EFFECT OF RESIDENTS' ECOCENTRIC ATTITUDE AND PERCEIVED ENVIRONMENTAL EFFECTS OF TOURISM ON THEIR SUPPORT FOR TOURISM DEVELOPMENT

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Abstract

Tourism industry, across the world, has grown to be a very important industry providing income and employment. The rapid growth of tourism had on one hand provided economic growth, but on the other, raised serious concerns about its sustainability and impacts. Studies proved that there was severe exploitation of the local community, its culture and natural resources. New modes of tourism, like responsible tourism, emerged to ensure positive effects of tourism activities. Evidences suggest that the local community of the tourism destination plays a very significant role in deciding how the industry performs. The present study is an attempt to identify the levels of residents' ecocentric attitude, their perceived environmental effects of tourism, and their support towards tourism development in their locality. It was found that the local residents had high levels of ecocentric consciousness and were aware of the environmental effects of tourism. Their involvement with tourism industry was not a key in deciding their perceptions on tourism. It was also found that the residents' ecocentric attitude and their perceived environmental effects of tourism were significant predictors of their support for tourism development.

Keywords: *tourism, ecocentric attitude, perceived environmental effects, support for tourism development*

Introduction

The tourism industry has been viewed as an important economic activity due to its potent to generate employment, income, foreign exchange receipts, tax revenue, infrastructure development etc. (Lankford & Howard, 1994). Hence, in many countries, tourism was considered as a savior. But studies have proven that tourism is not without ill-effects. Many destinations started realizing that tourism development was achieved at severe to environmental, cultural and social costs. (Khan, 1997; Sirakiya, Jamal, & Choi, 2000). Many tourist destinations have found it difficult to overcome the ravages created by uncontrolled tourism activity (Dimitriou, 2017). The ill-effects included traffic congestions, poor waste management, inefficient water usage, habitat changes etc. (Sayed, 2017). Local people in the tourist destination felt that tourism was taking advantage of their locality (Goodwin, 2019a). As a response, new concepts like sustainable tourism, ecotourism, responsible tourism etc. emerged. Responsible tourism is a type of tourism activity where responsibility of achieving sustainability of the destination and its environment is taken up by the stakeholders (Goodwin, 2019b). Residents of the local community are considered as the major actors in tourism development process as they are the most affected by it (Gunn, 1994). Sustainability of tourism development has the residents' support as its pivot (Butcher, 1997). It has also been accepted that development of tourism in a destination hugely depends on the local community's attitude and their support towards tourism (Jurowski 1994). The local resident households in tourism destinations can consist of members either involved with the industry or not. The study sub-classifies the members involved in tourism industry into 2 groups – involved for 5 years or more and involved upto 5 years. The attempt is to identify differences across the three groups on their ecocentric attitudes, perception on environmental effects of tourism and their support for tourism development.

Theoretical Framework

Ecocentric attitude is a reflection of strong belief in the protection and preservation of the natural environment (Jurowski, Uysal & Williams, 1997). Residents with strong ecocentric attitudes may prefer natural resources being allocated for the its protection and conservation, rather that have it made available to satisfy human needs and desires. (Uysal et al., 1994). Jurowski, et al. (1997) finds that ecocentric attitude of residents were significantly negatively related to the perceived economic, social and environmental impacts of tourism. People with strong environmental attitudes appear to be relatively neutral towards tourism. In such cases, their support for tourism development is negative and significant. Gursoy et al. (2002) reports a negative impact of ecocentric attitudes on the perceived benefits and costs of tourism, but finds that the strength of residents' ecocentric attitude positively influences their support for tourism. Gursoy & Rutherford (2004) reports that locals with high ecocentric attitude were not concerned with cultural benefits and costs of tourism, but were significantly concerned with the economic and social impacts. Studies suggest that within the community, there may be contradictory views among the residents regarding the environmental effects of tourism, and their attitudes towards environment may affect the way they perceive the impact (Jurowski et al., 1997).

Previous studies have examined various facets of positive and negative environmental effects of tourism. Among the positive effects, preservation of the natural environment and prevention of ecological decline has been examined as a positive effect of tourism by Sethna & Richmond (1978), Liu & Var (1986), and Liu, Sheldon, & Var (1987). Contribution of tourism to preservation of historic buildings and monuments have been examined by Sethna & Richmond (1978), Sheldon & Var (1984), and Liu, Sheldon, & Var (1987). Improvement of the area's appearance as a result of tourism has been studied by Perdue, Long, & Allen (1990). As regards the negative environmental effects, tourism contributes to increased traffic congestion (Pizam (1978), Perdue, Long, & Allen (1990), and Caneday & Zeiger (1991)). Overcrowding, as a negative effect, has been examined by Rothman (1978), Thomason, Crompton, & Kamp (1979) and Liu & Var (1986) and pollution and waste has been proved to exist by Pizam (1978), and Caneday, & Zeiger (1991).

Development of tourism has been increasingly viewed as a strategy for regional economic development (Getz, 1986). It has the potential to generate local employment, tax revenues etc. It also provides opportunities for development of rural entrepreneurship and assistance to locally owned business (Watkins & Allen, 1988). Since there are also widespread concerns on the impact of tourism development on the rural environment, it requires elaborate and meticulous planning, in which, one of the most important aspects is the local community support towards tourism development (Murphy, 1985; Marsh & Hensall, 1987). Ambroz (2008), Palmer et al. (2013), and Stylidis et al. (2014) have reported that the image and approval of the residents are of importance in the tourism development process.

Some studies have adopted the social exchange theory to explain how the local residents' perceived impact of tourism affects their perception towards tourism development (Yoon et al., 2001). Still, studies have rarely examined the effect of local community residents' ecocentric attitude and perceived environmental impact of tourism on their support for tourism development.

Research Methodology

The attempt of the present study is to establish the relationship of the local community residents' ecocentric attitude and their perceived environmental effects of tourism with their support for tourism development. Thus, the major constructs for the present study include residents' ecocentric attitude, their perception on environmental effects of tourism and the residents' support for tourism development. The independent variable 'residents' ecocentric attitude' was measured through a

scale adopted from the scales developed by Jurowski, Uysal, & Williams (1997), Gursoy, Jursowski & Uysal (2002), Gursoy & Rutherford (2004) and Miyakuni (2012). It consists of a four-item scale anchored on a five–point Likert type scale (1 = strongly disagree to 5 = strongly agree). The second independent variable 'residents' perceived environmental effects of tourism' was measured through a scale adopted form the scales developed by Ap & Crompton (1998), Ko & Stewart (2002), Choi & Sirakiya (2005), and Andereck & Vogt (2000). It consist of a ten-item scale anchored on a five–point Likert type scale (1 = strongly disagree to 5 = strongly agree). The outcome variable Residents' support for tourism development was measured through a scale adopted from the scales developed by Gursoy and Rutherford (2004), Sirakiya, Teye, and Sonmez (2002). It consist of a five item scale, anchored on a five-point Likert-type scale (1 = strongly disagree to 5 = strongly agree), intended to measure the level to which the residents support future development of tourism activities in their locality.

The study is conducted in major tourism sites in Kumarakom, which is an internationally renowned responsible tourism destination in Kerala. Kumarakom was selected because it was officially declared as a responsible tourism destination by the Government of Kerala in 2008, and had since risen to be a global model destination. Thus, to identify the ecocentric attitudes, perceived environmental effects and support for tourism development, the residents of the local community in Kumarakom were considered as the sample for the study. Systematic random sampling was employed to identify the sample respondent households. The list of households was collected from the local governance authorities. With the aid of local guides, the households in different streets were identified, and target respondent households were set for each street. Selected households were visited, and data were collected from the adult member who was available at the visit time. The data collection was done during the period between February 2019 and June 2019. The data were collected by administering a survey questionnaire. The respondents' demographic profile and their responses on the variables under the study were recorded. A total of 296 respondent households participated in the survey, out of which 276 questionnaires were selected as usable for final data analysis.

Data Analysis and Results
The profile of the respondents reveals that nearly 49 per cent belong to the age category of 26 years to 35 years, while 25 per cent are within 36 years to 45 years category. As regards their education level, 59 per cent are graduates and 23 per cent have education up to higher secondary level. It is found that 34 per cent of the respondents have been involved with the tourism industry for income or employments for more than five years, while 55 per cent have been involved with tourism up to five years. Eleven per cent of the respondents are not involved with the industry either directly or indirectly, for income or employment.

Residents' Ecocentric Attitude: The residents have the highest level of agreement towards 'possibility of ecological disaster unless care is taken' (mean score 4.056), followed by 'abuse of natural environment by humans' (mean score 3.652), 'ecosystems not being strong enough to recover from industrial impact' (3.474), and 'balance of nature being delicate and easily upset' (3.198), as is revealed by Table 1. ANOVA test was conducted to identify the variance in residents 'ecocentric attitude with their various levels of involvement in tourism industry – involvement in tourism industry for more than 5 years, involvement up to 5 years and not involved in tourism industry. Table 2 shows that there is no statistically significant variance in their ecocentric attitude among the three groups of respondents as determined by one-way ANOVA (F (2, 273), P > 0.05).

Residents' Perceived Environmental Effects of Tourism: Residents' agreement towards environmental effects of tourism is comparatively neutral to low levels of agreement, since Table 3

shows that the range of opinion falls between 3.363 and 2.654. The lowest level of agreement is on 'programmes to conserve biodiversity and natural heritage' being conducted at tourist sites. The highest level of agreement is on 'mechanisms are in force to monitor water quality, water usage and water risks'. 'Cooperation of local conservation agencies to monitor environmental risks' (3.256), 'use of alternative transport systems to reduce air, noise pollution' (3.251) have comparatively higher levels of agreement. 'Non-Invasive & Responsibly Managed Visitor interaction with nature & wildlife' (2.710), and having 'guidelines for visitor behavior to tourists, operators and guides' (2.881) have comparatively lower levels of agreement. ANOVA test was conducted to verify the variance in residents' perceived environmental effects of tourism with their various levels of involvement in tourism industry – involvement in tourism industry for more than 5 years, involvement up to 5 years and not involved in tourism industry. Table 4 shows that there is no statistically significant variance in their perceived environmental effects of tourism among the three groups of respondents as determined by one-way ANOVA (F (2, 273), P > 0.05).

Residents' Support for Tourism Development : The table shows that the levels of agreement towards the six items measuring support for tourism development records a high levels of agreement, signifying that the residents have a feeling of support towards tourism development. The highest level of agreement is towards more tourists visits to the locality in future (mean score 4.231), followed by tourism to be the most important industry (4.186), and inclusion of more cultural activities to promote tourism (4.177). The lowest level of agreement is towards development of new nature-based tourism sites (3.978). ANOVA test was performed to identify if the residents' support towards tourism development significantly varied with the three levels of involvement with tourism industry – involved with tourism for more than 5 years, up to 5 years and not involved in tourism industry. Table 6 shows that the three groups of residents did not statistically significantly vary in their support towards tourism development as determined by one-way ANOVA (F (2, 273), P > 0.05).

Dependence of Residents' Support for Tourism Development on their Ecocentric Attitude and Perceived Environmental Effects of Tourism: Studies have highlighted the residents' ecocentric attitudes and their perceived environmental effects of tourism in determining their support for tourism development. The study attempts to develop a multivariate regression model to explain the dependence of residents' support for tourism development (dependent variable) on their ecocentric attitude and perceived environmental effects of tourism. The regression equation (1) is given below:

$$STDev_t = \beta_o + \beta_1 EcoAttde_t + \beta_2 EnvEff_t + e_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where, $STDev_t$ *denotes residents' Support for Tourism Development*, $EcoAttde_t$ *denotes residents' ecocentric attitude*, $EnvEff_t$ *denotes residents' perceived environmental effects of tourism;* β_o *is the intercept,* β_1, β_2, *are the regression coefficients*, e_t *is the error term*

The following are the results of the regression analysis:

The minimum observations per independent variable for a multivariate regression are 20. With two independent variables, at least 40 records are required. Since the sample size for the present study is 276, the sample size requirement is met. The examine whether the dependent variable (Residents' Support for Tourism Development) follows a normal distribution, Shapiro Wilk's Test was performed. The results in Table 7 (statistic = 0.821; df = 276; p value= 0.529) show that the dependent variable data follows normal distribution. Presence of multicollinearity among independent variables was tested to see if the independent variables were strongly correlated between

themselves. The Person correlation coefficient between the two independent variables was found to be 0.192, proving that there existed very low (less than 0.70) correlation between the independent variables. Thus, it can be concluded that there exists no multicollinearity (Table 8) between the independent variables. It was also concluded form the table that that the dependent variable (support for tourism development) has very high correlations (more than 0.30) with the two independent variables (0.637, 0.581). The scatter plots for each of the two independent variables with the dependent variable were also plotted for identifying the existence of linear relation between the dependent variable and the independents. The plots revealed the presence of linear relationship, enabling the use of linear regression model for analysis.

The multiple regression coefficient (R) is found to be 0.791, shown in Table 9. The high value of R shows a very high quality for prediction power of the independent variables. Coefficient of determination (R^2) is 0.626 (Table 9), which indicates that the two independent variables together is capable of explaining nearly 63 per cent of variance in the dependent variable (Table 9). The Table 10 shows that the regression model is significant (f Change = 23.195, p value < 0.001).

The Table 11 shows the multivariate regression (Anova) results. The results indicate whether the overall regression model is a good fit for the data. The table results show that the two independent variables (*Ecocentric Attitude, Perceived Environmental Effects of Tourism) is capable of statistically significantly predicting the dependent variable (Support for Tourism Development),* $F_{(2, 273)} = 228.957$, $p < 0.001$. Thus, it is concluded that the regression model developed is a good fit of the data.

Table 12 reveals the estimated regression model coefficients. From the results, the regression equation can be formulated as:

Support for Tourism Development = 1.561 + (0.359 x **Ecocentric Attitude**) + (0.324 x **Environmental Effects**)

The unstandardised coefficients (B) show the amount of variation in the dependent variable along with a independent variable, while holding the other dependent variables constant. The results show that for one unit score increase in ecocentric attitude, the support for tourism development increases by 0.359 units, holding perceived environmental effects constant. Similarly, one unit score increase in perceived environmental effects results in an increase in support for tourism development by 0.324 unit score. The t scores and its significance levels (p value < 0.001 in all cases) show that all the independent variable coefficients are statistically significantly different from zero.

Conclusion
It is very important to note that the residents entertain very high levels of ecocentric attitude, irrespective of whether they were involved with tourism or not. This is indicative of a sensitive community that lives in of tourism destinations, who are conscious about the potential hazards of tourism on the ecological sustainability of the destination and its local community. Efforts towards tourism development have to be made only in recognition of the concerns raised by the locals, ensuring preservation of the natural habitat. Sadly, there are also strong indications towards the fact that the local community is quite apprehensive of the ways in which present tourism activities are being undertaken at the destinations, evidenced by their low agreement levels to many variables of environmental effects of tourism. Support towards tourism development was also equally entertained by all local community members irrespective of their involvement with tourism. This is indicative of their acceptance of tourism industry as an important commercial activity in their community. The predictor variables (ecocentric attitude, environmental effects of tourism) statistically significantly

predicted the dependent variable (support for tourism development), $F_{(3,272)} = 228.957$, $p < 0.001$, $R^2 = 0.626$. All the predictor variables added statistically significantly to prediction, $p < 0.001$. Thus, it can be concluded that the local community is an important stakeholder in tourism and its development, having clear perceptions regarding the way it is being conducted as well as in its future directions.

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Table 1: Residents' Ecocentric Attitude

Variables	Descriptive Statistics			
	Mean	SD	Skewness	Kurtosis
Balance of nature is Delicate and can be easily upset (EA1)	3.198	0.656	- 0.707	- 0.041
Humans are abusing the natural environment (EA2)	3.652	1.075	- 0.725	0.303
Face Ecological disaster unless care is taken (EA3)	4.056	1.030	-0.301	0.562
Natural ecosystems are not strong enough to recover from industrial impact (EA4)	3.474	1.124	- 0.715	0.432

Table 2: ANOVA - Variance in Ecocentric Attitude with Involvement in Tourism

Variables		Sum of Squares	df	Mean Square	F	Sig.
EA1	Between Groups	3.529	2	1.764	1.283	0.279

	Within Groups	375.413	273	1.375		
	Total	378.942	275			
EA2	Between Groups	1.517	2	0.759	0.526	0.591
	Within Groups	393.425	273	1.441		
	Total	394.942	275			
EA3	Between Groups	9.395	2	4.697	1.125	0.460
	Within Groups	410.355	273	1.503		
	Total	419.750	275			
EA4	Between Groups	2.967	2	1.483	1.015	0.364
	Within Groups	398.986	273	1.461		
	Total	401.953	275			

Table 3: Residents' Perceived Environmental Effects of Tourism

Variables	Descriptive Statistics			
	Mean	SD	Skewness	Kurtosis
Active Programmes to Conserve Biodiversity and Natural Heritage (EnI1)	2.654	1.101	0.567	- 0.431
Guidelines for Visitor Behavior to Tourists, Operators and Guides(EnI2)	2.881	0.726	0.425	0.701
Cooperation of Local Conservation Agencies to Monitor Environmental Risks (EnI3)	3.256	1.040	-0.517	- 0.562
Non-Invasive & Responsibly Managed Visitor interaction with nature & wildlife (EnI4)	2.710	0.958	0.765	- 0.372
Laws to Prevent Trading, Capturing or Killing of Wildlife is Enforced (EnI5)	2.932	1.122	0.236	0.231
Formal Measures to Improve Energy Consumption Efficiency (EnI6)	3.246	1.112	-0.453	- 0.591
Mechanisms are in Force to Monitor Water Quality, Water Usage and Water Risks (EnI7)	3.363	1.041	-0.303	- 0.893

Guidelines are Enforced for Waste Water Treatment (EnI8)	2.911	1.232	0.043	0.241
Guidelines are Enforced on Avoiding, Reusing, Reducing, Recycling of Solid Waste (EnI9)	3.221	1.009	-0.319	- 0.864
Businesses are Encouraged to Reduce Greenhouse Gas Emissions (EnI10)	3.127	1.261	0.054	- 0.246
Use Of Alternative Transport Systems to Reduce Air, Noise Pollution (EnI11)	3.251	1.120	0.152	- 0.280

Table 4: ANOVA - Variance in Perceived Environmental Effects with Involvement in Tourism

Variables		Sum of Squares	df	Mean Square	F	Sig.
EnI1	Between Groups	2.228	2	1.114	0.820	0.441
	Within Groups	370.595	273	1.357		
	Total	372.822	275			
EnI2	Between Groups	2.963	2	1.481	1.215	0.298
	Within Groups	332.863	273	1.219		
	Total	335.826	275			
EnI3	Between Groups	.162	2	0.081	0.058	0.943
	Within Groups	378.545	273	1.387		
	Total	378.707	275			
EnI4	Between Groups	5.847	2	2.923	2.545	0.080
	Within Groups	313.555	273	1.149		
	Total	319.402	275			
EnI5	Between Groups	2.598	2	1.299	0.917	0.401
	Within Groups	386.804	273	1.417		
	Total	389.402	275			
EnI6	Between Groups	1.662	2	0.831	0.681	0.507
	Within Groups	333.392	273	1.221		
	Total	335.054	275			
EnI7	Between Groups	.505	2	0.252	0.212	0.809
	Within Groups	324.452	273	1.188		
	Total	324.957	275			
EnI8	Between Groups	5.012	2	2.506	2.325	0.100
	Within Groups	294.191	273	1.078		
	Total	299.203	275			
EnI9	Between Groups	.660	2	0.330	0.288	0.750
	Within Groups	312.891	273	1.146		
	Total	313.551	275			

	Between Groups	1.684	2	0.842	0.791	0.454
EnI10	Within Groups	290.389	273	1.064		
	Total	292.072	275			
	Between Groups	.668	2	0.334	0.266	0.766
EnI11	Within Groups	342.636	273	1.255		
	Total	343.304	275			

Table 5: Residents' Support for Tourism Development

Variables	Descriptive Statistics			
	Mean	SD	Skewness	Kurtosis
New nature-based tourism sites need to be developed (STD1)	3.978	1.132	-0.087	0.556
More cultural based activities should be included to promote tourism (STD2)	4.177	1.014	-0.447	0.321
Tourism has potential to play increased role in future local economic development (STD3)	4.105	1.148	-0.225	0.492
Tourism can assist the community to prosper in the right way (STD4)	4.143	1.069	-0.146	0.408
More tourists should visit the locality in future (STD5)	4.231	0.725	-0.185	0.522
Tourism should be the most important industry in the locality (STD6)	4.186	0.842	-0.543	0.332

Table 6: ANOVA - Variance in Support for Tourism Development
with Involvement in Tourism

Variables		Sum of Squares	df	Mean Square	F	Sig.
STD1	Between Groups	0.923	2	0.461		
	Within Groups	298.889	273	1.095	0.421	0.657
	Total	299.812	275			
STD2	Between Groups	7.898	2	3.949		
	Within Groups	344.838	273	1.263	1.126	0.145
	Total	352.736	275			
STD3	Between Groups	0.608	2	0.304		
	Within Groups	310.911	273	1.139	0.267	0.766
	Total	311.518	275			
STD4	Between Groups	0.205	2	0.103		
	Within Groups	383.432	273	1.405	0.073	0.930
	Total	383.638	275			

	Between Groups	1.124	2	0.562		
STD5	Within Groups	186.916	273	0.685	0.821	0.441
	Total	188.040	275			
	Between Groups	4.254	2	2.127		
STD6	Within Groups	292.105	273	1.070	1.988	0.139
	Total	296.359	275			

Table 7 : Tests of Normality of Dependent Variable

Support for Tourism Development	Shapiro-Wilk		
	Statistic	df	Sig.
	0.821	276	0.529

Table 8 : Pearson Correlation

Predictors	Support for Tourism Dev.	Ecocentric Attitude	Environmental Effects
Ecocentric Attitude	0.637	1.000	0.192
Environmental Effects	0.581	0.192	1.000

Table 9 : Multivariate Regression - Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	0.791[a]	0.626	0.615	0.221

a. Predictors: (Constant), Ecocentric Attitude, Environmental Effects

Table 10 : Multivariate Regression - Model Summary (F Change)

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	0.626	23.195	3	272	0.000

Table 11: Multivariate Regression - ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	75.556	2	37.778	228.957	0.000[b]
1 Residual	45.142	273	0.165		
1 Total	120.698	275			

a. Dependent Variable: Support for Tourism Development

b. Predictors: (Constant), Ecocentric Attitude, Environmental Effects

Table 12: Multivariate Regression - Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.561	0.112		13.938	0.000
1 Ecocentric Attitude	0.359	0.051	0.377	7.039	0.000
1 Environmental Effects	0.324	0.048	0.351	6.75	0.000

a. Dependent Variable: Support for Tourism Development