Visitors’ Motivation and Willingness to Pay for Conservation in Selected Zoos in Southwest Nigeria

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ABSTRACT: The motivation and willingness to pay for ecotourism and wildlife conservation at the University of Ibadan and Obafemi Awolowo University Zoos in Southwest Nigeria were investigated. Structured Questionnaire was used to elicit information from two hundred and forty (240) visitor and data were analysed using descriptive and inferential (Chi-Square, Correlation) statistics. Findings from this study show that 50.4% of the visitors were female, 37.9% and 37.1% were within the age range of 15-24 years and 25-54 years respectively, 46.7% were married, and 43.3% attained to tertiary level of education. Furthermore, 66.2% of the visitors were employed with 39.6% earning ₦81,000 (265.57 USD) and above as their monthly income. The main motivations of the zoo visitors are to see the condition of habitat and diversity of wildlife at the zoos, proximity to their residence and viewing wild animals. The starting bid for visitors to the zoos shows their willingness to pay for conservation services at the zoos. Income (r = 0.23, p = 0.00) had effect on the visitation pattern of the visitors. Relationship exists between the visitors’ motivation (r = 0.23, p = 0.00) and their level of satisfaction. The age (r = 0.15, p = 0.02), income (r = 0.13, p = 0.04), marital status (χ² = 68.79, p = 0.01), religion (χ² = 45.06, p = 0.04) of the visitors have impact on their willingness to pay for conservation at the zoos.

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The tourism industry is considered one of the largest and fastest growing industries in the world (Ninemeier and Perdue, 2008; Cooper and Hall, 2008). As a worldwide occurrence it forms a very important part of the service sector strongly influencing the economy (Kay, 2003; Koc, 2004; Ninemeier and Perdue, 2008). For the tourism industry to maintain or improve its current status it is dependent on tourists’ travel decisions which are reflected in travel behaviour. Visitors’ travel motivations forms an integral part of travel behaviour. The need to see the unseen and know the unknown drives people to travel to new places and motivates them to visit new destinations (Venkatesh, 2006). According to George, (2004) as well as March and Woodside, (2005) travel motivations can be considered as one of the most important psychological influences of tourist behaviour. Zoos and aquariums reach millions of people all over the world, most of them living in urban areas and having little or no contact with nature. They come to the zoo because they have an interest in animals. The role of the zoo has evolved to prioritize research, education, and conservation. The world was changing, and there was evidence of positive public education about conservation. The desire to understand animals has been joined by the need to conserve their populations and ecosystems.

Environmental valuation attempts to quantify non-market values, which can then be combined with market values to give a total economic value (Bateman and Langford, 1997). There are several techniques available for the estimation of non-market value of the environmental attributes or amenities. These include the travel cost method, simulated market method and contingent valuation method (Carson et al., 1996). Although many natural resources are valued on the market, resources supplied by environmental goods (such as forests) do not usually have an actual monetary value because of the difficulty in evaluating them. But since they do provide a certain utility to individuals, an economic value can and should be attributed to them (Baranzini et al. 2010).

Most often studies that involve economic valuations estimate individual Willingness To Pay (WTP) from the entrance fee view point. Individuals are asked to either state or choose an existing value for the entrance fee they would be willing to pay in order to support conservation within the protected area. The general value is that adjusting entrance fees to a reasonable...
level results in maximizing revenue and producing much needed funds for the financial sustainability of the protected areas (Baral et al., 2008) thus further decreasing the probability of becoming financially self-sufficient. However, there were limited studies especially in Nigeria that identify visitors’ motivations towards visiting eco-friendly tourist destination and their willingness to pay for conservation services. Therefore, to address the gap, the objective of this study is to elucidate information on visitors’ motivations and their willingness to pay for conservation.

MATERIALS AND METHODS

Study Areas: The study was conducted at the University of Ibadan Zoological Garden, Ibadan, Oyo State and Obafemi Awolowo University Zoological Garden, Ile-Ife, Osun State, Nigeria.

University of Ibadan (UI) Zoological Garden: The zoological garden of University of Ibadan, Oyo state, is located Ibadan in the south western Nigeria approximately between Latitude 7°26'48" N and Longitude 3° 53' 46" E and an Altitude of 190m. The city of Ibadan ranges in elevation from 150m in the valley area to 275m above sea level. The zoological garden boasts of many fauna species like lions, giraffe, eland, kob, etc. The study area is endowed with myriads of indigenous forest tree species such as Milicia excelsa, Azadirachta indica, Antiaris africana, Mangifera indica, Morinda lucida among others.

Obafemi Awolowo University (OAU) Zoological Garden: The zoological garden is located in Ile-Ife, Osun State and lies on latitude 7.4667°N and longitude 4.55667°E. The zoological garden has several different sections and the animals are put in sections by species. The fauna species found in this Zoo include Birds, Reptiles, Monkeys, and Baboons etc. The vegetation represents an inter phase between the tropical rainforest and the derived savannah.

Data Collection: The statistical population was the visitors to University of Ibadan (UI) and Obafemi Awolowo University (OAU) Zoological Gardens. These Zoos were selected because they are pioneer Institution Zoos established in Southwest Nigeria 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 visitors’ influx to the zoos in the year 2016. A total of two hundred and forty respondents were randomly selected from the zoos; one hundred and sixty (160) respondents were selected at UI Zoo while eighty (80) respondents were selected at OAU Zoo.

The instrument of data collection was structured questionnaire which was self-administered by the visitors. The questionnaire elucidate information on the socioeconomic characteristic of respondents, visitation pattern, motivations for visitation, level of satisfaction and willingness to pay for conservation at the Zoos. Visitors’ motivations and willingness to pay were measured in Likert-scale type and rated as 5= strongly agree, 4= agree, 3= undecided, 2= disagree and 1= strongly disagree.

Data Analysis: The analytical and statistical tools used for this study were inferential and descriptive tools. The inferential tools used were Chi-square and Pearson’s correlation. Descriptive tools used include mean, median, mode, frequencies, percentage and standard deviation.

RESULTS AND DISCUSSIONS

Socio-demographic Characteristics of Visitors: This study observed that female visitors (50.4%) were more than the male (37.9). This is inconsistent with the findings of Hun and Anuar (2014) in Malaysian National Zoo which reported that 56% of visitors to the zoo as male. The study also shows that most of the visitors were between the age group of 15-24 years and 25-54 years old respectively. This suggests that majority of the visitors were youths, this is in agreement with the findings of Knežević et al., (2016) which reported that 56% of the visitors to Zagreb zoo were within the age group of 25-39 year olds. Hun and Anuar (2014) reported that 91% of the visitors to National zoo, Malaysia were within the age group of 18-45 year old. Also, Adetola and Oluleye (2014) at the University of Ibadan and Obafemi Awolowo University Zoological gardens reported that majority of the visitors to the Zoos were students. High percentage of the Zoo visitors were married (46.7%). This is not in agreement with the findings of Hun and Anuar (2014) which reported that 51% of the visitors to National zoo, Malaysia were single. The educational status of the visitors shows that most of the visitors were highly educated attaining to tertiary level of education. This is consistent with the findings of Knežević et al., (2016) in Zagreb zoo, Croatia which reported that 52% of the visitors to the zoo were educated attaining to tertiary level of education and its equivalents. Furthermore, 66.2% of the visitors were employed with 25.4% self-employed, 25% working in the private sector and 15.8% working in the public sectors, while 28.8% of the visitors were students. This supports the findings of Karanikola et al., (2014) in zoo of Thessaloniki, Greece which reported that 60% of the visitors were employed. The study further shows

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that 39.6% of the visitors earned ₦81,000 (265.57 USD) and above as their monthly income.

| Variables               | Frequency | %    |
|-------------------------|-----------|------|
| Gender                  |           |      |
| Male                    | 119       | 49.6 |
| Female                  | 121       | 50.4 |
| Age (Years)             |           |      |
| 0 – 14                  | 18        | 7.5  |
| 15-24                   | 91        | 37.9 |
| 25-54                   | 89        | 37.1 |
| 55-64                   | 26        | 10.8 |
| 65 and above            | 16        | 6.7  |
| Marital status          |           |      |
| Single                  | 91        | 37.9 |
| Married                 | 112       | 46.7 |
| Divorced/separated      | 22        | 9.2  |
| Widower/widow           | 15        | 6.3  |
| Level of education      |           |      |
| Non-formal education    | 32        | 13.3 |
| Primary                 | 13        | 5.4  |
| Secondary               | 19        | 7.9  |
| ND/NCE                  | 30        | 12.5 |
| HND/B.Sc               | 104       | 43.3 |
| M.Sc./PhD               | 20        | 8.3  |
| Professional            | 22        | 9.2  |
| Religion                |           |      |
| Christianity            | 123       | 51.3 |
| Islam                   | 96        | 40.0 |
| Traditional             | 21        | 8.8  |
| Occupation              |           |      |
| Student                 | 69        | 28.8 |
| Self-employed           | 61        | 25.4 |
| Private sector          | 60        | 28.0 |
| Unemployed              | 12        | 5.0  |
| Public sector           | 38        | 15.8 |
| Monthly income          |           |      |
| ₦0 - ₦20,000 (₦0–₦65.57) | 46    | 19.2 |
| ₦21,000 - ₦40,000 (₦68.85–₦131.15) | 37 | 15.4 |
| ₦41,000 - ₦60,000 (₦134.43–₦196.72) | 22 | 9.2 |
| ₦60,001 - ₦80,000 (₦196.73–₦262.30) | 40 | 16.7 |
| ₦81,000 and above       | 95        | 39.6 |
| Place of residence      |           |      |
| Within Ibadan/Ife metroplis | 112 | 46.7 |
| Within Oyo/Osun State   | 69        | 28.8 |
| From other States       | 40        | 16.7 |
| within Nigeria          | 19        | 7.9  |
| From outside Nigeria    |           |      |
| Nigerian                | 223       | 92.9 |
| Non Nigerian            | 16        | 7.1  |

This is inconsistent with the findings of Adetola et al., (2016) which reported that 63.6% of the visitors to University of Ibadan Zoological garden earned less than ₦20,000 as their monthly income, 46.7% of the respondents reside within Ibadan and Ife metroplis. Adetola et al., (2016) reported that 66.7% of visitors to University of Ibadan Zoological garden reside within Ibadan metropolis. Ridgway et al. (2005) in their findings on visitors’ behaviour opined that majority of visitors resides in the same city where the zoo they were visiting. The study further revealed that majority (92.9%) of the visitors was Nigerians (Table 1). This is in tandem with the findings of Adetola et al., (2016) which reported that 98.8% of visitors to University of Ibadan Zoological garden as Nigerians.

Most of the visitors to the zoos were repeat visitors (78.3%), with more than half of the visitors visiting the zoos more than four times (Figure 1). This is in tandem with the findings of Adetola et al., (2016) which reported that 61% of the visitors to University of Ibadan zoological garden as repeat visitors. Knežević et al., (2016) also reported that 88% of visitors to Zagreb zoo, Croatia were repeated visitors, Couch (2013) in Detroit Zoo, reported that 80% of the visitors as repeat visitors, but this is not in agreement with the findings of Couch (2013) in Potter Park Zoo, USA that reported 53% of the visitors as first time visitors.

Visitors Motivations to pay for conservation in UI and OAU Zoos: Motivation has been fundamental to tourism researchers interested in the “why” of tourist travel (Fennell, 1999). The mean value of the motivation of visitors to the Zoos ranges from 4.50 to 4.24 (Table 2). “Condition of habitat and diversity of wildlife” had the highest mean value (4.50); while “to relax” had the least mean value (4.24). The main motivations of the UI and OAU zoo visitors are to see the condition of habitat and diversity of wildlife at the zoos, proximity to their residence and viewing wild animals. Knežević et al., (2016) reported that watching wild animals, enjoying nature and spending quality time as their main motivation for visiting the zoos. According to Boyd et al., (2014) the main motivation of zoo visitors is to satisfy their curiosity.
to see wild animals in captivity. Jordaan and du Plessis (2014) in National Zoological Gardens of South Africa showed that some people visit the zoo in order to have a self-directed zoo experience (e.g., relaxation, recreation), while others visit the zoo to promote the welfare of others (e.g., family togetherness). Karanikola et al., (2014) reported that the visitors to the zoo were primarily motivated by the prospect of spending a pleasant day out with their family. Allenby (2014) in National zoological garden South Africa reported that 97.3% of the visitors came to see animals. The visitors to the UI and OAU zoos were satisfied with their visit (Figure 2). Karanikola et al., (2014) reported that most (43.5%) of visitors to the municipal zoo of Thessaloniki stated that they were a little satisfied with their visit to the zoo.

### Table 2. Visitors’ motivation to Visit the UI and OAU Zoos.

| Motivation                                      | Mean  | SD   |
|------------------------------------------------|-------|------|
| To Relax                                       | 4.24  | 0.82 |
| To escape from daily routine                   | 4.35  | 0.77 |
| To get emotionally and physically refreshed    | 4.30  | 0.77 |
| To have fun                                    | 4.42  | 0.85 |
| Relief myself of boredom                       | 4.41  | 0.80 |
| For the recreational activities that I enjoy   | 4.36  | 0.83 |
| It is much easier to handle stress when you    | 4.35  | 0.78 |
| spend time in nature                           |       |      |
| I love hanging out with my family and friends  | 4.33  | 0.78 |
| Aesthetics (Beauty of destination)             | 4.30  | 0.92 |
| Cleanliness of general destination             | 4.31  | 0.86 |
| Protection of nature                           | 4.40  | 0.84 |
| Value for money                                | 4.35  | 0.79 |
| Safe and easy access to destination            | 4.36  | 0.82 |
| The value of the destination                   | 4.28  | 0.86 |
| Evidence of environmental practices            | 4.28  | 0.85 |
| To seek adventure                              | 4.28  | 0.91 |
| Meeting new people and socialize               | 4.27  | 0.94 |
| Beautiful natural Scenery and landscape of the | 4.28  | 0.88 |
| destination                                     |       |      |
| To visit a place I have not visited before     | 4.37  | 0.86 |
| To see wild animals                            | 4.41  | 0.91 |
| For education and research purposes            | 4.43  | 0.82 |
| Proximity to residence                         | 4.48  | 0.80 |
| Expected climate or weather                    | 4.35  | 0.92 |
| Cost affordability of visit                    | 4.38  | 0.83 |
| Condition of habitat and diversity of wildlife | 4.50  | 0.76 |

**SD = Standard Deviation**

**Visitors’ motivation to Visit the UI and OAU Zoos:** The visitors were willing to pay conservation at UI Zoo and OAU Zoo. The starting bid for visitors to the zoos is ₦100 (0.33 USD) as revealed in Fig. 3, the willingness to pay bids range from ₦300 (0.98 USD) for the visitors. The study shows that 97.9% of the visitors to the Zoos were willing to pay ₦100 (0.33 USD) for conservation, 97.9% of the visitors to the Zoos were willing to pay ₦150 (0.49 USD) for conservation, 97.1% of the visitors to the Zoos were willing to pay ₦200 (0.66 USD) for conservation, 94.2% of the visitors were willing to pay ₦250 (0.82 USD) for conservation, while 88.3% of the visitors were willing to pay ₦300 for conservation. Furthermore, 57% of the visitors were willing to pay between ₦301-₦500 (0.99 USD – 1.64 USD) as the maximum amount of environmental user fee (Fig. 4). Reasons why the Zoo visitors were willing to pay for conservation are presented in Table 3.

![Fig. 2. Visitors’ level of satisfaction](image)

This result is consistent with the findings of Adetola et al., (2016) report that the visitors to the UI zoo were willing to pay captive wildlife tourism especially if the fees will be used in for conservation purposes and improving the facilities in the zoos. Findings of Armira et al., (2015) shows that majority of the visitors were willing to pay for ecotourism at PuncakLawang Park, Indonesia. Ijeomah and Herbert (2012) in Assop fall reported that all (100%) the respondents were willing to pay ₦100 and ₦50 (0.60 USD and 0.30 USD) for adults and children respectively as the entrance fee. Reynisdottir et al., (2008) in Gullfoss Waterfall and Skaffafell National Park reported that visitors were willing to pay ISK508 (4.20 USD); Vujko and Gajić (2014) in Fruška Gora National Park observed that 78.3% of the respondents were willing to pay between 50 dinars to 150 dinars (0.53 USD to 1.60 USD) as environmental user fee. Nuva and Mad (2009) at Gunung Gede Pangrango National Park, Indonesia reported that 61% of the visitors were willing to pay for the given bid.

Significant relationship exists between the visitors’ marital status ($x^2 = 68.79, p = 0.01$) and religion ($x^2 = 45.06, p = 0.04$) as well as age ($r = 0.15, p = 0.02$) and income ($r = 0.13, p = 0.04$) (Tables 4 and 5). This suggests that visitors with high income will be able to afford any increase in the entrance fee at the zoos compare to visitors that earn low income. Visitation pattern was also influenced by income ($r = 0.25, p = 0.00$) (Table 6). Also the youthful and single tourists had the freest time and less responsibility and may decide to visit ecotourism sites when compared with married visitors, though the married were most times made to visit Zoo because of their wards.

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Adetola et al., (2016) reported that marital status and place of residence of the visitors has significant effect on their willingness to pay. Garcia (2006) in Puerto Galera, Philippines that reported that income, gender, age was variables that significantly affected the willingness of tourist to pay for increased environmental user fee. Armira et al., (2015) in PuncakLawang Park, Indonesia reported that income and gender had significant relationship with visitors WTP. This is also similar to the findings of Nuva and Mad (2009) in Gunung Gede Pangrango National Park, West Java, Indonesia. Visitors’ motivation had significant relationship with their level of satisfaction (r = 0.23, p = 0.00) (Table 7) which agrees with Page (2009) view that motivation is a “state of need, a condition that exerts a push on the individual towards certain types of action that are seen as likely to bring satisfaction”. It shows the intrinsic reasons why the individual selects a particular trip (Weaver and Lawton, 2002).
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Conclusion: Visitors have various motives for visiting a zoo. Information on these motives can be applied by zoo management to make informed decisions when developing marketing strategies to ensure the success and future relevance of the zoo. The starting bid for visitors to the UI and OAU zoos shows their willingness to pay for conservation services at the zoos. The study therefore recommends that charging visitors an economically viable entrance fee to nature and wildlife based tourism sites is one of the promising options that would curtail the problem of fund inadequacy for conservation in many destinations.

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