

Push and Pull Motivation of Ecotourism Impact to Satisfaction Moderating by Eco-Experience

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Abstract

Investigating several motivations that might have impact on satisfaction by divided into push and pull factor and the possibility of another factor that drives motivation. Another objective is observing possibilities ecotourism experience in moderating push motivation and effect to the satisfaction. This research involves 221 respondents who's randomly selected at ecotourism destinations. The analytical methods used confirmatory factor analysis (CFA), multiple linear regression analysis (MLRA), and moderate regression analysis (MRA). The final CFA test results show that the variables are divided into push motivation groups consisting of Escape, Refreshing, Out of Routine, Sport, Special Purposes, and pull motivation consisting of Natural Scenic View, Adventure Activities, Green Scenic, Rural Communities, Hiking/Walking, Photography, and Amenities. Based on MLRA test shows that both push and pull motivation groups have a significant impact on satisfaction. Pull motivation becomes the strongest motivation in attracting visitors to visit ecotourism destinations. Ecotourism experience could moderate push motivation. Demand predictors which consist of push and pull motivations have a significant impact on satisfaction. Ecotourism experience strengthens push motivation in achieving ecotourist satisfaction

Keywords: Ecotourism; Experience; Motivation

1. Introduction

To discuss ecotourism is certainly inseparable from the definition that has been expressed by Ceballos-Lascuráin [1] which specifically states that ecotourism is a tourism activity in a special area that is not interrupted and not contaminated by mass tourism activities with special purposes such as learning something, admiring something, enjoying the scenery and biodiversity of both plants or animals as well as endangered species. Ecotourism is a type of tourism that has minimal environmental impact, maximum effect on host communities, and maximum satisfaction value for tourists who enjoy it [2]. Ecotourists are tourists who are willing to enjoy a destination with several specific activities, some of which may require certain equipment and requirements. According to Fennel [3], ecotourists are those who want to get closer to the attractions they visit, have a passion to know something more deeply about its meaning, and are willing to interact with the surrounding social community.

Ecotourism consumer (eco-tourist) motivation is different from the type of tourist motivation in general, due to the specific character of ecotourism attractions. Motivation in tourism theory is often associated with push and pull motivation theory [4]. Push motivation relates to all personal values that encourage a person to do certain activities. This push motivation can be different for each individual, for example, the desire to enjoy nature, feelings of rest and relaxation, escape, social contact with local communities, novelty, ego, knowledge, lifestyle, self-development [5, 6]. Pull factors motivations are more visually or

physically apparent such as nature views, nature resources, variety of ecotourism attractions, facilities and amenities [7]. It is possible that an ecotourist has a combination of push and pull motivations, it can also only be one of them, namely push motivation only or pull motivation only.

Motivation is one of the essential elements that tourism stakeholders need to know so that they can determine the right policy in serving ecotourism enthusiasts as well as possible [8]. In Indonesia, ecotourism is developing rapidly in many regions, especially in rural areas. Indonesia's natural characteristics are very supportive of the development of ecotourism. However, the majority segment currently is still domestics who adhere to special interests. Yogyakarta is one of the popular soft adventure ecotourism destinations for domestic groups. Various tourist attractions are available quite a lot in this area. The number of ecotourism visits is also quite high, which is around 40% of the total tourist visits to Yogyakarta for each year. The existence of ecotourism potential is an opportunity that has been recognized to help improve the welfare of the community [9, 10]. However, of the many studies in Indonesia, not many have explored the motivations of ecotourists for their choice to visit destinations. Most research is more focused on the impact and development of potential attractions.

In deepening a wider international study of eco-tourist motivation, at least two basic theories were found that were used by a number of researchers in assessing the motivation of tourists, especially eco-tourists, namely Maslow's pyramid of needs theory [11] and push-pull theory [12]. In other research, motivation is also divided into strong, medium and low segmentation levels [13] which differentiates the motivation at each segment level regarding their interest in ecotourism destinations. It is interesting that push and pull are the theories most widely used by researchers. There is an empirical gap in the results of research that has been conducted previously, so that ecotourist motivation is not fixed in a defined grouping between push and pull. Each researcher produces differences in the terminology of either push or pull motivation, which results in ambiguity about what constitutes a push motive and a pull motive. If refer to the opinion Carvache-Franco, et al. [7] that motivations is a demand predictor, then the empirical inconsistency of research results will make it difficult for ecotourism businesses to provide the best service their guests.

Due to those reasons, this research is a pilot study that aims to provide an overview of ecotourist motivations for visiting ecotourism destinations and their relationship to overall visit satisfaction. The motivation will describe what is included in the category of push motives and what is included in pull motives, and how the two groups of motivations affect satisfaction. These groups of push and pull motives can also be referred to as demand predictors [7]. Understanding motivation means understanding tourist satisfaction, even the loyalty [5].

2. Literature Review and Theoretical Framework

One of the well-known classical theories related to individual motivation in meeting their needs is Abraham Maslow's theory which states that needs become the reason for the formation of motivation in an individual to carry out all activities that can support the individual in an effort to meet their needs [11]. A person can use the power of motivation to encourage them to reach the next level of needs, motivation is a statement about a need that influences a person to take a certain attitude to satisfy that need [14]. In the context of tourism science, these tourist motivation theories are then grouped into push and pull motivations theory [4, 12].

Each research on motivation produces different conclusions, meaning that the motivation of everyone is not always the same. A specific motivation for this type of ecotourism was suggested by Ajuhari, et al. [13] which states that there are three segment groups, each of which has a different attachment level, as

well as their motivation in choosing ecotourism destinations. The first group is those who have the strongest level of attachment, the percentage of this segment is small, they are groups who visit destinations for the purpose of blending in with nature, which is called nature-engagement-centric, this group really comes because they want to do adventure activities, mingle with nature, it can also be for special purposes such as research, experiment observing rare plants or animals. The second and third groups respectively are medium attachment level and low attachment level who have the motivation to come to ecotourism destinations for picnics such as enjoying nature's scenic views, escaping, enjoying scenic greens, refreshing and relaxation, getting out of routine, enjoying rural communities, photography, enjoy ecotourism amenities such as camping grounds, viewing from top of hills, and various types of light sports activities such as hiking, walking, caving, climbing, in soft scale adventures. It is these medium and low attachment populations that dominate the ecotourism market share in various countries in the world. A study conducted by [5] in Ecuador in a fauna production reserve found that ecotourists stopped at destinations due to reward & escape motivations, marine nature, and multiple motivations. The certain goal for self-development and interpersonal relationships. According to Dey, et al. [15] travel motivation can be due to factors 1) cultural and rural attraction, 2) destination location and transportation. In another study, it was mentioned that the motivation for ecotourism is novelty and escape [7]. An old study on motivation Crompton [12] states that the majority of tourist trips of any type are based on socio-psychological factors, namely: relaxation, prestige, facilitation and social interaction, novelty, and education.

A study conducted on the Gili Islands of Lombok states that ecotourist satisfaction is related to resourced development demands from visitors [8]. The demands referred to here are the demand for resources development to fulfill the desire of sightseeing, enjoy the amusement park, bathing beach (swimming, holding beach competition, fishing) entertainment, recreation, hiking, walking, and other amenities that complement a destination. The main focus of research conducted by Chen, et al. [8] the satisfaction of ecotourist is in the amenities provided. In another study conducted by [16] and [17] stated that motivation is influenced by destination image (all physical and visual appeals to destinations), and even when combined with a memorable tourism experience it will increase the intention to revisit, not only satisfaction but loyalty intentions.

Meanwhile, Arowosafe, et al. [18] mentioned that motivation is related to the desire to escape, enjoy nature lives, socialization, and the Sport. Almost the same opinion was expressed by Pham and Khanh [19] that the motivation of ecotourism is escape, out of routine and socialization. In another study, it was mentioned that destination image related to facilities and amenities, as well as city services are factors that are considered to have a major influence on motivation [20]. Another factor that is considered to move tourists to come to a destination is a distinctive culture [21, 22].

The motivations of tourists, especially ecotourism enthusiasts, vary greatly when visiting destinations. Studying motivations is fundamental for tourism stakeholders in improving destination marketing, product development, and segmentation [23-25]. For this reason, this research aims to simplify a number of these motivations into groups, making them easier to identify. There are push motivations and pull motivations. Satisfaction with several motivations is an indicator of development that needs to be followed up to improve the quality of the tourists' experience.

Based on the review of the theories above, motivational factors have many unique variations for everyone. If it is inventoried there are more than 20 types of tourist motivation when visiting ecotourism destinations. Motivation that internally comes from individual desire factors (needs and wants) and external motivation

which is influenced by product factors and the attractiveness of a destination due to the availability of attractions, facilities, and amenities or factors related to the destination image [17, 26].

It is important to distinguish between push motivation factors and pull motivation factors. Push motivation will have implications for how to offer ecotourism to potential tourists, while pull motivation will have implications for how to prepare infrastructure and attractions at destinations that support tourist activities, experience and satisfaction [8, 27].

Several studies said that motivation is also related to a person's previous experiences [25, 28, 29]. A tourist may be interested in visiting a destination because they have previously visited a similar destination in the same location or from another area. If this statement is related to opinion from Ajuhari, et al. [13] that the medium and low motivation groups often go on picnics to various ecotourism destinations for recreation, then this experience also increases the motivation of eco-tourists to visit other destinations as something that increases their satisfaction. Experience is something that is personal, so experience is associated with things like the desire to enjoy nature, feelings of rest and relaxation, and lifestyle [5, 6]. Experience also strengthen travel motivation [19]. Therefore, the hypotheses put forward are whether pull and push motivation affect ecotourist satisfaction, and the role of experience in moderating push factor.

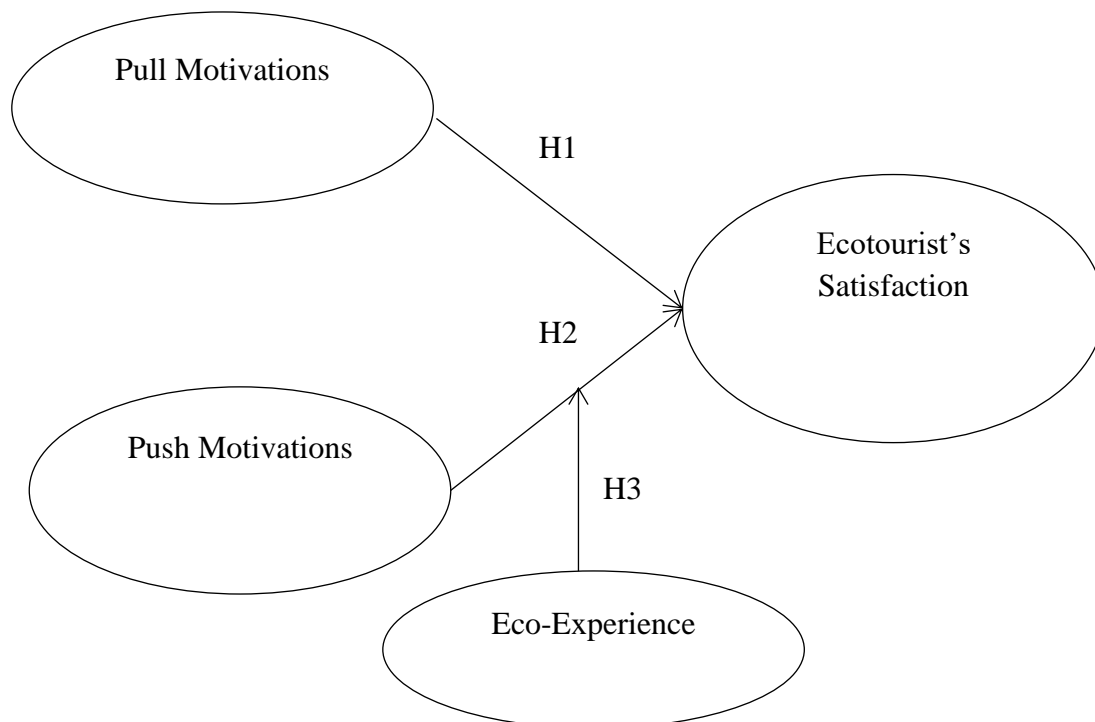
Based on those empirical studies above, the hypotheses can be stated and describe as follows:

H1: Pull Motivations Has Significant Impact to Ecotourist’s Satisfaction

H2: Push Motivation Has Significant Impact to Ecotourist’s Satisfaction

H3: Ecotourism Experience (Eco. Experience) Has Significant Moderating Effect to Ecotourist’s Satisfaction

Figure.1 Theoretical Framework



3. Method

This research was conducted using a quantitative research approach, the stages will be explained as follows:

Determining Respondent & Test Variables

The first step before distributing the questionnaires was to conduct a random test for 30 people to determine the motivational variables to be tested (Figure 2.) In this case the researcher initially proposed 18 variables. The variables with the highest number of voters are selected, so there are 12 variables. This variable then becomes the test variable, and it will be distinguished which are included in the push motives variables and which are included as the pull motives variables. The 12 variables referred to consist of : 1) enjoy natural scenic view (NatScenicV), 2) interesting on special purposes such as watching the certain plant or animal (SpecPurpose), 3) desire to go somewhere pleasant (Escape), 4) Sport, 5) adventure activities (AdvActivities), 6) do a soft adventure such as hiking and walking (HiWalk), 7) enjoy the amenities (Amenities), 8) enjoy taking photos (Photography), 9) involved and interaction with rural communities (RuralComm), 10) see the green color such as forest, rice fields (Green Scenic) 11) refreshing and relaxing (Refresh), 12) get out the routine (OutofRoutine).

After the questionnaire was completed, the researcher tested the validity and reliability of the questions on several randomly selected respondents. Some statements were later corrected. Once corrected, the questionnaire is ready to be distributed to the respondent. This study involved 221 ecotourists who were taken randomly to several ecotourism destinations in Yogyakarta. The sampling period was 4 months, especially during the holiday season or long weekend in year 2022. The instrument used is a questionnaire with closed questions and measurement using Likert's Scale starting from 5 as the highest and 1 as the lowest value.

Analysis Method and Research Model

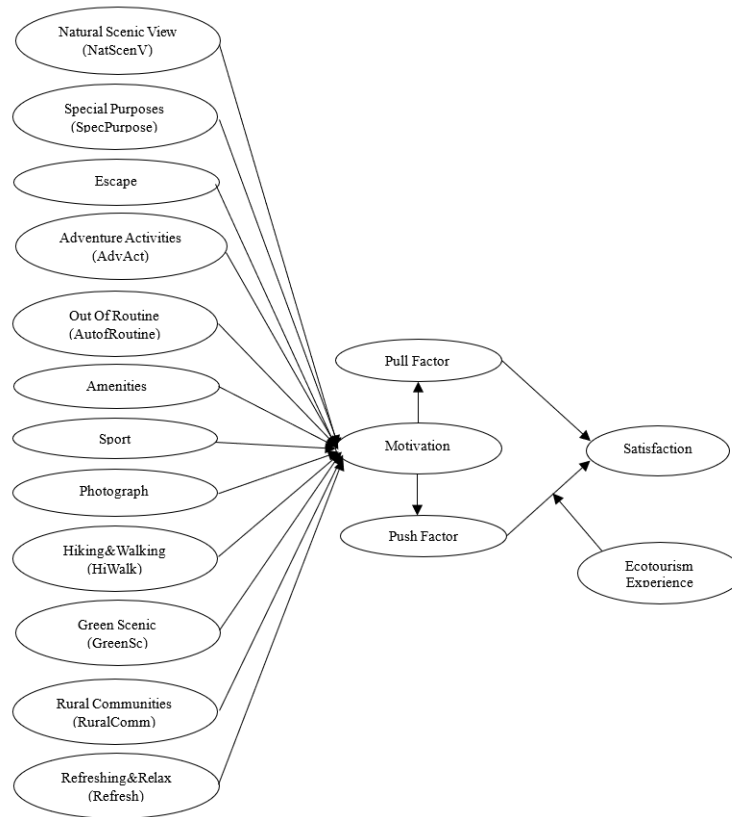
This research is a quantitative study that aims to test the construct, namely the variable motivation. These variables are tested to obtain the type of construct that corresponds to the type of motivation, namely push motives, or pull motives. The relevant analysis method is Confirmatory Factor Analysis (CFA), this method is still reliable in testing the construct validity of a measuring instrument, especially in the social sciences [30-32]. Because of its confirmatory nature, CFA can measure the extent to which a construct is able to measure one thing, in this matter is motivation.

Another analytical method used is Multiple Linear Regression Analysis (MLRA), which is a formula for finding the mathematical relationship between two or more independent variables and the dependent variable [33, 34]. In this study, the relationship sought is the effect of motivation as an independent variable (X) with ecotourist satisfaction as the dependent variable (Y). The research steps will be carried out by first determining the motivation group with CFA, then looking at the relationship of each motivation group with ecotourist satisfaction with the MLRA test.

One of the hypotheses in this research is to test ecotourism experience as a moderating push factor after measuring construct validity with CFA. The method used to determine moderation is Moderated Regression Analysis (MRA). This method is quite widely used in several social and management research. According to [35, 36] MRA able to produce moderation effects which can be strengthening moderation, weakening moderation, and reverse effect moderation. This method is also commonly used in research related to eco-tourist motivation [37].

The research model is as depicted in Figure 2 below:

Figure 2. Research Model & Construct Variables



4. Results and Discussion

A. Results

Respondent Profile

Respondents are tourists who visit ecotourism attractions, their characteristics are very interesting. As shows at Table 1 that most respondents are male (58.4%), aged between 20 - 50 years old (91%), average income level of 3 - 8 million rupiah (± 533 USD), spending ability per visit less than 200 thousand rupiah (± 13 USD). The main source of information about the destination is social media (37.6%) and friends/colleagues (32.6%). Most are first timer visitors (67%). Most did not stay overnight (88.2%) and visited with family (52.5%), with friends (31.2%) is the second option. Based on this profile, the interesting thing is that they are first timers, spend less, and don't stay overnight. Another interesting aspect that the main segment for ecotourism attraction is family.

Table 1. Socio Demographic Profile of Respondent

	In Percentage (N=221)		In Percentage (N=221)
Gender		Source Information	
Male	58.4	Media Social	37.6
Female	41.6	Friends/Colleague	32.6
Aged		Family	20.4
< 20 Years Old	5.4	Travel Agent/Operator	4.5

20 - 30 Years Old	38.9		Others	5.0
31 - 40 Years Old	37.1		Visit Frequency	
41 - 50 Years Old	14.9		First Time Visit	67.0
> 50 Years Old	3.6		Second Time Visit	21.7
Income Level			Third Time Visit	8.1
< 3.000.000 IDR	9.0		Fourth Time Visit	1.8
3.000.000 - 5.000.000 IDR	53.8		Fifth Time Visit or More	1.4
5.000.000 - 8.000.000 IDR	33.0		Overnight	
> 8.000.000 IDR	4.1		No Stay	88.2
Spending Per Visit			One Day	11.8
< 200.000 IDR	57.5		Trip Companion	
200.000 - 400.000 IDR	34.8		None	8.1
400.000 - 600.000 IDR	6.3		Partner	8.1
> 600.000 IDR	1.4		Family	52.5
			Friends	31.2

Push and Pull Ecotourist's Motivation

Using principal component analysis to separate the antecedent variables of pull and push motivation, using the varimax rotation method can pinpoint factors or variables that have low and high load values. Tests carried out using Confirmatory Factor Analysis (CFA) are also Validity testing in the study. CFA is used to test the unidimensional of whether the indicators used can confirm a construct or variable.

Measurement of the validity of questionnaire instrument items can be factor analysis measured through the loading factor value with the help of an SPSS 25.0 computer. The loading factor is the correlation of question items with the constructs they measure. If the loading factor value is greater than or equal to 0.5 (≥ 0.5), the indicator in question is valid and means that the indicator can be used to measure a construct. To test whether there is a correlation between variables, the Bartlett Test of Sphericity is used. If the result is significant ≥ 0.5 , it means that the correlation matrix has a significant correlation with several variables. Using the CFA validity test Table 2 below shows that the KMO (Kaiser-Meyer-Olkin) value and loading factor are greater than 0.5 which is 0.934. Variable indicators have also formed groups based on their dimensions. Thus, it shows that the indicators have a good ability to represent the dimensions of the research variables. Therefore, it can be concluded that all statements in the questionnaire can be said to be possible as instruments for measuring research data.

Based on the value of the varimax rotated component matrix, the first factor can be said as novelty of the motivations, and at the same time was a factor with highest explanatory capacity 52.853 or 52.8% of the total variance. This group of factors is referred to as the pull factor of motivations which consists of Natural Scenic View, Adventure Activity, Green Scenic, Rural Community, Photograph, and Amenities. The second factor group is referred to as the push factor of motivation (varimax rotated component matrix 2) which consists of Escape, Refreshing and Relax, Out of Routine, Sport, and Special Purposes. In this group, the factor has a lower explanatory capacity which is 9.785 or 9,78% of the total variance.

Table 2. Factor Analysis

Motivation	Varimax Rotated Component Matrix		Factor
	1	2	
NatScenV	0.762		Pull
AdvActiv	0.723		
GreenSc	0.674		
RuralComm	0.762		
HiWalk	0.646		
Photograph	0.750		
Amenities	0.802		
Escape		0.743	Push
Refresh		0.755	
OutofRoutine		0.738	
Sport		0.634	
SpecPurpose		0.785	
Eigenvalues	6.342	1.174	
% of Explained Variance	52.853	9.785	
KMO (Kaiser-Meyer-Olkin) Measure of Sampling Adequacy		0.934	
Sphericity test of Bartlett	Chi-Square = 1681.954 Sig. = 0.000		

Reliability Test for Pull and Push Factor of Motivation

Reliability shows the consistency and stability of a measurement scale. The research instrument can be said to be reliable if the Cronbach's Alpha value is > 0.7. The test result shows that pull factors have a Cronbach's Alpha value of 0.920 or above 0.7, and push factor has a Cronbach's Alpha value of 0.889 or above 0.7. Both groups of variables are declared reliable.

The following (Table. 3) are the results of the reliability test:

Table 3. Item Reliability Test Results

Variable Group	Cronbach's Alpha	Comment
Pull Factor	0,920	Reliable
Push Factor	0,889	Reliable

Push and Pull Motivations and Ecotourist Satisfaction

The next step after CFA test is to test the effect of Motivation (Pull and Push) on Ecotourist Satisfaction using MLRA. In multiple linear regression analysis model will be tested simultaneously (F test) and partially (t test). The provisions of the F test and t test significance tests are accepting the hypothesis if the probability (p) value ≤ 0.05 means that Motivation (Pull and Push) simultaneously and partially has a significant influence on Satisfaction. According to Simultaneous Regression, the F-count value is 105.990 with a probability (p) value = 0.000 or less than 0.05, it states that Pull & Push Factors simultaneously affect Satisfaction (Table 4.).

Table 4. Simultaneous Regression Test Results (F-Test)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	519.473	2	259.737	105.990	.000 ^b
	Residual	534.228	218	2.451		
	Total	1053.701	220			
a. Dependent Variable: Ecotourist Satisfaction						
b. Predictors: (Constant), Push, Pull						

The magnitude of the influence of Pull & Push Factors on Satisfaction is indicated by the Adjusted R Square value of 0.488. This means that 48.8% of Satisfaction is influenced by Motivation (Pull & Push), while the remaining 51.2% is influenced by other variables (Table 5.).

Table 5. Test Results of the Coefficient of Determination R Square

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.702 ^a	.493	.488	1.565
a. Predictors: (Constant), Push, Pull				

Based on the partial regression test on Pull motivation, the t-count value is 7.947 with probability (p) = 0.000 or less than 0.05, it can be concluded that Pull Motivation has a significant effect on Satisfaction. Meanwhile, based on the partial regression test on Push Motivation, the t-count value is 4.540 with a probability (p) = 0.000 can be concluded that Push Motivation has a significant effect on Satisfaction (Table 6.).

Table 6. Partial Regression Test Results (T-Test)

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.472	.663		3.730	.000
	Pull Factor	.216	.027	.491	7.947	.000
	Push Factor	.176	.039	.281	4.540	.000
a. Dependent Variable: Ecotourist Satisfaction						

Push Factor Effect to Satisfaction with Eco-Experience as Moderating Variable

Results of simultaneous regression analysis with Eco. Experience moderation on push factors to Ecotourist Satisfaction using MRA shows that the F-count value is 69.337 with probability (p) value = 0.000 or less than 0.05, it states that Push Factors mediating by Eco. Experience simultaneously affects Satisfaction (Table 7.).

Table 7. Simultaneous Regression Test Results (F-Test) With Moderation

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	592.364	2	148.091	69.337	.000 ^b
	Residual	461.338	218	2.136		
	Total	1053.701	220			
a. Dependent Variable: Ecotourist Satisfaction						
b. Predictors: (Constant), Push*Eco. Experience, Push, Pull, Eco. Experience						

The magnitude of the influence of Push Factors and Eco. Satisfaction to Satisfaction is indicated by the Adjusted R Square value of 0.554. This means that 55.4% of Satisfaction is influenced by Push Motivation with Eco. Satisfaction as moderating variable (Table 8.).

Table 8. Test Results of the Coefficient of Determination R Square with Moderation

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.750 ^a	.562	.554	1.461
a. Predictors: (Constant), Push, Pull				

Based on the partial regression test with moderation on Push motivation, the t-count value is 3.519 with P value = 0.000, it can be concluded that Push Motivation has significant effect to Satisfaction. Meanwhile, the result of partial regression test on Push Motivation which moderated by Eco. Experience is -2.776 with P Value = 0.006, shows that Eco. Experience could moderate Push Motivation, so it has a more significant effect on Ecotourist Satisfaction (Table 9.).

Table 9. Partial Regression Test Results (T-Test) With Moderation

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.828	.822		-1.839	.067
	Push Factor	.433	.0123	.691	3.519	.001
	Eco. Experience	.833	.200	.863	4.172	.000
	Push*Eco. Experience	-.029	.010	-.943	-2.776	.006
a. Dependent Variable: Ecotourist Satisfaction						

The summary of the results of multiple linear regression analysis that has been carried out is as follows:

Table 10. Pull Factor, Push Factor, and The Effect Moderation Eco. Experience to Satisfaction

Variables	B	Std. Error	Beta	t-value	Sig. t	Comment
Pull → Satisfaction	0.147	0.27	5.266	3.730	0.000	Hypothesis Accepted

Push → Satisfaction	0.433	0.123	3.519	3.519	0.001	Hypothesis Accepted
Push*Moderates Eco. → Satisfaction	-0.029	0.10	-2.776	-2.776	0.000	Hypothesis Accepted

Based on table 10 can be explained that the pull factor regression coefficient of 0.147 of all the factors tested, shows that the pull motivation has a significant effect to ecotourist satisfaction. This states that by increasing factors related to pull motivation, it will be able to increase ecotourist satisfaction level. The push factor regression coefficient of 0.433 from all the factors tested shows that the push motivation variable has a significant effect on ecotourist satisfaction. This states that an increase factor related to push motivation will be able to increase ecotourists satisfaction level. The push motivation that moderated by ecotourism experience has coefficient regression -0.029 means that the more experienced of tourist (medium-high level) who visited ecotourism destination the more can expected to satisfaction. Ecotourists is persons who always respect to everything related no nature dan preserved [38]. Not much higher expectation compared to common tourists [6].

B. Discussion

There are many ecotourism motivations in several empirical studies that have been conducted previously, but they do not specifically explain what these motivations are and what their implications are. Most studies do not explain which is push and which is pull as theorized by Crompton [12] dan Su, et al. [4]. Using CFA test (Table 2) was found that ecotourist motivation can be divided into two motivations, namely pull motivation and push motivation. Pull motivations consisting of factors: Nature Scenic View (0.762), Adventure Activities (0.723), Green Scenic (0.674), Rural Communities (0.762), Hiking-Walking (0.646), Photography (0.750), Amenities (0.802), and push motivations consisting of Escape (0.743), Refreshing (0.755), Out of Routine (0.738), Sport (0.634), Special Purposes (0.785).

Pull motivation can be referred to as main motivation, motivation with the highest explanatory capacity reached 52.8% of the total variance, and push motivation is the next motivational group that has a lower explanatory capacity with only 9.78% of the total variance. Pull motivation turns out to be the main attraction that is considered by tourists when going to visit ecotourism destinations. This is important to put attention to because it affects in improving destination marketing, product development, and segmentation [23-25]. Other opinion said that both push and pull will have implications on how to prepare infrastructure and attractions at destinations that support tourist activities, experience and satisfaction [8, 27].

Pull motivation is an important motivation for the case of ecotourism in Yogyakarta, also known as external motivation [17, 26]. Tourists are attracted to visiting ecotourism destinations because of these pull factors. However, this does not mean that push motivation is not important, but it means that pull can be a top development priority in the short term. Development of Push factors that aim to increase internal motivation can be done by increasing awareness for ecotourism enthusiasts so that they are motivated to visit ecotourism destinations.

In the moderation analysis, namely by using the level of experience in visiting ecotourism destinations (Eco. Experience) in other places, it turns out to strengthen the effect of push motivation on satisfaction. Ecotourism enthusiasts are generally more respectful and concerned about all destinations which trying to protect and preserve natural potential [3]. Apart from that, ecotourism enthusiasts are also not tourists who have high satisfaction standards by insisting facilities or kinds related to. For them, the more natural a

destination is, the better. Therefore, the ecotourist group which is included in the medium-high segment (true ecotourism enthusiasts) will be more easily satisfied [13]. This is very important in choosing destination promotion targets, especially for medium-high ecotourist groups.

Based on the hypothesis testing carried out with MLRA and MRA, the two types of motivation, both push and pull, significantly affect tourist satisfaction, then push which moderates by Eco. Experience has significantly affected satisfaction (table 10). This means that simultaneously developing both types of motivation, namely developing ecotourism destinations as physical matters, and increasing the motivation of ecotourists as psychological matters, will increase ecotourist satisfaction. By targeting medium-high levels of ecotourists will be more effective in promoting ecotourism destinations.

5. Conclusion

Based on factor analysis test results show that there are two groups of ecotourist motivations, namely pull motivation and push motivation. Included in the pull motives group are Natural Scenic View (NatScenV), Adventure Activities (AdvActiv), Green Scenic (GreenSc), Rural Communities (RuralComm), Hiking/Walking (HiWalk), and Photograph. Included in the push motives group are Escape (Escape), Refreshing and Relaxation (Refreshing), Out of Routine (OutofRoutine), Sport, and Special Purposes (SpecPurpose). Both motivation groups, whether pull or push together influence ecotourist satisfaction. This means that the overall demand predictor has a significant impact on ecotourist satisfaction. The improvement to these variables is expected to increase the satisfaction of ecotourists in the future.

Eco. Experience as moderating variable has significant strengthening effect on push factor to satisfaction. It means that the more experienced ecotourists the easier they are satisfied. It's common sense that the true ecotourist enthusiast (Med-High) very respect to various tourism activities which protect and preserve the natural environment. They don't put high preference to enjoy ecotourism activities, so using them as specific target on promote the ecotourism destination can be considered.

Special implications for the case of ecotourism in Yogyakarta for all tourism stakeholders, attention to demand factors related to 1) Nature Scenic View can be done by making sure all ecotourism attractions have amazing nature view and protected from environmental damage, 2) Adventure Activities related to provide all infrastructure and facilities to support various adventure activities at ecotourism destinations especially for family segment, 3) Green Scenic as well as support to always protect all green resources such as rice fields, forests, and hills which are covered with green views, 4) Rural Communities related to facilitating all kind of relationship by involving tourists with local communities such as farming, gardening, 5) Hiking-Walking related to support the facilities and equipment that may be needed by tourists to explore the nature while visiting the destination by hiking or walking, 6) Photography related to facilitated photography activities that can be memorable souvenirs for tourists, a local photographer might be available to take photos, 7) Amenities related to providing all facilities to support convenience for tourists such as local restaurants with local food, lodging with local taste, souvenir shops, rest area, playing ground for kids, first aid, etc.

Both on the push and pull side of motivation will affect tourist satisfaction, so that a balanced development strategy for the two types of motivation will have a good impact on ecotourist satisfaction. Apart from motivation and its influence on satisfaction, there are still interesting things to study further, for example related to information sources since many ecotourists use social media as an important source of information. Other things such as lower spending which is less than 13 USD (under 200,000 IDR), most

do not stay overnight (88%), and most of tourists are first timers (67%) with only a little bit for repeaters (21.7%). This condition can be a concern in future ecotourist behavior studies.

Reference

1. H. Ceballos-Lascuráin, "Tourism, Ecotourism and Protected Areas: The State of Nature-Based Tourism around the World and Guidelines for Its Development," no. 301. doi: 10.2305/iucn.ch.1996.7.en
2. N. D. Hetzer, "Environment, tourism, culture," in *The Encyclopedia of Ecotourism* vol. 1, ed, 1965, pp. 1-3.
3. D. A. Fennel, *Ecotourism An Introduction* Routledge, Taylor & Francis, 2002, pp. 30-42.
4. D. N. Su, L. W. Johnson, and B. O'Mahony, "Analysis of push and pull factors in food travel motivation," *Current Issues in Tourism*, vol. 23, no. 5, 2020.
5. M. Carvache-Franco, W. Carvache-Franco, O. Carvache-Franco, and J. Borja-Moran, "Ecotourism motivations and segmentation in a Fauna Production Reserve in Ecuador," *Journal of Cultural Heritage Management and Sustainable Development*, pp. 2044-1266, 2022.
6. M. Massi and A. D. Nisco, "The internet-Based Marketing of ecotourism: are ecotourists really Getting What they Want?," *Tourism Planning and Destination Marketing*, pp. 161-182, 2019.
7. M. Carvache-Franco, M. M. Solis-Radilla, W. C. Franco, and O. Carvache-Franco, "Push and Pull Motivations as Demand Predictors of Coastal and Marine Destinations: A Study in Acapulco, Mexico," *Tourism Planning & Development*, 2021.
8. F. Chen, J. Liu, J. Wua, N. D. M. Sjafrie, P. Rahmadi, and R. Y. Putranto, "Measuring the relationship among stakeholders from value-satisfaction-demand in the development of ecotourism of Marine Park," *Marine Policy* vol. 29, no. 104519, 2021.
9. N. Ginting and E. Triska, "Developing Tourism Attractions Based on Ecotourism in Aek Nauli Indonesia," presented at the OP Conference Series: Earth and Environmental Science, Sweden, 2023.
10. Zakia, "Ecotourism in Indonesia: Local Community Involvement and The Affecting Factors," *Journal of Governance and Public Policy*, vol. 8, no. 2, pp. 93-105, 2021.
11. S. S. Huang and C. H. C. Hsu, "Travel motivation: linking theory to practice," *International Journal of Culture, Tourism and Hospitality Research*, vol. 3, no. 4, pp. 287 - 295, 2009.
12. J. L. Crompton, "Motivations for pleasure vacation," *Annals of Tourism Research*, vol. 6, no. 4, pp. 408-424, 1979.
13. Z. Ajuhari, A. Aziz, and S. Bidin, "Characteristics of attached visitors in ecotourism destination," *Journal of Outdoor Recreation and Tourism*, vol. 42, no. 100608, 2023.
14. G. Jogaratnam, K. Kim, and J. Noh, "Multi-Destination Segmentation Based on Push and Pull Motives," *Journal of Travel & Tourism Marketing*, vol. 21, no. 2-3, 2007.
15. B. Dey, J. Mathew, and C. Chee-Hua, "Influence of destination attractiveness factors and travel motivations on rural homestay choice: the moderating role of need for uniqueness," *International Journal of Culture, Tourism and Hospitality Research*, vol. 14, no. 4, pp. 639-666, 2020.
16. D. Dagustani, G. I. Kurniawan, H. A. Vidyastuti, and R. Miharja, "Model of Increasing Tourists Revisit Intention : Utilizing The Environment as An Ecotourism Area," in *Environmental, Social, and Governance Perspectives on Economic Development in Asia International Symposia in Economic Theory and Econometrics*, 2022.

17. N. Quynh, N. T. Hoai, and N. V. Loi, "The role of emotional experience and destination image on ecotourism satisfaction," *Spanish Journal of Marketing ESIC* vol. 25, no. 2, pp. 308-328 2021.
18. F. Arowosafe, O. Akinwotu, O. Tunde-Ajayi, O. Omosehin, and E. Osabuohien, "Push and pull motivation factors: a panacea for tourism development challenges in Oluminrin waterfalls, Nigeria," *Journal of Policy Research in Tourism, Leisure and Events* vol. 14, no. 1, 2022.
19. H. S. T. Pham and C. N. T. Khanh, "Ecotourism intention: the roles of environmental concern, time perspective and destination image," *Tourism Review*, vol. 76, no. 5, pp. 1141-1153,, 2021.
20. G. C. Santamaria, J. M. Jimenez, F. Sanchez-Cubo, and A. G. Pozo, "Motivations in heritage destinations of the cultural tourist: the case of Malaga (Spain)," *National Accounting Review* vol. 3, no. 1, 2021.
21. X. Wang and C. H. Leou, "A Study of Tourism Motivation, Perceived Value and Destination Loyalty for Macao Cultural and Heritage Tourists," *International Journal of Marketing Studies*, vol. 7, no. 6, 2015.
22. N. Yan and E. Halpenny, "The role of cultural difference and travel motivation in event participation A cross-cultural perspective," *International Journal of Event and Festival Management*, vol. 10, no. 2, pp. 155-173, 2019.
23. G. Halkos, A. Leonti, and E. Sardianou, "Activities, motivations and satisfaction of urban parks visitors: A structural equation modeling analysis," *Economic Analysis and Policy*, vol. 70, pp. 502–513, 2021.
24. C. Jeong, "Marine Tourist Motivations Comparing Push and Pull Factors," *Journal of Quality Assurance in Hospitality & Tourism*, vol. 15, pp. 294–309, 2014.
25. M. K. Smith, I. Pinke-Sziva, Z. Berezvai, and K. Buczkowska-Golabek, "The changing nature of the cultural tourist: motivations, profiles and experiences of cultural tourists in Budapest," *Journal of Tourism and Cultural Change* vol. 20, no. 1-2, 2022.
26. C. N. T. Khanh and L. T. Phong, "Impact of environmental belief and nature-based destination image on ecotourism attitude," *Journal of Hospitality and Tourism Insights*, vol. 3, no. 4, pp. 489-505, 2020.
27. M. Carvache-Franco, W. Carvache-Franco, O. Carvache-Franco, and J. e. Borja-Mor'an, "Motivations as a predictor of satisfaction and loyalty in ecotourism," *Journal of Outdoor Recreation and Tourism* vol. 37, no. 100478, 2022.
28. N. V. Atmari and V. W. Putri, "The Effect of Tourism Experience on Revisit Intention through Destination Image and Satisfaction," *Management Analysis Journal*, vol. 10, no. 1, 2021.
29. A. Suryani, Soedarso, D. Rahmawati, Endarko, A. Muklason, and B. M. Wibawa, "Why What they Say Matters: The Impacts of Visitors' Experiences on Tourism Sustainability," *International Journal of Social Science and Business*, vol. 5, no. 1, pp. 99-110, 2021.
30. V. Costa and R. Sarmento, "Confirmatory Factor Analysis A Case study," P. FEUP, Ed., ed, 2019.
31. R. H. Hoyle, "Confirmatory Factor Analysis," *Encyclopedia Social Science Research Method*, vol. 1, pp. 169-175, 2004.
32. C. D. Stapleton, "Basic Concepts and Procedures of Confirmatory Factor Analysis," presented at the Annual Meeting of the Southwest Educational Research Association Austin, TX, 1997.
33. C. Coulton and J. Chow, "Interaction Effects in Multiple Regression," *Journal of Social Service Research*, vol. 16, no. 1-2, pp. 179-199, 2008.
34. J. F. Hair, W. C. Black, B.J, and R. E. Anderson, *Multivariate Data Analysis* Upper Saddle River: Pearson Education International, 2010.

35. R. G. Gardner, T. B. Harris, N. Li, B. L. Kirkman, and J. E. Mathieu, "Understanding "It Depends" in Organizational Research: A Theory-Based Taxonomy, Review, and Future Research Agenda Concerning Interactive and Quadratic Relationships," *Organizational Research Methods*, vol. 20, no. 4, pp. 1-29, 2017.
36. A. F. Hayes, *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York: The Guilford Press, 2013.
37. N. T. K. C. a. H. Pham, "The moderating role of eco-destination image in the travel motivations and ecotourism intention nexus," *Journal of Tourism Futures*, pp. 1-17, 2022.
38. V. T. N. Thuy and H. D. P. Thao, "Ecotourists' satisfaction and dissatisfaction: asymmetric effects of service attributes," *Journal of Asian Business and Economic Studies* vol. 26, no. 2, 2019.