



## Willingness of Tourists to Pay for Ecotourism Services in Selected Ecotourism Destinations in South-West, Nigeria

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**ABSTRACT:** Quality ecotourism services provided at ecotourism destinations have great contributions to tourists' willingness to pay for a certain service or products. One of the key challenges of ecotourism management is to set chargeable fees without ascertaining how much tourists are willing to pay. Hence, this paper investigates willingness of tourists to pay for ecotourism services in selected ecotourism destinations in South-West, Nigeria using appropriate standard methods. Major findings showed that 40.0% of tourists were willing to pay more for services such as tour guides, 35.0% for food and drink, 27.1% for cultural and entertainment, 26.8% for recreation, 18.3% for merchant services, and 14.0% for accommodation at the destinations. Inferential test showed that there is no significant relationship between the visitor's age ( $\chi^2=8.382$ ,  $p=0.755$ ), gender ( $\chi^2=3.718$ ,  $p=0.715$ ), marital status ( $\chi^2=6.301$ ,  $p=0.900$ ), education level ( $\chi^2=3.811$ ,  $p=0.987$ ), religion ( $\chi^2=2.729$ ,  $p=0.842$ ), main occupation ( $\chi^2=8.639$ ,  $p=0.733$ ), monthly income ( $\chi^2=17.063$ ,  $p=0.147$ ) and household size ( $\chi^2=4.595$ ,  $p=0.597$ ). There is significant relationship between the visitors nationality ( $\chi^2=16.950$ ,  $p=0.009$ ). The paper concludes that that destinations attributes, such as the attractiveness of the site and presence of ecotourism services are the major factors in determining tourists' willingness to pay for ecotourism services in ecotourism destinations. This paper would guide not only the management of the ecotourism destinations, but also policymakers to consider the important market segment among the visitors with a view to encouraging the visitation of such a target group in order to create an avenue for enhancing revenue for ecotourism destinations.

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Tourism has experienced continued growth and become one of the fastest growing economic sectors in the world (Timothy, 2023). According to the United Nations World Tourism Organization (UNWTO), tourism has continued to contribute to global economic recovery while also providing greater job opportunities for impoverished regions (Khan *et al.*, 2020). Ecotourism is defined as visiting relatively undisturbed natural areas with the goal of studying, admiring, and enjoying scenery, as well as existing cultural manifestations (both past and present) found in these areas (Machnik, 2021). Although the

Ecotourism destinations has several values which draw peoples to visiting it, the economic climate for instance, people living below the World Bank benchmark of USD \$1.25 per day (Adefalu *et al.*, 2015), affects the paying characteristics of most visitors. It may even restrict some from visiting the ecotourism destinations (Rahman *et al.*, 2023). As a result, ecotourism is a major technique for promoting conservation while also generating revenue for communities in and around ecotourism destinations (Tseng *et al.*, 2019). Achieving the ecotourism objectives requires an in-depth knowledge and

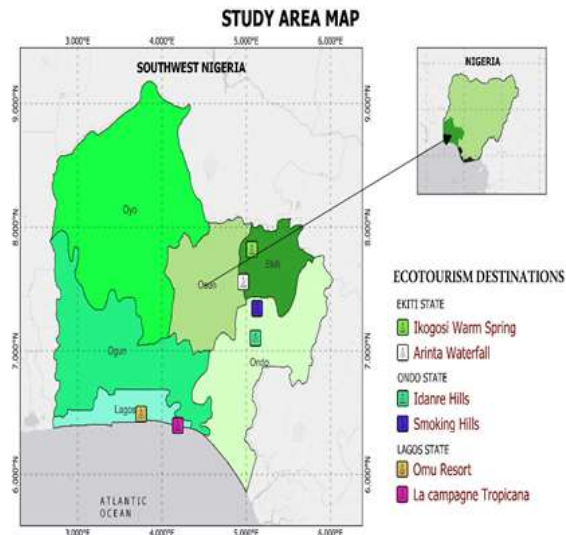
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understanding of the economic value of the ecotourism resources as environmental goods and services that needed to be measured in monetary terms, to view them from the same scale as commonly traded commercial goods in the market (Wondirad *et al.*, 2020). Willingness to Pay (WTP) studies are used to assess visitors views and opinions towards fee systems and the potential of paying more in order to sustain an organizations role in nature management and conservation of natural and other valuable resources (Elsie *et al.*, 2016). The term willingness to pay (WTP) has been used to characterize a consumer's willingness to pay a maximum price for a product or service (Ghaleb, 2019). WTP is an important part of customer demand since it provides the best pricing margin and allows you to set a price (Kucheret *et al.*, 2019). Tourist's willingness to pay refers to the amount of money that a tourist is willing to give up in order to acquire a greater degree of utility or to avoid a loss in the future (Meleddu and Pulina, 2016). Ecotourism services are ecotourism options that you give for visitors or tourists visiting ecotourism destinations (Satryaet *et al.*, 2023). For instance, high-quality ecotourism service delivery, highly qualified tour guides accommodation, food and beverage, entertainment and recreation service (Chan *et al.*, 2015). Understanding WTP and the elements that influence it is critical because it gives guidance and opportunity for specific parties to improve sales volumes and margins (Bakaret *et al.*, 2021). It has been established by many researchers that factors which aids WTP includes visitors' socioeconomic characteristics, attitudes, and motivations (Dinda and Ghosh, 2021). However, there is evidence that, in many places, ecotourism destinations are facing a decrease in fund allocation for maintenance and other developmental project (Adamuet *et al.*, 2015). The shortage or inadequacy of the funds together with an increase in the number of visitors has been threatening the sustainability of many ecotourism destinations (Kisi, 2019). Therefore, acquiring funds for the enhancement and preservation of these natural attractions is always a concern for sustainable tourism in many places worldwide (Witt, 2019). To achieve sustainability, ecotourism destinations need to determine an optimum price to be charged to tourists using various non-market economic valuation techniques, such as the contingent valuation method (Adamu *et al.*, 2015). Therefore, this paper investigates willingness of tourists to pay for ecotourism services in selected ecotourism destinations in South-West, Nigeria.

## MATERIALS AND METHODS

**Study Areas:** The study was conducted at La Campagne Tropicana Beach Resort, Ibeju-lekki, Lagos State, Omu Resort, Bogije, Lagos State, Idanre

Hills, Idanre, Ondo State, Smokin Hills Golf Resort, Ilara-mokin, Ondo State, Ikogosi Warm Spring Resort, Ikogosi, Ekiti State and Arinta Waterfalls, Ipole-Iloro, Ekiti State, Nigeria.



**Fig 1:** Map of Nigeria showing Southwest States (Source: Field survey, 2023)

**La Campagne Tropicana Beach Resort:** La Campagne Tropicana is a beach resort in Ikegun, Ibeju-lekki LGA, Epe Expressway, Lagos State, Nigeria, situated at the coast of the Atlantic Ocean bordered by the freshwaters of the Ikegun Lake. It's located at 6.39260N and 4.18650E. **Omu Resort:** Omu Resort is located at 1 Asiwaju Bola Tinubu way, Bogije, Ibeju Lekki. Omu Resort is located between Latitude 6.4897<sup>0</sup> N and Longitude 3.7533<sup>0</sup>E (Ogundele, 2012). **Idanre Hills:** Idanre hills or Oke-Idanre is situated in Idanre Local Government area of Ondo state about 20 kilometers Southwest of Akure (the state capital). It lies between latitudes 7'00' N to 7'15' N and longitudes 5'00' E to 5'15' E of the equator and Greenwich meridian respectively. (Akingbade and Okereke, 2009).

**Somking Hills Golf Resort:** Smoking Hills Golf Resort is situated about 1 km east of Ilara-Mokin town on the old Ilara-Mokin/Akure roadway. It lies between latitudes 7.34<sup>0</sup> N to 7<sup>0</sup>20' 24" N and longitudes 5.1289<sup>0</sup> E to 5<sup>0</sup>7' 44" E of the equator and Greenwich meridian respectively. **Ikogosi Warm Springs:** Ikogosi (7<sup>0</sup>35" N, 4<sup>0</sup>59" E) is situated in Ekiti West Local Government Area, Ekiti State, Nigeria. The state is mainly an upland zone, rising over 250 m above sea level (Cohen & Saul, 1998). **Arinta Water Falls :** Ipole-Iloro is one of the towns under Ekiti West Local Government Area of Ekiti State in Western Nigeria which is situated between lofty, steep-sided and heavily wooded, North-south trending hills about 27.4 km east of Ilesha (Osun

State), and about 10.5 km Southeast of EffonAlaye (Ekiti State). It is located at 7025' and 8005' N latitude and 4045' and 5046' E longitude (Godfrey and Clarke2000).

*Data Collection:*The statistical population was the tourists to La Campagne Tropicana Beach Resort, Omu Resort, Idanre Hills, Somking Hills Golf Resort, Ikogosi Warm Springs and Arinta Water Falls. These ecotourism destinations were selected based on availability of ecotourism services in the ecotourism destinations and respondents' selection was based on their willingness to participate in the study. The sample size was determined using Krejcie and Morgan, (1970) method of sampling determination from the total annual tourists' influx to the ecotourism destinations in the year 2021. A total of three hundred and twenty (320) tourists were randomly selected from the selected ecotourism destinations; sixty-nine (69) tourists were selected at Idanre hills, thirty-nine (39) tourists were selected at Smokin hills, sixty (60) tourists were selected at Lacampagne tropicana beach resort, seventy-one (71) tourists were selected at Omo resort, forty-three (43) tourists were selected at Ikogosi warm spring resort while thirty-eight (38) tourists were selected at Arinta waterfalls. The instrument of data collection was structured questionnaire which was self-administered to the tourists. The questionnaire elucidate information on the socioeconomic characteristics of tourists, tourists awareness of ecotourism services, determine the tourists willingness to pay for ecotourism services and the factors influencing willingness of tourists to pay for ecotourism services in the selected ecotourism destinations.

*Data Analysis:*The analytical and statistical tools used for this study were inferential, descriptive tools and logit regression model. The inferential tools used were Chi-square to determine the relationship between socioeconomic characteristics of the respondents and their willingness to pay for ecotourism services. Descriptive tools used include frequencies, percentage and tables. Logit regression model was used to determine factors influencing tourist's willingness to pay for ecotourism services.

## RESULTS AND DISCUSSION

*Socio-demographic Characteristics of Tourists:*This study observed that female tourists (73.8%) were more than the male (58.6%). This is inconsistent with the findings of Adetola and Adedire (2018), who reported that majority of visitors to ecotourism destinations were females. The study also shows that most of the tourists were between the age group of 18-29 years (70.0%) and 40-49 years old (61.7%) respectively.

This suggests that majority of the tourists were youths, this is in agreement with the findings of Knezevic *et al.* (2016) which reported that 56% of the tourists to ecotourism destinations were within the age group of 25-39 year olds. The educational status of the tourists shows that most of the tourists were highly educated attaining to tertiary level of education. This is consistent with the findings of Arowosafe and Emmanuel (2014), who reported that 76.8% of the tourists to the mole national park were highly, educated attaining to tertiary level of education. High percentages of the tourists were single (100%). This is in agreement with the findings of Meng and Uysal (2008) who reported that visitors who are not married seek adventure activities in a destination more than married visitors. Furthermore, 65.7% of the tourists were students with 60.0% self-employed, 35.0% working in the private sector and 21.3% government staff, while 14.0% of the tourists were unemployed. This study however negates the findings of Karanikola *et al.* (2014) in ecotourism sites of Thessaloniki, Greece which reported that majority of the visitors were employed. The study further shows that 50.0% earned ₦20,000 and below as their monthly income. This is consistent with the findings of Adetola *et al.* (2016) which reported that 63.6% of the visitors to ecotourism destinations earned less than ₦20,000 as their monthly income. The study further revealed that majority (90.0%) of the tourists was Christians (Table 1). This is tandem with the findings of Orimaye *et al.* (2018) which reported that 84.7% of the visitors to the ecotourism destinations were Christians. Most of the tourists to ecotourism destinations fall between household size of 1-5 (64.3%). This study however negates the findings of Musa *et al.* (2020) in their study on coastal communities' willingness to pay for mangrove ecotourism.

*Tourists Awareness of Ecotourism Services:*Table 2 shows how tourists at Idanre Hills, Smokin Hills, Lacampagne Tropicana Beach Resort, Omu Resort, Ikogosi Warm Spring Resort, and Arinta Waterfalls were aware of ecotourism services and where they learned about them. Findings from this study showed that in Idanre hills (97.1%), Smokin hills (100%), Lacampagne Tropicana (96.7%), Omu resort (90.0%), Ikogosi (98.0%) and Arinta waterfalls (90.0%) of tourists visiting the ecotourism destinations were aware of the services (Table 2). Also, the results also reveals that 98.0% of the tourists' sources of awareness of ecotourism services were from friends and families, 96.0% was through advertisements, 88.0% through internet, 92.0% through social media, 83.3% through electronic, magazines, and newspapers, 82.0% through personal experience and

84.0% through billboards, signposts, and flyers. This is supported by Salim and Mwaipopo (2016) that visitors are willing recommend it to friends and families if they were satisfied with it.

**Table 1:** Socio-Demographic Attributes of Respondents

Variables	Idanre Hills		Smokin Hills		Lacampagne		Omu Resort		Ikogosi		Arinta	
	F	%	%	F	F	%	F	%	F	%	F	%
<b>Gender</b>												
Male	40	58.6	11	40.0	34	56.7	21	26.3	13	30.0	18	36.7
Female	29	41.4	28	60.0	26	43.3	50	73.8	30	70.0	20	63.3
<b>Age</b>												
18-29	10	64.3	4	70.0	1	1.7	3	48.8	4	8.0	3	10.0
30-39	45	14.3	21	13.3	15	25.0	34	42.5	5	16.0	2	6.7
40-49	12	17.1	14	16.7	43	61.7	30	3.8	14	28.0	18	33.3
50-59	2	4.3	0	0	0	0	1	1.3	9	20.0	7	23.3
Above 59	0	0	0	0	1	1.7	3	3.8	13	24.0	8	26.7
<b>Educational qualifications</b>												
No formal education	1	1.4	0	0	0	0	6	7.5	6	14.0	5	16.7
Adult education	1	1.4	0	0	1	1.7	1	1.3	10	22.0	6	20.0
Primary education	1	1.4	0	0	0	0	1	1.3	4	10.0	1	3.3
Secondary education	14	20.0	4	13.3	11	18.3	18	22.5	8	20.0	20	40.0
Tertiary education	52	75.7	35	86.7	48	80.0	45	67.5	15	34.0	6	20.0
<b>Marital status</b>												
Single	60	85.7	39	100.0	38	25.1	57	83.4	11	22.0	8	26.7
Divorced	1	1.4	0	0	2	3.3	4	5.0	10	21.0	0	0
Widow	8	12.9	0	0	5	8.3	1	1.3	8	18.0	4	13.3
Married	0	0	0	0	15	63.3	9	11.3	14	36.0	26	60.0
<b>Main occupation</b>												
Government staff	14	20.0	0	0	7	11.7	14	21.3	3	6.0	1	3.3
Private sector	2	2.9	1	3.3	48	30.0	26	35.0	10	26.0	6	20.0
Self-employed	7	10.0	10	33.3	2	3.3	7	8.8	17	40.0	26	60.0
Un-employed	1	1.4	1	3.3	1	1.7	4	5.0	7	14.0	0	0
Student	45	65.7	27	60.0	2	3.3	20	30.0	6	13.0	5	16.7
<b>Monthly income</b>												
₦20,000 And below	33	47.1	20	50.0	6	10.0	28	35.0	6	20.0	4	13.3
₦21,000-₦40,000	24	34.3	15	36.7	11	18.3	13	18.8	2	4.0	2	6.7
₦41,000- ₦60,000	5	7.1	2	6.7	26	43.3	6	7.5	12	24.0	8	26.7
₦61,000-₦80,000	7	11.4	2	6.7	9	15.0	6	7.5	15	30.0	17	30.0
₦81,000 And above	0	0	0	0	8	13.3	18	31.3	8	22.0	7	23.3
<b>Nationality</b>												
Nigerian	68	98.6	39	100.0	58	96.7	69	97.5	42	98.0	37	96.7
Foreigner	1	1.4	0	0	2	3.3	2	2.5	1	2.0	1	3.3
<b>Religion</b>												
Christianity	56	80.0	36	90.0	52	86.7	55	80.0	16	40.0	28	66.7
Islam	12	18.6	3	10.0	8	13.3	16	20.0	24	54.0	10	33.3
Traditionalist	1	1.4	0	0	0	0	0	0	3	6.0	0	0
<b>Household size</b>												
1-5	45	64.3	29	63.3	32	53.3	39	61.3	18	42.0	21	56.7
5-10	21	30.0	10	36.7	28	46.7	26	32.5	22	50.0	16	40.0
10 And above	3	5.7	0	0	0	0	6	6.3	3	8.0	1	3.3

Freq= frequency, Perc= percentage. Source: Field survey, 2023

#### *Tourists' Willingness to Pay for Ecotourism Services:*

The tourists were willing to pay ecotourism services at selected ecotourism destinations. The findings revealed that majority of the tourists at Omu resort (41.3%) and the least number of tourists at Lacampagne tropicana (15.0%) believe that tour guide services should be compensated, owing to the nature of the job, which necessitates mental and emotional strength. This finding is in agreement with Armira *et al.* (2015) who reported that majority of the visitors were willing to pay for ecotourism at Puncak Lawang Park, Indonesia. Findings also revealed that majority of the tourists at idanre hills (27.1%) and the least percentage of tourists at Ikogosi (16.0%) believe that

cultural and entertainment activities should be compensated as a value addition. This means that culture, as a way of life for people, cannot be separated from the entertainment services that come with it. The outcome supports the findings of Mohamed *et al.* (2014) who reported that visitors with higher incomes may be willing to pay more if the recreational quality of a park improves. Also, the results indicate that majority of the tourists at Lacampagne Tropicana (35.0%) and the least percentage of tourists at Omu resort (6.3%) believe that food and beverage are necessary for physical strength and are willing to pay for it. This finding is in agreement with Armira *et al.* (2015) who reported that majority of the tourists were

willing to pay for ecotourism at Puncak Lawang Park, Indonesia. The results reveal that majority of the tourists at Ikogosi (14.0%) and the least percentage of tourist at Lacampagne Tropicana (1.7%) are willing to pay for accommodation services due to lack of facility maintenance and fees charged for accommodation services at each ecotourism destination. This is also similar to the findings of Nuva and Mad (2009) in Gung Gede Pangrango National Park, Indonesia reported that 61% of the visitors willing to pay for the given bid. Furthermore, the results showed that high percentage of tourists at Omu resort (26.8%) and the low percentage of tourists at Arinta waterfalls (2.7%) are willing to pay for recreation services due to lack of

recreation facilities at the sites. This assertion is in line with the findings of Sarker *et al.*, (2017) who reported that visitors with higher incomes may be willing to pay more if the recreational quality of a park improves. Also, the results reveal that majority of the tourists at Lacampagne Tropicana (18.3%) and the least percentage of tourists at Smokin hills (10.0%) are willing to pay for merchant services due to the numerous opportunities for tourists to purchase souvenirs and personal necessities. This negates the findings of Kerstetter *et al.* (2004) found that tourists in Taiwan were not too willing to spend money at destinations to purchase local souvenirs or environmentally friendly products.

**Table 2:** Tourists Awareness of Ecotourism Services

	Idanre Hills		Smokin Hills		Lacampagne		Omu Resort		Ikogosi		Arinta	
	F	%	F	%	F	%	F	%	F	%	F	%
<b>Aware of the ecotourism services</b>												
Yes	67	97.1	39	100.0	58	96.7	63	90.0	42	98.0	35	90.0
No	2	2.9	0	0	2	3.3	8	10.0	1	2.0	3	10.0
<b>Through family and friends</b>												
Yes	64	92.9	32	76.7	49	81.7	60	85.0	42	98.0	36	93.3
No	5	7.1	7	23.3	11	18.3	11	15.0	1	2.0	2	6.7
<b>Through advertisement</b>												
Yes	52	74.3	28	63.3	49	81.7	56	81.3	41	96.0	32	80.0
No	17	25.7	11	36.7	11	18.3	15	18.8	2	4.0	6	20.0
<b>Through internet</b>												
Yes	57	81.4	26	70.0	53	88.3	56	82.5	34	88.0	30	73.3
No	12	18.6	13	30.0	7	11.7	15	17.5	9	12.0	8	26.7
<b>Through social media</b>												
Yes	57	81.4	29	66.7	53	88.3	55	80.0	39	92.0	32	80.0
No	12	18.6	10	33.3	7	11.7	16	20.0	4	8.0	6	20.0
<b>Through electronic, magazines and newspapers</b>												
Yes	33	48.6	26	53.3	44	73.3	49	73.8	35	84.0	33	83.3
No	36	51.4	13	46.7	16	26.7	22	26.3	8	16.0	5	16.7
<b>Through personal experience</b>												
Yes	39	55.7	23	60.0	46	76.7	53	78.8	34	82.0	25	70.0
No	30	44.3	16	40.0	14	23.3	18	21.3	9	18.0	13	30.0
<b>Through billboards, signpost and flyers</b>												
Yes	31	45.7	17	43.3	45	75.0	52	76.3	35	84.0	28	80.0
No	38	54.3	22	56.7	15	25.0	19	23.8	8	16.0	10	20.0

Freq= frequency, Perc= percentage. Source: Field survey, 2023

**Table 3.** Ecotourism Services Tourists are willing to payfor

Which of the following ecotourism services do you think should be paid for	Idanre Hills		Somkin Hills		Lacampagne		Omu Resort		Ikogosi		Arinta	
	F	%	F	%	F	%	F	%	F	%	F	%
Tour guide	21	30.0	14	26.7	9	15.0	24	41.3	10	22.0	20	40.0
Food and beverage	19	27.1	8	16.7	21	35.0	5	6.3	3	10.0	2	6.7
Cultural and entertainment services	19	27.1	7	13.3	13	21.7	15	18.8	8	16.0	7	23.3
Merchant services	6	10.0	5	10.0	11	18.3	12	15.0	8	16.0	4	13.3
Accommodation services	2	2.9	2	6.7	1	1.7	8	10.0	4	14.0	3	10.0
Recreation services	2	6.9	3	8.7	5	22.3	7	26.8	10	22.0	2	2.7

Freq= frequency, Perc= percentage Source: Field survey, 2023

*Reason for Willingness to Pay for Ecotourism Services:* Tables 4 show the reasons behind tourist’s willingness to pay for ecotourism services in various ecotourism destinations. According to the study, the majority of tourists to Idanre Hills (72.9%) strongly agreed that people should be responsible for facility maintenance, however majority of the tourists at

Ikogosi (80.0%) did not agree strongly even though they also agreed. Also the results indicate that highest percentage of tourists in Smokin hills (76.7%) strongly agreed that individuals should pay to help improve the destination's current situation; however majority of the tourists at Ikogosi (50.0%) did not agree strongly even though they also agreed. Furthermore, the results

showed that majority of the tourists strongly agreed that in order for ecotourism destinations to be visited again, tourists should pay for sustainability in Idanre hills (60.0%), while majority of the tourists at

Lacampagne Tropicana (48.3%) did not agree strongly even though they also agreed. These findings imply that tourists place a high value on ecotourism services and are willing to pay for them.

**Table 4:** Reason for Willingness to Pay for Ecotourism Services

	Idanre Hills		Somkin Hills		Lacampagne		Omu Resort		Ikogosi		Arinta	
	F	%	F	%	F	%	F	%	F	%	F	%
<b>For maintenance of the facilities</b>												
Strongly disagree	2	2.9	0	0	0	0	4	3.8	1	2.0	0	0
Disagree	7	10.0	0	0	2	3.3	1	1.3	1	2.0	0	0
Agree	10	14.3	12	30.0	16	26.7	22	27.5	33	80.0	29	63.3
Strongly agree	50	72.9	27	70.0	42	70.0	44	67.5	8	16.0	9	36.7
<b>To improve existing condition of the destination</b>												
Strongly disagree	1	1.4	1	3.3	2	3.3	2	2.5	0	0	1	3.3
Disagree	0	0	0	0	2	3.3	7	8.8	1	2.0	0	0
Agree	28	41.4	15	20.0	26	43.3	34	42.5	25	50.0	8	26.7
Strongly agree	40	57.1	23	76.7	34	50.0	37	46.3	18	48.0	30	70.0
<b>For it sustainability, so that i can visit again</b>												
Strongly disagree	0	0	1	3.3	0	0	0	0	0	0	0	0
Disagree	0	0	1	3.3	3	5.0	4	5.0	2	4.0	0	0
Agree	28	40.0	12	40.0	29	48.3	33	45.0	13	36.0	12	46.7
Strongly agree	41	60.0	25	53.3	31	46.7	38	50.0	30	60.0	26	53.3

Freq= frequency, Perc= percentage Source: Field survey, 2023

*Factors influencing tourist's willingness to pay for ecotourism services:* The Table 5 below, revealed that Seven variables significantly determine the tourists willingness to pay (WTP) for ecotourism services in the study area.

*Bid amount:* The bid amount put on a positive significantly relationship on the tourists willingness to pay for ecotourism services. This indicates that as the bid amount increases, the tourists WTP increases. This implies that as bid amount increases by one unit, the tourist's willingness to pay also increases under 5% significant level, which implies that the bid amount highly affects the decision of the tourist's willingness to pay for ecotourism services. This result is in line with the findings of Nguyen (2015) who opined that positive sign indicates that as the bid amount increases, the tourists would be willing to pay a premium for ecotourism services.

*Age:* The variable age is statistically significant at 1% with a negative coefficient. A unit increase in the age of tourists tends to decrease the willingness to pay for ecotourism services. This indicates that the older the tourists are, the more their willingness not to pay the bid offer. The outcome supports the findings of Wang and Jia (2012), and Hejazi *et al.* (2014) who found a positive relationship between male gender and WTP.

*Level of education:* Level of education of the tourists has a positive coefficient of 0.135519 which implies that one-unit increase in level of education would increase the likelihood of paying for ecotourism services. The result revealed that level of education is significant at 1% and had a positive relationship in

influencing tourists' decision to pay for the services. This study is in line with the findings of (Hejazi *et al.*, 2014) where education plays a significant role in determining willingness to pay.

*Marital status:* At 1% level, the coefficient of marital status is statistically significant. The negative sign of the coefficient -0.095944 shows the negative influence of marital status on WTP. This result conforms with the findings of Adetola *et al.* (2016) they, reported that marital status and place of residence of the visitors has significant effect on their willingness to pay.

*Household income:* Estimated annual income was statistically significant at one 1% and the results shows that an increase in the annual income of the tourist will probably lead to an increase in willingness to pay for ecotourism services. The result shows that the disposable income of the tourist influences their willingness to pay for the improved services in the ecotourism sites. This result conforms to the findings of Wang and Jia (2012) who reported that a positive relationship existed between income and willingness to pay.

*Awareness of ecotourism services:* Awareness of ecotourism services the tourists had a positive coefficient of 0.882958 at 5% significant level which indicate that one-unit increase in awareness would increase the probability of the tourists paying for ecotourism services in the study area. This implies that the more aware the tourists are to ecotourism services, the more positively they are influenced in paying for ecotourism services. This assertion is supported by the findings of Lee and Jan (2017) who reported that a

positive relationship existed between awareness of ecotourism services and willingness to pay.

*Knowledge about the ecotourism destination:* However, as shown in the result, knowledge about the ecotourism destination was positive and statistically significant at 1% level. Knowledge about the ecotourism destination the

tourists had a positive coefficient of 0.007268 at 1% significant level. This implies that tourists' willingness to pay for ecotourism services is positively influenced by their level of destination knowledge. The outcome supports the findings of Lee and Jan (2017) who reported that a positive relationship existed between awareness of ecotourism services and willingness to pay.

**Table 5:** Factors influencing tourist's willingness to pay for ecotourism services

Variables	Coefficient	Standard Error	P-value
Bid Amount	0.006600**	0003121	0.034
Sex	-0.562776	.5273243	0.286
Age	-0.631715***	.1299716	0.000
Household Size	-0.665945	.5387401	0.216
Years of formal education	0.135519***	.0419452	0.001
Marital Status	-0.095944***	.0220561	0.000
Estimated Annual Income	0.006280***	.0016314	0.000
Awareness of the product	0.882958**	.3781182	0.020
Main Occupation	0.192343	.279833	0.492
Knowledge on Ecotourism Services	0.007268***	0011896	0.000
Constant	7.583968	3.329867	0.023
Number of Observation	320		
Log Likelihood	-38.832652		
Prob> Chi <sup>2</sup>	0.0321		
LR Chi <sup>2</sup> (10)	11.33		
Pseudo R <sup>2</sup>	0.1273		

\*\*\* Significant at 1%, \*\* Significant at 5%; Source: Field Survey, 2023

The Log likelihood Ratio (LR) statistics exhibited signs and was significant at 1% probability level, meaning that the explanatory variables included in the model explained the probability of willingness of the tourists and shows there was a significant relationship between socio-economic factors and willingness of the tourists to pay for the new entrance fees and other recreational services in the study area.

*Relationship between Socioeconomic Characteristics of the Respondents and Their Willingness to Pay for Ecotourism Services:* Table 6 presents the chi-square relationship between socioeconomic characteristics of the respondents and their willingness to pay for ecotourism services. The hypotheses of this study

revealed that there is no significant relationship between the visitor's age ( $x^2=8.382$ ,  $p=0.755$ ), gender ( $x^2=3.718$ ,  $p=0.715$ ), marital status ( $x^2=6.301$ ,  $p=0.900$ ), education level ( $x^2=3.811$ ,  $p=0.987$ ), religion ( $x^2=2.729$ ,  $p=0.842$ ), main occupation ( $x^2=8.639$ ,  $p=0.733$ ), monthly income ( $x^2=17.063$ ,  $p=0.147$ ) and household size ( $x^2=4.595$ ,  $p=0.597$ ). There is significant relationship between the visitors nationality ( $x^2=16.950$ ,  $p=0.009$ ). This assertion is in line with the findings of Armiraet *al.*, (2015) in PuncakLawang Park, Indonesia where they reported that nationality and gender had significant relationship with visitors WTP. This is also similar to the findings of Nuva and Shamsudin (2009) in GunungGedePangrango National Park, West Java, Indonesia.

**Table 6:** Relationship between Socioeconomic Characteristics of the Respondents and Their Willingness to Pay for Ecotourism Services

Variables	Chi-Square (X <sup>2</sup> )	Significant Value	Decision
Gender	3.718	0.715	Not Significant
Age	8.382	0.755	Not Significant
Educational Level	3.811	0.987	Not Significant
Marital Status	6.301	0.900	Not Significant
Main Occupation	8.639	0.733	Not Significant
Monthly Income	17.063	0.147	Not Significant
Nationality	16.950	0.009**	Significant
Religion	2.729	0.842	Not Significant
Household Size	4.595	0.597	Not Significant

Source: Field Survey, 2023

*Conclusion:* This study concluded that bid amount, age, level of education, marital status, household income, awareness of ecotourism services and knowledge about the ecotourism destinations are

important determinants influencing tourist's willingness to pay for ecotourism services in the study area. It is essential to create more awareness for ecotourism services because the more the awareness,

the more tourist are influenced positively in their willingness to pay for ecotourism services. This study also concluded that the ecotourism sites management should do more in improving the condition of recreational facilities and accommodation facilities at the sites should be maintained and improved upon so as increase tourist's willingness to pay and revisit.

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