tourists and thirdly increases tourist perception that the Wonogiri Organic Tourism Object is superior to other tourism objects in Wonogiri.
- 4.2.3** Perceptions of uniqueness need to be increased so that organic tourism visits in Wonogiri can increase. The policy that can be pursued is by first increasing the perception of tourists that the existence of Wonogiri organic tourism is very helpful, especially the economy of local residents. Second, it increases tourists' perception that the Wonogiri Organic Tourism Object is very suitable to the economic conditions of tourists and thirdly increases tourist perception that the Wonogiri Organic Tourism Object is superior to other tourism objects in Wonogiri.

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