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Assessing Visitors' Willingness to Pay for Viewing Wildlife Conservation at Kano Zoological Garden: A Survey

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Abstract

By concentrating on tourist preferences, the tremendous potentials of wildlife tourism in terms of recreation, community development, and economic growth can be fully realised, assuring the sustainability of this growingly significant industry. The money generated by wildlife tourism has a significant economic impact since it helps fund conservation efforts. Children can run around and improve their motor skills while making new acquaintances in zoo facilities. Zoo visits foster family unity by offering a unique chance to attend a special event and a wonderful setting for family reunions. Therefore, one of the possible solutions that would lessen the issue of funding insufficiency for conservation in many destinations is to charge tourists an admission fee to nature-based ecotourism sites that is commercially feasible. In developed countries, it is done. This study's primary goal is to use environmental economic tools to assess the mean willingness to pay for wildlife resource conservation in Kano Zoological Garden. Using 329 visitors, the study used the dichotomous choice contingent valuation approach (DC-CVM) to determine the average willingness to pay for the preservation of wildlife resources at the Kano Zoological Garden. The value of the resources was estimated using a logistic regression model, and the findings showed that visitors' willingness to pay for an increase in the zoo entrance fee was significantly influenced by factors such as gender, age, education level, gross monthly income, bid amount, and marital status. The result also shows that the visitors are willing to pay N505 for conservation as against the current entrance fee of N100. Result of this study would help to assist policy makers and the management of the zoo especially in terms of revenue generation. It is recommended that Prices for use of parks by visitors should be raised based on economic levels.

Keywords: Biodiversity, Conservation, Ecosystem, Wildlife, Protected Areas

1.0 Introduction

A common characteristic of national parks and other protected places across many tourist locations is their ability to draw foreign tourists and contribute somewhat to the improvement of local populations' quality of life and economic growth (Thomas & Koontz, 2021). The primary goal of national parks should be the preservation of the natural environment and biodiversity, even though they are a significant source of funding. According to Zhang et al. (2023), the tourism sector is one of the biggest

and fastest-growing in the world. According to Schägner et al. (2016), the 2010 global target to slow down the rate at which biodiversity is disappearing globally has not been met. But in recent years, mounting worries about the swift depletion of biodiversity resources worldwide have contributed to raising awareness of the need of these resources for maintaining the stability of ecosystem functioning. According to Meduna et al., (2019), biodiversity resources are thought to be the foundation of sustained natural functions. They also offer potential for human use, including the chance for scientific research and leisure activities like ecotourism. There is evidence, nevertheless, that funding for upkeep and other development initiatives is being reduced in several locations for ecotourism destinations. The sustainability of many ecotourism sites has been threatened by a lack of funding or insufficiency, as well as by an increase in tourists and their constant negative effects on the environment, such as traffic jams, littering, and disruptions of wildlife (Chen and Jim, 2012).

In the past, keeping wildlife in captive has been associated with religion and authority. In a circus, animals were on exhibit for the amusement of paying patrons and dignitaries from the royal family (Gusset et al., 2014). The zoo as a travel destination from being merely menageries, centres have developed into professionally managed, scientifically administered organisations (Hutching & Conway, 1995). Modern zoos are currently refocusing their priorities from entertaining the general public to education, research, and conservation as a result of increased awareness and improved documentation (Adetola & Adedire, 2018). At now, efforts are being made to assist in the preservation of natural areas and wildlife (Rice et al., 2019). Zoos nowadays provide more than only leisure activities (Zydroń et al., 2021). They raise public awareness of the value of protecting animals and the splendours of nature (Schägner et al., 2016). Children can run around in the zoo and improve their motor skills while making new friends. Families can strengthen their bonds by going to the zoo together, which offers a unique opportunity to attend important events like World Wildlife Day and an ideal setting for family reunions (Abdou et al., 2022). Over the past few decades, there has been a significant growth in the number of people visiting zoos, and most of these visits are motivated by the desire to see real, live, and exotic animals up close (Mooney et al. 2020). Nigerian parks and zoological gardens have a lot of potential to grow and bring in more foreign exchange for the nation, but sadly, due to a lack of funding, inadequate infrastructure development, and a lack of a strong tourism industry, visitor numbers are typically lower than anticipated (Yager et al., 2015, Morenikeji, 2018).

Therefore, one of the possible solutions that would lessen the issue of funding insufficiency for conservation in many destinations is to charge tourists an admission fee to nature-based ecotourism sites that is commercially feasible. Many countries throughout the world, including the US and Canada, have long had entrance fees for protected areas (Mutanga et al., 2017). According to Pearce and Turner (1990), the direct economic use value of wildlife is measured by tourists' willingness to pay for wildlife viewing tourism. This value is defined within the larger framework of total economic value. Income obtained by using the resource or environmental item in issue directly is a direct indicator of its direct use values. The willingness of a visitor to contribute to the preservation of wildlife may represent non-use values as well as direct use values (de Castro et al., 2015). Previous writers (de Castro et al., 2015; Wang et al., 2021; Rice et al., 2019; Clark et al., 2019; Rice et al., 2019) have made an effort to determine the factors that influence national park visitation, duration of stay, and willingness to pay for services provided by national parks across the globe. Nonetheless, there hasn't been much focus on why tourists choose eco-friendly travel destinations or whether they are prepared to pay for those services. The goal of the current study is to determine what motivates people to visit national parks and how much they are ready to pay at the Kano Zoological Garden. Therefore, this study's goal is to clarify data regarding visitors' motivations and readiness to pay for conservation in order to close the gap.

2.0 Literature Review

Biodiversity loss and tourism

Given the expanding human population and the accelerating rate of plant and animal extinctions, biodiversity is becoming more and more threatened (Lindsey et al., 2017). More than 28,000 species are officially recognised as endangered by the

International Union for Conservation of Nature (IUCN, 2016). A common concern is the inadequate funding for protecting natural areas and biodiversity (UNEP-WCMC and IUCN, 2016). Even while parks and protected areas frequently have to deal with urgent conservation challenges, they frequently run into financial difficulties (Sgalitzer et al., 2016). Tourist-visited natural areas are becoming less financially supported to enable the best conservation management practices, and most governments underfund protected areas (Weaver & Lawton, 2017). Thus, it is important for natural environments to be supported from a variety of sources, including tourism, to meet conservation goals. The role of the tourism sector in preserving biodiversity is evidenced in the creation of national parks and reserves,

Wildlife Tourism

The phenomenon known as wildlife tourism is garnering more and more attention from academic institutions and business sectors. This heightened focus is placed within the broader framework of public knowledge of environmental issues (Green & Higginbottom, 2018). Environmental issues are getting increased attention in the media and in school curricula, and people are typically showing a positive attitude towards the environment (Ibrahim et al., 2021). (Hehir et. al., 2023). However, wildlife tourism offers a chance to captivate visitors and pique their curiosity about wildlife, which can improve the preservation of particular habitats and communities (Ijeomah et al., 2017; Weaver, and Lawton, 2017). Negative consequences may also occur, such as alterations in the afflicted animals' physiology or behaviour (Green & Higginbottom, 2018). Any living, non-human, undomesticated creature in the kingdom Animalia has been referred to as wildlife (Suckall et. al., 2017). According to Green and Higginbottom (2018), "tourism based on interactions with wildlife, whether in its natural environment or in captivity," is how wildlife tourism is characterised in the literature on travel. It is a subset of nature-based tourism. It also has all the conventional components of tourism, including visitors, hosts, and resources, but what sets it apart is its emphasis on wildlife as a draw for tourists (Shackley, 2017). A 2020 World animals Fund (WWF) research claims that overconsumption of animals by underprivileged locals residing in or close to national parks has caused a 68% drop in wildlife populations since 1970. Ecotourism is defined by the International Ecotourism Society (TIES) as "responsible travel to natural settings that conserves the environment and enhances the well-being of local people".

Wildlife Conservation

Wildlife conservation is the process of protecting wild species and their habitats in order to avoid species from going extinct (Giles, 2018). Spenceley and Snyman (2017) undertook a study on whether a wildlife tourism company affects conservation and the development of tourism in a particular destination. Protected areas have two primary goals. As per Hehir et al. (2023), they are expected to have a vital function in preserving the natural surroundings and offering leisure activities. Setting, experience, recreation facilities, and benefits are the four categories into which recreation facilities can be divided based on the visitor's experience (Manning, 2011). Benefits and experiences come from visits, but settings are under the management of the protected areas. Three primary types of settings exist: those with physical, social, and management components. The result of the combination of environments are recreational facilities. Trekking, picnics, and other amenities are available to different groups visiting national parks and protected regions as recreational activities (Mutanga et al., 2017).

Ecotourism

An economic instrument for protecting wildlife is ecotourism. Conservation learning that concentrated on captive species, such as that found in zoos or aquariums, and conservation interpretation were highlighted in earlier research including wildlife conservation through ecotourism (Hehir et al., 2023) (Green & Higginbottom, 2018). Spenceley and Snyman (2017) assert that visitors play a role as agents in the conservation of species. They are conscientious individuals who are concerned in preserving and safeguarding wildlife (Spenceley and Snyman, 2017).

Visitor' Preference and Satisfaction to Wildlife Tourism

The tourist industry depends on measuring and controlling client satisfaction if it is to thrive and continue to exist. The fundamental idea behind customer satisfaction surveys is that respondents

should consider their experiences and communicate them objectively, truthfully, and without prejudice (Njeri, 2013). Because it is crucial to the ongoing and sustainable operation of any tourism business, customer happiness is one of the areas that is studied the most in the hospitality and tourism industry (Togridou, et al., 2017). A destination attraction depends on its patrons and their requirements being met in order to remain open and flourish. While meeting all of the demands of visitors is not the ultimate goal, aiming for it helps the attraction reach its own objectives (Lindsey et al., 2017).

3.0 Methodology

Study area

Kano State, located in North West Nigeria, has Kano as its state capital. It is located south of the Sahara in the Sahelian geographic region. Kano, the country's second-biggest metropolis, serves as the commercial hub of Northern Nigeria. Six local government areas (LGAs) – Kano Municipal, Fagge, Dala, Gwale, Tarauni, and Nasarawa – made up the first 137 square kilometers (53 square miles) of the Kano city.

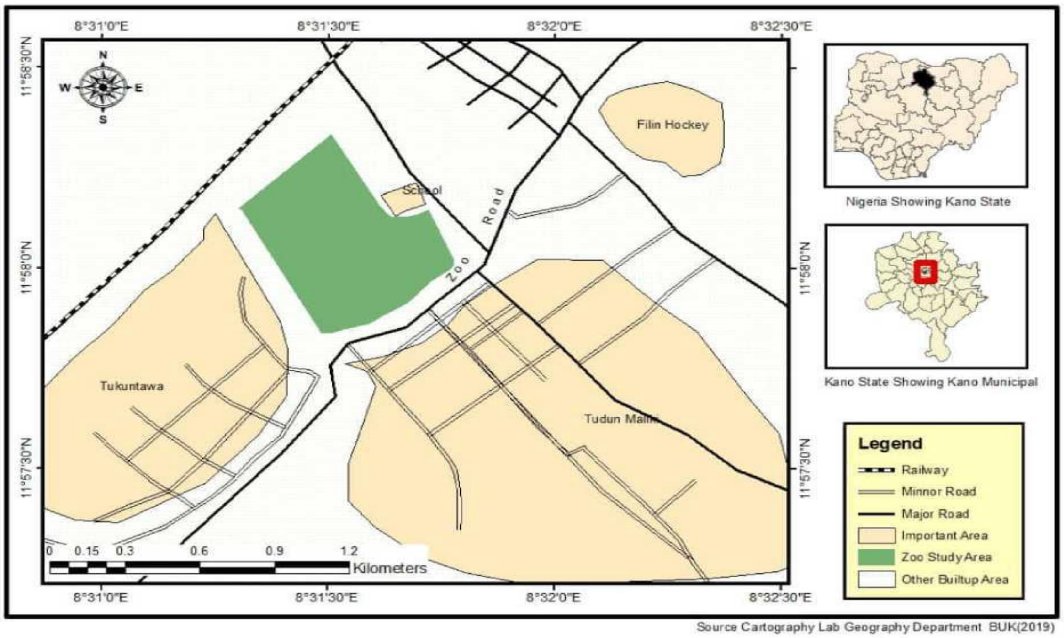

Figure 1: Map of Nigeria Showing the Study area

Sampling and Survey Instrument

This study employed a systematic random sampling method for the visitors where the first sample was drawn randomly upon arrival and subsequently, samples were chosen after every third visitor arriving in the zoo. A total of 346 respondents were sampled from the total annual visitor's influx to zoo in the previous year (2018) which is approximately 3,700. The data used for the analysis in this research was mainly from primary source, supplemented with the secondary source as literatures to support some of the research findings. The primary data was collected using questionnaire while the secondary data were obtained from various sources which include journals, textbooks, and data from the management of Kano Zoological Garden.

4.0 Results and Discussions

The data in this research were analyzed using descriptive statistic and logistic regression, with the aid of computer software (NLOGIT 4.0 and SPSS VERSION 20.0); the descriptive statistic was employed for the socio-demographic characteristics of the respondents, their attitude toward wildlife resources, and their perception about wildlife resources in the zoo. For the contingent valuation method the logistic

regression model was used to estimate the WTP as suggested by Hanemann (1999).

Table 1: Socio-demographic Profile of the Visitors

Element (n=329)		**Freq.**	**Percentage (%)**
Gender			
	Male	229	69.6
	Female	100	30.4
Age			
	17-20	41	12.5
	21-25	129	39.2
	26-30	97	29.5
	31-35	37	11.2
	36 and above	25	7.6
Marital status			
	Married	131	39.8
	Single	198	60.2
Educational level			
	Primary	16	4.9
	Secondary	86	26.1
	Collage/Polytechnic	101	30.7
	University	126	38.3
Occupation			
	Government employed	67	20.4
	Privately employed	54	16.4
	Business	124	37.7
	Unemployed	77	23.4
	Retiree	2	.6
	Others	5	1.5
Origin			
	Local		
	State	121	36.8
	International	204	62.0
		4	1.2
Gross monthly household income			
	N 20,000 and Below	88	26.7
	N 21,000-40,000	111	33.7
	N41,000-60,000	84	25.5
	N 61,000-80,000	23	7.0
	N 81,000 and above	23	7.0

Source: Authors, field work 2023

The result of the respondent attitudes towards wildlife resources is presented in table 1 above. On whether the visitors have visited the zoo before, most of the visitors responded positively with majority of them 215(65.3%) have visited the zoo before while 114(34.7%) have never visited the zoo before.

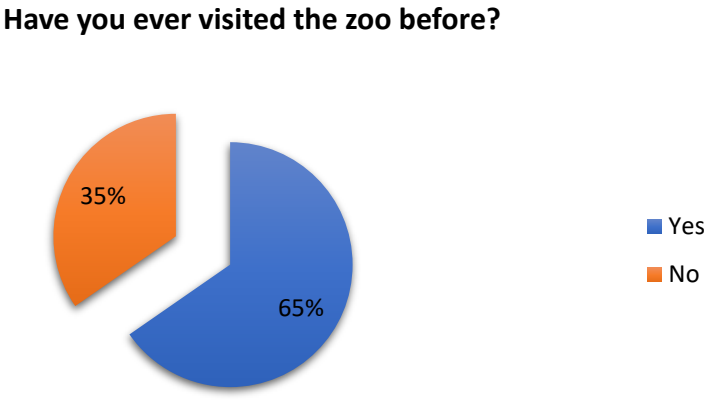

Figure 2: Pie Chart showing possible visits by the respondent.

With regard to the number of times the respondent visited the zoo, significant number of respondent 173 (44.5%) visited twice or more, 69 (21.7%) visited only once while 114(34.7%) are first timers.

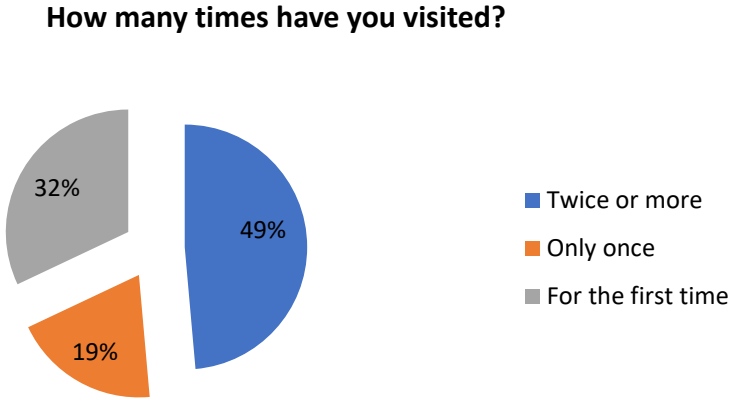

Figure 3: Pie Chart showing number visits of the respondent.

The respondent were asked why do they choose to visit Kano Zoological Garden as against other gardens, majority of the respondents 233(70%) visit the zoo to see wildlife, 36(10.9%) choose quietness, while 30(9.1%) visit the zoo because of closeness while 28(8.5%) is because of its scenic beauty and 2(0.6%) give other reasons.

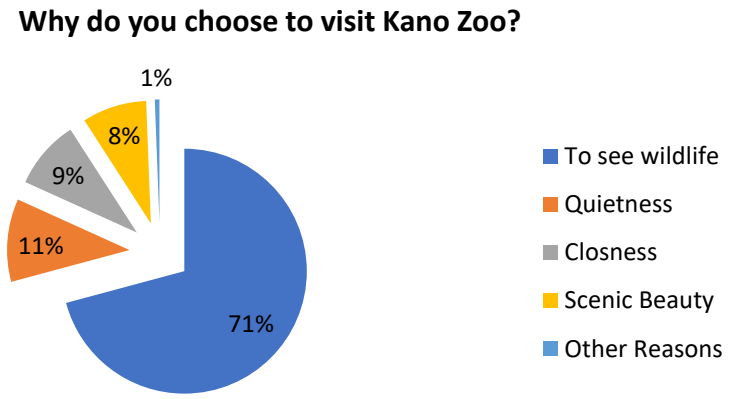

Figure 4: Pie Chart Showing reasons for their visit.

With regards to visitors intention to revisit the zoo must of the visitors responded positively 299(90.9%) are willing to revisit while 30 (1.1%) have no intension to revisit the zoo again.

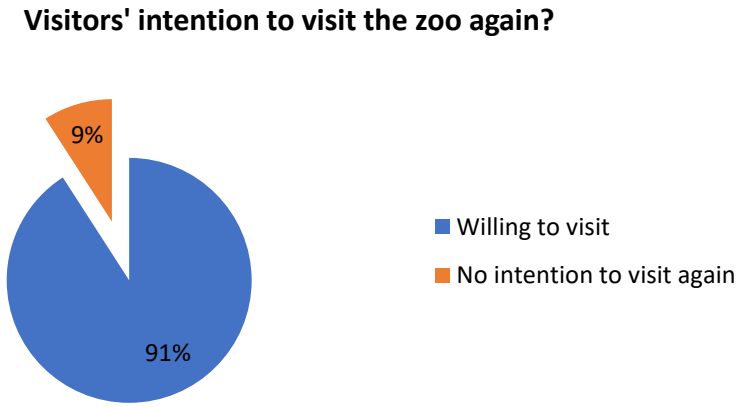

Figure 5: Pie Chart showing possibility of visit by the respondents.

On the medium through which the visitors get information about Kano Zoological Garden, 79(24.0%) get information via either radio or television, 190(57.8%) through family and friends and 41 (12.5%) get information via internet, 10(3.0%) get information from Newspaper or magazine while 9 (2.7%) stated other reasons.

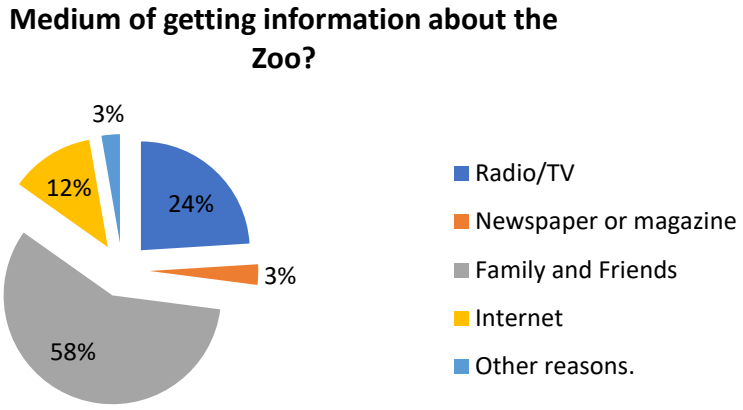

Figure 6: Pie Chart showing medium of getting information about the zoo by the respondents.

Table 2: Respondent attitude toward wildlife resources in Kano Zoological Garden

Element (n=329)	Frequency	Percentage (%)
Have you ever visited the zoo before?		
Yes	215	65.3
No	114	34.7
How many times have you visited?		
Once	42	19.5
Twice or more	173	80.5
Why do you choose to visit Kano Zoological Garden?		
To see wildlife	233	70
Quietness	36	10.9
Closeness	30	9.1
Scenic beauty	2	0.6
Other reason	2	0.6
Visitor's intension to revisit the zoo again?		
Yes	299	90.9
No	30	9.1
Medium of getting information about the zoo?		
Radio/TV	79	24
Family/ Friends	190	57.8
Internet	41	12.3
Newspaper/magazine	10	3
Other reason	9	2.7

Source: Authors, field work 2023

Visitors' perception about wildlife resources in Kano Zoological Garden

The perception of the visitors was considered based on their opinion about wildlife resources in Kano Zoological Garden. Ten (10) statements were given all of which were measured on a 5-point linkert scale. The result of the descriptive statistics on respondent opinion about wildlife resources in Kano Zoological Garden is presented in table (2). The result indicates a more positive response to most of the statement given, implying visitors having a positive perception about Kano Zoological Garden.

Visitors Opinion About wildlife resources

With respect to the opinion about quietness and conduciveness of the Kano Zoological Garden, 132 (40.1%) of the total respondent strongly agree and 177 (53.8%) agreeing with the statement while 15 (4.6%) were undecided and only 3 (0.9%) disagree while 2 (0.6%) strongly disagree. Most of them 201 (61.1%) agree that the zoo is not so crowded, 81 (24.6%) strongly agree while 40 (12.2%) were undecided, and only 7 (2.1%) disagree with no single response on strongly disagree. On the statement that vegetation provides the reserved with a scenic beauty, 144 (43.8%) of the respondent strongly agree, 157 (47.7%) agree with the statement respectively, 26 (7.9%) were undecided and only 1 (0.3%) strongly disagree with the statement. Significant number of respondent 120 (36.5%) strongly agree that conservation is an important aspect in Kano Zoological Garden and 162 (49.26%) also agree, but 4 (1.2%) strongly disagree and only 4 (1.2%) disagree with the statement, 39 (11.9%) remained neutral. Kano Zoological Garden being one of the famous in Nigeria, wildlife viewing is considered an important attraction in the zoo. Majority of the respondents 177 (53.8%) strongly agree with the statement, 137 (41.6%) also agree whereas 12 (3.6%) were undecided while 2 (0.6%) strongly disagree and only 1 (0.3%) disagree with the statement. On whether ecotourism generate economic benefits to the local people, 72 (21.9%) strongly agree, 155 (47.1%) agree and 71 (21.6%) were neutral, while 19 (5.8%) disagree and 12 (3.6%) strongly disagree that local people benefited economically from ecotourism in Kano Zoological Garden. For the statement that Kano Zoological Garden is worth visiting with friends and families, 111 (33.7%) strongly agree, 200(60.8%) agree, while 18 (5.5%) remained neutral on the statement, with no single response on both strongly agree and disagree. The Kano Zoological Garden environment is clean and free from litters, 237 (72.0%) agree, 58 (17.6%) strongly agree, but those whose responded negatively to the statement were 3 (0.9%) who disagree with no single response on strongly disagree and 31 (9.4%) remained undecided. On the adequacy of tourism facilities in Kano Zoological Garden majority of the respondent answered positively 219 (66.6%) agree and 41 (12.5%) strongly agree while 62 (18.8%) were neutral and 6 (1.8%) disagree while only 1 (0.3%) strongly disagree. The last item of the respondent opinion about resources in Kano was the respondent opinion about hospitality of the staff and how they relate with visitors was inquired. The vast majority 156 (47.4%) agree and 152 (46.2%) strongly agree that the staff are hospitable to visitors but those who strongly disagree and disagree has the same number of response 2 (0.6%) each respectively, while undecided responses were 17 (5.25).

Table 3: Respondents' Perception about the wildlife in the Zoo

S/N	Items (n=329)	1 Freq. (%)	2 Freq. (%)	3 Freq. (%)	4 Freq. (%)	5 Freq. (%)
1	Kano Zoological Garden is very quiet and conducive	132 (40.1)	177 (53.8)	15 (4.6)	3 (0·9)	2(0.6)
2	The zoo is not so crowded	8 (24.6)	201 (61.1)	40 (12.2)	7(2.1)	0 (0.0)
3	Vegetation cover provides the garden with scenic beauty	144 (43.8)	157 (47.7)	26(7.9)	1(0.3)	1 (0.3)
4	Conservation is an important aspect in the zoo	120 (36.5)	162 (49.2)	39 (119)	4 (1.2)	4 (1.2)
5	Wildlife viewing is an important aspect in the zoo	177 (53.8)	137 (41.6)	12 (3.6)	1 (0.3)	2 (0.6)
6	Ecotourism generate economic benefit to the local people	72 (21.9)	155 (47.1)	71 (21.6)	19 (5.8)	12(3.6)
7	Kano Zoological Garden is worth visiting for leisure with	111(33.7)	200 (60.8)	18 (5.5)	0 (0.0)	0(0.0)
8	The environment is clean and free from litters	58 (17.6)	237 (72.0)	31(9.4)	3(0.9)	0(0.0)
9	There are adequate tourism facilities in Kano Zoological	41 (12.5)	219 (66.6)	62 (18.8)	6(1.8)	1 (0.3)
10	The staff are very hospitable to	152 (46.2)	156 (47.4)	17(5.2)	2 (0.6)	2 (0.6)

1= Strongly Agree, 2=Agree, 3= neither agree nor disagree, 4=Disagree, 5=Strongly Disagree.
Source: Authors, field work 2019

Visitors Willingness to Pay

Out of the total visitors interviewed during the survey period, 238(72.3%) are willing to pay by responding 'Yes' to the various bids (amount offered) while the remaining 91 (27.7%) responded 'No'. the summary result of the visitor's willingness to pay for conservation is presented in table below.

Table 4: Summary of visitor's willingness to pay for conservation

Bids Price (#)	Yes Freq	(%)	No Freq	(%)	Total Freq	(%)
100	238	72.3	91	27.7	329	100
200	233	70.8	96	29.1	329	100
300	146	44.50%	183	55.5	329	100

Source: Authors, field work 2019

For the initial bid amount offered N200, the total respondents obtained for this amount was 329. Those who responded by saying 'Yes' to this amount were 233 (70.8%) out of the total response of the bid. Those who respondent 'No' were 96 (29.1%) showing unwillingness to pay amount. The second bid amount N300 have total responses of 329 also, out of it 146 (44.4%) said 'Yes' to the bid amount while 183 (55.5%) said 'No' for the bid amount. The findings showed that visitors' willingness to pay was primarily determined by two factors: existence value (105/44.1%), which indicated that they would be

willing to pay for the conservation of wildlife resources, and bequest value (71/29.8%), which indicated that they would be willing to pay for the "sustain of the resources for future generation." These findings are consistent with economic theory (the theory of demand).Other justifications offered were: 29 (12.2%) for its sustainability, meaning I can visit it again (the "option value"); 7 (2.9%) to prevent overcrowding at the zoo (the "visitors control"); 26 (10.9%) for its affordability, meaning I can afford it for my recreational pleasure (actual use); however, of the 91 respondents who are unwilling to pay any bid amount, 12 (13.2%) stated that they are not interested in the conservation of resources; and 47 (51.6%) stated that it is the duty of the government to protect the zoo's wildlife resources. Another reason people are unwilling to pay is a lack of institutional confidence, as stated by 28 respondents (30.8%), who also stated they don't think the money will be utilised for conservation. The final excuse, provided by 4 respondents (4.4%), is that they already pay enough in taxes.

In order to investigate the relationship between the dependent variable, which is willingness to pay, and the independent variables, which are socio-demographic factors like age, income, gender, and education level as well as marital status and some of the explanatory variables included in the questionnaire, like the respondent's attitude towards the zoo's wildlife resources, the binary regression model was utilized in this study.

Table 5: Factors influencing respondents WTP

Variable	Coefficient	Standard Error	b/St.Er.	Sig.
Constant	0.55826263	0.48698276	1.146	0.2516
Gender	-0.73262479	0.3074197	-2.383	.0172**
Age	-1.41955682	0.51251622	-2.77	.0056**
Marital Status	1.53322474	0.34015067	4.507	.0000***
Education	1.0432926	0.29383613	3.551	.0004***
Income	0.02383369	0.00733848	3.248	.0012***
Bid Price	-0.00262652	0.0011089	-2.369	.0179**
Number of observations		329		
Log likelihood function		-167.205		
McFadden Pseudo R-squared		0.1759		
Percentage Correct Prediction		72.34		

Note: *** Significance at 1%, ** Significance at 5%.
Source: Authors, field work 2019

Logistic Regression Model

Based on the result of model 1 as presented in table (4) six of the explanatory variable in the model were found to be significant. Every variable in the model has a coefficient and a significant level (P-value). The coefficient provides two key pieces of information: its sign and weight. A negative coefficient indicates an inverse relationship between the variable and the WTP, whereas a positive coefficient indicates a positive relationship. The weight, on the other hand, is the coefficient's value, which indicates the magnitude or strength of the variable or factors influencing the WTP. Of the six variables in the model, three have negative coefficients (bid price, gender, and age), while the other three have positive coefficients (level of income, educational attainment, and respondent's marital status).

Educational level being a significant variable coded as (1=Educated, 0= uneducated) this

variable has a positive coefficient value with weight of 1.04. The positive coefficient indicates a more willingness to pay by those who are educated than those who are not. It is statistically significance at 1% confidence level. This outcome is anticipated as educated people are believed to have more knowledge and awareness of the importance of wildlife resources conservation than un-educated people. Wang and Jia, (2019) among others also reported influence of education on WTP. Another significant variable in the model is household income, which has a positive coefficient of 0.23 weights. At a 1% confidence level, statistical significance was determined. It turned out that willingness to pay increased along with income. It is expected that individuals with higher incomes will be more likely than those with lower incomes to be willing to pay, which is consistent with other CVM literatures where willingness to pay was found to be significantly influenced by income (Bhandari and Heshmanti, 2018; Wang and Jia, 2019).

The final factor in the model that determines WTP is married status. The results indicate that, in comparison to income level and educational attainment, marital status has a positive coefficient but a high weight of 1.53. At a 1% confidence level, statistical significance was determined. According to this outcome, married people are more eager to pay than unmarried people.

On the other hand, the bid amount, as anticipated, has a negative sign on its coefficient. As previously mentioned, an inverse relationship between the variable and the WTP is indicated by a negative sign. As a result, at a 5% confidence level, the bid amount has a negative coefficient and a weight value of -0.002, which is likewise statistically significant. It demonstrates that the willingness to pay decreases as the bid amount rises. According to Loomis et al. (2016), a respondent's likelihood of being willing to pay decreases with the quantity of the bid that is requested of him. The next significant variable on WTP in the model is age. The result shows that age has a negative coefficient both with highest weight of -1.41, it was found to be statistically significant at 5% confidence level. This result revealed that as age increase, the WTP decreases. Another variable with negative coefficient in the model is the gender of the respondents coded as 1=male and 0=female. Its coefficient value has a weight of -0.73, found to be significant at 5% confidence level. This result shows a higher elasticity of gender for willing to pay, indicating that female visitors are more willing to pay an increase in entrance fee than the male visitors. This shows that younger people among the visitors have higher probability of willingness to pay than the older visitors. Effect of age on WTP was reported in many studies, Bhandari and Heshmanti, (2018), reported positive and significant relationship between age and WTP. Reynisdottir et al., (2018) had a contrary finding in their research.

The estimated Mean WTP Value

Since this study employed the single bounded dichotomous choice of contingent valuation (DC-CVM) method, the possible outcome is also dichotomous in nature (two). It is either the respondent is willing to pay (by answering 'yes' coded as 1) to the bids offered or the respondent is not willing to pay (by answering 'No' coded as 0) to the bid amount offered. The mean WTP was calculated from the Logit regression result obtained using the mean WTP equation explains in chapter three. The unit currency used in all the monetary estimation is the Nigerian naira (N).

Visitors Mean WTP

The result of the mean WTP amount estimated from the Logit model 1 was calculated using the formula as earlier discussed in chapter three. The mean WTP value for the visitors is estimated at N505.48. this indicate that visitors are willing to pay higher amount than the current amount as entrance fee to the zoo provided that the money will be used for conservation purposes.

$$\text{Mean WTP} = \frac{\beta(\text{Gender}) + \beta(\text{Age}) + \beta(\text{Marital status}) + \beta(\text{Education}) + \beta(\text{Income})}{-\beta\text{Bid}}$$

$$\text{WTP1} = \frac{(-.73262479*A1 + -1.41955682*A2 + 1.53322474*A3 + 1.04329260*A4 + .02383369*A9)}{(-0.00262652)}$$

Mean WTP = 505.48 Naira

5.0 Conclusion

From the findings of this study, it can be concluded that the respondents shows a positive attitude toward wildlife resources conservation, in which their support would help in ensuring the preservation of resources in Kano Zoological Garden. As sustainability of ecotourism activities depends on the visitor's perception and satisfaction with resources and services provided, it is interesting to know that visitors have revealed a high level of satisfaction especially with the facilities as well as services provided for visitors in the zoo. Some factors that affect the willingness to pay include marriage, education and house hold income. Gender was found to be of no significance in determining willingness to pay. The outcome of this study provides justification for the need to review the current entrance fee to the estimated mean amount that visitors are willing to pay (N505) to maximize their current ecotourism experience as against the current fee N100. This can help to capture the consumer benefit, there by realizing increases in revenue that could be used for various conservation programs.

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