



Analysis of the Relationship of Service Quality, Motivation and Destination Image to Destination Loyalty: A Case Study of Wonorejo Mangrove Ecotourism in Surabaya, East Java

Anggi Novita Dewi¹ and Zainal Abidin^{1*}

¹ Department of Socio-Economy Fisheries and Marine, Faculty of Fisheries and Marine Sciences, Universitas Brawijaya, Jl. Veteran, Ketawanggede, Lowokwaru, Malang city, East Java 65145, Indonesia

*Correspondence :
z_abidin@ub.ac.id

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Abstract

Surabaya as the capital of East Java Province has a tourism attraction based on mangrove ecosystems namely Wonorejo Mangrove Ecotourism. Interest in the growth of loyalty to the destination depends on service quality, motivation, and destination image. Service quality is the heart of marketing and one of the concepts of loyalty success determines the sustainability of a tourist destination in the future. Motivation is also considered the main driver for traveling. However, this depends on the destination image in the minds of tourists. The purpose of this study was to analyze the direct and indirect relationship between service quality and motivation towards destination loyalty, which is mediated by destination image. From 276 online and offline questionnaires distributed to local tourists who visited or visited the Wonorejo Mangrove Ecotourism in the past years, 182 questionnaires were filled in completely. Data analysis used WarpPLS to examine the relationship of influence between variables. The results showed that service quality and motivation had a positive and significant effect on destination loyalty directly or mediated by destination image. Destination loyalty can be effectively increased by encouraging visitor motivation supported by an increase in destination image because the value of the total influence was at the largest of 0.443.

INTRODUCTION

Ecotourism is a form of travel to natural areas to conserve the environment and preserve the lives and welfare of local people (Fahrian *et al.*, 2015). Specifically, ecotourism is a development of the tourism concept (Attar *et al.*, 2013). One of the mangrove tourism destinations based on ecotourism is in a city in East Java province, namely the city of Surabaya. Ecotourism that has long been known as mangrove ecotourism in Surabaya city is Wonorejo Mangrove

Ecotourism. In 2010, Wonorejo Mangrove Ecotourism began to publicly open as a tourist attraction. It was managed by the local government, private sector, and the local people. However, the number of visits to Wonorejo Mangrove Ecotourism decreased from 2018 to 2019, from 522,805 people to 391,230 people or there was a decrease of 25.17%. People who visit certain tourist attractions have different purposes, including vacation, sports, business, events, education, and so

on. Therefore, tourist loyalty needs to be taken seriously by the tourism managers because loyalty is the guarantee of a sustainable tourism business. Improving the quality of tourist attraction is an effort to achieve tourist loyalty as this is a determining factor for tourists' interest in visiting and influencing the number of tourist visits (Hermawan, 2017). Therefore, this study analyzes the relationship between the influence of service quality on destination loyalty and on motivation to destination loyalty directly or indirectly by adding a mediating variable, namely the destination image. The indicators of service quality variable are assurance, responsiveness, reliability, tangible facilities, and empathy (Akroush *et al.*,

2016). The indicators of the motivational variable are knowledge, physical pleasure, price and health. The indicators of destination image variable are cognitive, unique and affective (Llodra-Riera *et al.*, 2015). Meanwhile, an indicator of the destination loyalty variable is the intention to revisit and recommend it to others (Suhartanto *et al.*, 2018).

METHODOLOGY

Place and Time

This research was conducted on February 29-March 15 2020 at Wonorejo Mangrove Ecotourism (WME) which is located at Jalan Raya Wonorejo 1, Wonorejo, Rungkut sub-district, Surabaya city, East Java (Figure 1).



Figure 1. Wonorejo Mangrove Ecotourism.

This location was chosen because Wonorejo Mangrove Ecotourism is the first mangrove ecotourism in the region and is popular in Surabaya city and its surroundings as a chosen ecotourism destination, especially for urban communities.

Research Material

The quality of tourism service is the heart of marketing because the quality of tourism service is one of the successes and the central concept of tourism destination loyalty. The quality of tourism service has a relationship with destination loyalty, but it depends on the destination image in the minds of tourists, so the quality of tourism service can affect tourist loyalty through a destination image as a mediator (Akroush

et al., 2016). Also, in a tour, both the process of forming a destination image in the minds of tourists and the process of determining a tourist destination can be influenced by tourist motivation (Llodra-Riera *et al.*, 2015). Tourist motivation can be considered as the main drive when tourists carry out tourism activities (Yeon *et al.*, 2018). Thus, the tourist motivation in tourism activities is one of the determinants of tourist loyalty. Tourist loyalty can eventually have an impact on the sustainability of tourist attractions (Suhartanto *et al.*, 2018).

According to Permatasari *et al.* (2017), service quality is a comparison between the desired service and the perception of the service obtained. Quality of service is essential to success in

destination marketing. Service quality has basic dimensions of SERQUAL (service quality) to determine visitor loyalty. According to Dwiputra (2013), motivation is fundamental in tourists and tourism because motivation is the trigger for the process of travel, even though the motivation is often not realized by tourists. Furthermore, destination image stated by Suwarduki *et al.* (2016) is attitude, prejudice, imagination and emotional thoughts of individuals and groups towards a tourist attraction, while destination loyalty is a measure of attitude, including the intention to revisit and recommend the destination to others (Permatasari *et al.*, 2017).

There are four hypotheses from this present study, which are:

H1: Service quality has a significant and positive effect on destination loyalty

H2: Service quality has a significant and positive effect on destination loyalty mediated by destination image

H3: Motivation has a significant and positive effect on destination loyalty

H4: Motivation has a significant and positive effect on destination loyalty mediated by destination image

Research Design

This type of research was explanatory research with a survey research and quantitative approach. Explanatory research has two problem formulations, namely comparative and associative hypotheses. This study used associative problem formulation with asymmetric relationship, namely the relationship between independent and dependent variables (Solimun *et al.*, 2017). One of the methods in explanatory research is survey using census or sampling. Explanatory research with a survey method is a research design with a quantitative approach (Kadji, 2016). Quantitative research is used to test variables, determine the causality of variables, test theories and look for generalizations or predict future results (Salim and Haidir, 2019).

Work Procedures

Data collection in this study included interviews, observation, documentation, and questionnaires. Interviews were conducted with the tourism managers to get information about the history and profile of Wonorejo Mangrove Ecotourism. Observation was used to observe the conditions around the ecotourism location. Meanwhile, documentation was used to obtain research-related documents, and questionnaires were given to obtain data from tourists who visit the tourist attraction online and offline. The questionnaires used a Likert scale with a score of 1-5 with the criteria of *strongly disagree* to *strongly agree*. Those questionnaires were distributed to tourists of Wonorejo Mangrove Ecotourism according to predetermined sample criteria. They were spread to as many as 276 respondents, and 182 were filled by the respondents, to be continued to the data analysis stage. Respondent profiles can be seen in Table 1.

Data Analysis

Data analysis in this study used Structural Equation Modeling Warp Partial Least Square (SEM-WarpPLS) developed by Kock (2017). The model used in this study was a statistical model which, according to Solimun *et al.* (2017) is an effort to simplify a problem into the concept of statistics.

A statistical model that involves the relationship between variables and also the indicator model simultaneously is called the Structural Equation Modeling. The type of relationship between variables in this study is an asymmetric relationship, in which the relationship between these variables is one-way causal flow (recursive model). Meanwhile, the model of indicator variable of this research used a reflective model, except for the formative variable of service quality. Data analysis using SEM does not require many

assumptions and can be analyzed with a sample that is not too large (Wahyoedi and Saparso, 2019). The minimum sample size in the analysis in SEM is 100 samples (Suwendra, 2018). The descriptive analysis is conducted to interpret the results of the SEM WarpPLS analysis according to the statement of Istijanto (2005) that descriptive analysis transforms raw data into more concise information.

RESULTS AND DISCUSSION

Mangrove forests in Wonorejo have existed since the Reformation era. However, due to a large number of illegal logging of mangrove trees used as fuels for tofu and coal factories, damage to mangrove forests occurred. This illegal logging then continued until 2008. Therefore, law enforcement and the effort to change mangrove forests into ecotourism can reduce illegal logging and reforest mangrove forests, as well as introduce potential in Wonorejo, Surabaya. For this reason, it is necessary to maintain tourist loyalty to ensure the sustainability of tourism in the future.

Table 1. Respondent profile.

	Respondent profile.	Percentage (%)
Sex	Male	35.71
	Female	64.29
Age (year)	17-25	66.48
	26-36	15.93
	36-45	8.25
	>45	9.34
Marital status	Single	68.13
	Married with no children	6.59
	Married with children	25.28
Education level	Primary education (SD/MI)	4.39
	Secondary education (SMP/MTS)	9.34
	Secondary education (SMA/SMK/MA)	61.54
	Diploma	3.30
	Degree (S1, S2, S3)	21.43
Occupation	Student	48.35
	Civil servant	4.39
	Private employee	24.18
	Entrepreneur	13.19
	Housewife	7.69
	Household personal assistant	0.55
	Unemployed	1.65
Religion	Moslem	96.15
	Christian	3.85
Income	<Rp.2,500,000	64.83
	Rp.2,500,000-Rp.4,000,000	20.88
	>Rp.4,000,000	14.29
Frequency of visits	1-2 times	81.87
	3-4 times	10.99
	>4 times	7.14
Source of information	Family/relatives/friends	59.34
	Social media	37.36
	Originally from Surabaya	1.65
	supervisor	0.55
	While studying in the university (ITS)	1.10

The research data collected were crosschecked through validity and

reliability tests (Table 2), all criteria were met and the data were declared valid and

reliable. Furthermore, based on the SEM Warp-PLS analysis stages, the following analysis results were obtained:

a. Evaluation of the Measurement Model (Outer Model)

Table 2. Results of validity and reliability tests.

Test	Parameter	Rule of Thumb	Result
Validity	Factor Loading Value	> 0.3 is considered acceptable	Valid
	Average Variance Extracted (AVE)	>0.5 is considered acceptable	Valid
		However, if < 0,5 does not cause a concern, it is acceptable	
Reliability	Composite Reliability Coefficients	> 0.7 is considered reliable	Reliable
	Cronbach's Alpha Coefficients	>0.6 is considered reliable	Reliable

b. Evaluation of the Structural Model (Inner Model)

This test was carried out before the interpretation of the results of hypothesis testing, and all criteria were met according

to the Goodness of Model Fit (Table 3) which, according to Solimun *et al.* (2017), is an index or measure of whether or not the relationship between latent variables is related to the assumptions.

Table 3. Model fit and Quality Indices.

Model Fit and Quality Indices	Fir Criterion	Analysis Result	Remark
Average path coefficient (APC)	P < 0.05	0.348 (P<0.001)	Good
Average R-squared (ARS)	P < 0.05	0.597 (P<0.001)	Good
Average adjusted R-squared (AARS)	P < 0.05	0.591 (P<0.001)	Good
Average block VIF (AVIF)	Acceptable if <= 5, ideally <= 3.3	1.860	Ideal
Average full collinearity VIF (AFVIF)	Acceptable if <= 5, ideally <= 3.3	2.336	Ideal
Tenenhaus GoF (GoF)	small >= 0.1, medium >= 0.25, large >= 0.36	0.569	Ideal
Sympson's paradox ratio (SPR)	Acceptable if >= 0.7, ideally = 1	1.000	Ideal
R-squared contribution ratio (RSCR)	Acceptable if >= 0.9, ideally = 1	1.000	Ideal
Statistical suppression ratio (SSR)	Acceptable if >= 0.7	1.000	Acceptable
Nonlinear bivariate causality direction ratio (NLBCDR)	Acceptable if >= 0.7	1.000	Acceptable

c. R² Value

R² value was used to measure the variation level of the value change of the independent to the dependent variable. The R² value (Table 4) obtained is

moderate because it is ≥ 0.33, in accordance with the criteria that ≥ 0.67 is substantial, ≥ 0.33 is moderate and ≥ 0.19 is weak (Chinn, 1998).

Table 4. R² value.

Variable	R ²	Interpretation	Note
Destination Image (X3)	0.60	Moderate	≥ 0.33
Destination Loyalty (Y)	0.59	Moderate	≥ 0.33

d. Mediation Test.

1. $X1 \rightarrow X3 \rightarrow Y$

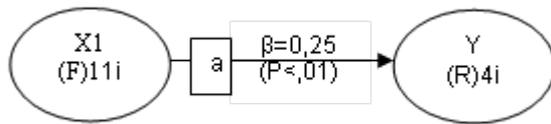


Figure 2. Model without mediation.

2. $X2 \rightarrow X3 \rightarrow Y$

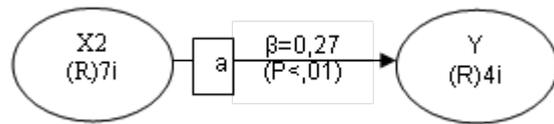


Figure 4. Model without mediation

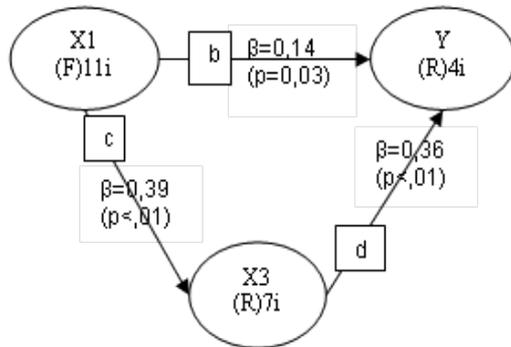


Figure 3. Model with mediation

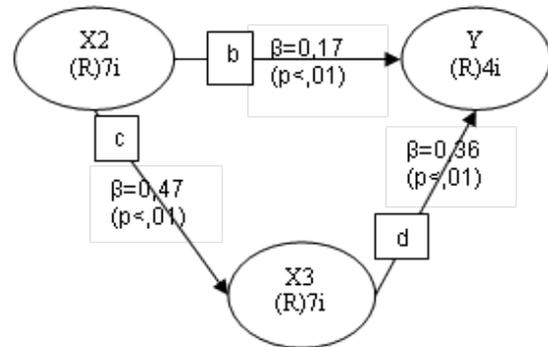


Figure 5. Model with mediation.

According to Solimun *et al.* (2017) if (c), (d) and (b) values are significant and the coefficient (b) is smaller than the coefficient (a), then it is said to be partial mediation. Based on Figures 2 and 3 it is shown that destination image (X3) as a mediator that connects service quality (X1) to destination loyalty (Y) belongs to partial mediation, and Figures 4 and 5 also show that destination image (X3) as a

mediator which connects motivation (X2) to destination loyalty (Y) belongs to partial mediation.

e. Testing of Effect Effectiveness

Testing of Effect effectiveness was used to compare the effect of direct and indirect relationships and to determine the priority of the effect of effectiveness between variables (Table 5).

Table 5. Direct, indirect, and priority of effect effectiveness between variables.

Type of Variable			Type of Effect			Priority of Effect Effectiveness				
P	M	R	Direct Effect	Indirect Effect	Total Effect	All	P-R	P-M-R	X1-Y X1-M-Y	X2-Y X2-M-Y
X1		Y	0.246 (<0.001)	-	0.246 (<0.001)	4	2	-	2	-
X1	X3	Y	0.246 (<0.001)	0.142 (0.003)	0.388 (<0.001)	2	-	2	1	-
X2		Y	0.274 (<0.001)	-	0.274 (<0.001)	3	1	-	-	2
X2	X3	Y	0.274 (<0.001)	0.169 (<0.001)	0.443 (<0.001)	1	-	1	-	1

Note: P: Predictor; M: Mediation; R: Response; X1: Service Quality; X2: Motivation; X3: Destination Image; Y: Destination Loyalty; All: all relationships.

Based on the results of the SEM WarpPLS analysis as in Table 5, it can be explained as follows:

The relationship between direct and indirect effects on service quality variable towards destination loyalty shows that more effective results are recorded in indirect effect by using a mediating

variable, namely destination image. This is because the value of the indirect effect beta coefficient (0.388) is greater than the direct effect beta coefficient (0.246).

The relationship between direct and indirect effects on motivation variable towards destination loyalty shows that more effective results are in indirect effect

by using a mediating variable, namely destination image. This is because the indirect effect beta coefficient (0.443) is greater than the direct effect beta coefficient (0.274).

The overall effectiveness priority lies in the relationship between the motivation

variable and destination loyalty (mediated by the destination image) because the value of the total effect (total beta coefficient) is the largest, standing at 0.443.

f. Model of Research Results

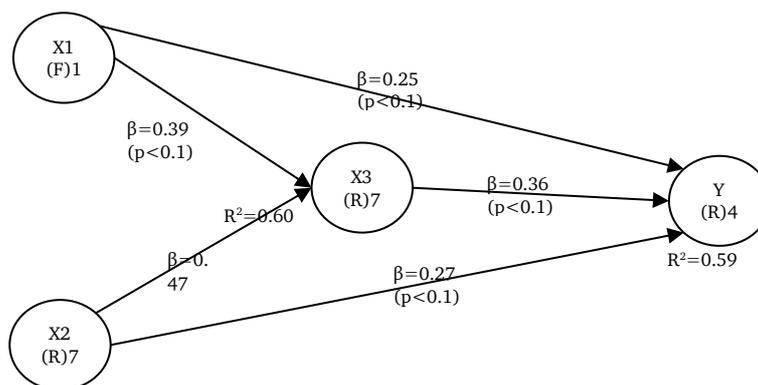


Figure 6. Model of research results.

According to Solimun *et al.* (2017) $p < 0.01$ is said to be highly significant, $P < 0.05$ is said to be significant, $P < 0.10$ is said to be weakly significant. Based on the results of Figure 6, it can be seen that hypothesis 1 (H1) results in $P < 0.01$ and a beta coefficient of 0.246, so it can be said that service quality is highly significant and has a positive effect on destination loyalty. The field data show that the dominating service quality in the form of guidance and directions given by Wonorejo Mangrove Ecotourism adds loyalty to that destination. This greatly helps tourists to successfully arrive in the Ecotourism Mangrove Wonorejo location. The results of Hypothesis 2 results are $P < 0.01$ and a beta coefficient of 0.388, so it can be said that service quality is highly significant and has a positive effect, using a mediating destination image, on destination loyalty.

The field data show that a quality service provided matches with a destination image in the minds of tourists who want to feel a relaxed and comfortable atmosphere during their visit to Wonorejo Mangrove Ecotourism, and it makes the tourists more loyal to the

destination. The results of Hypothesis 3 (H3) is $P < 0.01$ and a beta coefficient of 0.274, so it can be said that motivation is highly significant and has a positive effect on destination loyalty. The tourist motivation to visit Wonorejo Mangrove Ecotourism is to enjoy fresh air because the air condition there is still fresh and free from pollution. This encourages visitors to be more loyal. Meanwhile, the results of Hypothesis 4 (H4) is $P < 0.01$ and a beta coefficient of 0.443, so it can be said that motivation is highly significant and has a positive effect on destination loyalty, mediated by destination image. The fact that the tourist motivation to visit and enjoy the fresh air is accompanied by the destination image of tourists who want to feel a relaxed and comfortable atmosphere while visiting Wonorejo Mangrove Ecotourism makes tourists want to revisit it in the future. From the overall results, the relationship between variables can form destination loyalty, but Hypothesis 4 has the most dominant relationship in forming destination loyalty because it has the largest beta coefficient value.

The results of this study can be compared with previous theory and research (Table 6):

Table 6. Comparison of present research with previous theory and research.

Research Results	Position of Theory	Position of Previous Research
Service quality is significant to destination loyalty	Strengthening Marketing theory by Kloter (1967)	Strengthening the results of previous research by Permatasari <i>et al.</i> (2017).
Service quality is significant to destination loyalty, mediated by destination image	Strengthening Marketing theory by Kloter (1967) and expanding the theory of consumer behavior by Mowen and Minor (2002)	Strengthening the results of previous research by Akroush <i>et al.</i> (2016).
Motivation is significant to destination loyalty	Extending the theory of consumer behavior by Mowen and Minor (2002)	Strengthening the results of previous research by Suhartanto <i>et al.</i> (2018)
Motivation is significant to destination loyalty, mediated by destination image	Extending the theory of consumer behavior by Mowen and Minor (2002)	The results of the study are new findings that modify the results of previous research by Suhartanto <i>et al.</i> (2018) with a combination of previous research by Llodra-Riera <i>et al.</i> (2015) and Akroush <i>et al.</i> (2016).

The overall relationship between variables studied shows that service quality and motivation can increase destination loyalty directly or mediated by destination image. The novelty of this research is that motivation has a significant effect on destination loyalty, mediated by destination image. The research results, give practical implications for the development of Wonorejo Mangrove Ecotourism (WME), where the ecotourism managers maintain service quality and fresh air conditions as well as comfort in the WME area as the main motivations for tourists, followed by integrated promotional efforts with marketing strategies to form a destination image. This research can also add insight into marketing in the service sector, especially in tourism marketing because it contributes to strengthening marketing theory and extending consumer behavior theory.

CONCLUSION

All relationships between variables in this study indicate that the better the tourists' perceptions of service quality,

motivation, and destination image, the better tourist loyalty. The tourist loyalty to Wonorejo Mangrove Ecotourism destination can be increased directly by improving service quality and tourist motivation, yet the most effective priority action is to maintain the existence of tourist motivation, followed by efforts to form a destination image.

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