

RESEARCH ARTICLE

Tourists' Willingness to Pay for Recreation Services in Nyerere National Park, Tanzania: Are We Overvaluing or Undervaluing Our Nature Recreation Resources?

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ABSTRACT

This study estimated tourists' Willingness to Pay (WTP) per day for recreation services in Nyerere National Park (NNP) and compared these values with daily travel costs that are incurred by tourists to visit NNP in order to inform whether recreation resources in the park are overvalued or undervalued. The study revealed that tourists' WTP per day for recreation services was estimated at \$237.4 and \$1521 for resident and non-resident tourists, respectively. The estimated tourists' WTP values exceed the daily travel costs currently incurred by tourists, which are \$201.04 and \$1517.97 for resident and non-resident tourists, respectively. This indicates that tourists are willing to spend more to enjoy recreation services in NNP, which signifies that recreation resources in NNP are slightly undervalued. In addition, the findings disclosed that the largest share of tourist daily travel expenses is allocated to transportation services, and very little is paid to the park as a conservation fee. It was revealed that out of the daily travel expenses incurred by non-resident and resident tourists, only 4.62% and 2.23% are respectively paid directly to NNP as conservation fees. This study considers that allocation is not very fair; thus, NNP, in collaboration with TANAPA, needs to adjust the current entrance or conservation fee and reduce the transportation costs charged by tourist companies. The travel costs incurred by tourists, age, education, monthly income, site visited, substitute site, and quality of park were identified as significant factors in influencing tourists' WTP for recreation services in NNP. Thus, policies oriented to reduce tourists' transportation costs and improve the quality of national parks would attract more tourists to NNP.

Keywords: Willingness to pay; Recreation services; Resident tourists; Non-resident tourists; Conservation fee; Nyerere National Park

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1. Introduction

1.1 Background information

Tanzania's tourism sector is mostly based on national parks, which increase employment opportunities and the country's GDP ^[1]. Information on the economic values and willingness to pay for recreation services by tourists, both residents and non-residents, is lacking despite being vital for policy actions. Little information on the economic use values of recreational resources is attributed to the fact that these resources are environmental goods and services, which belong to non-marketed goods and services, hence they do not command actual market prices ^[2]. Most ecosystem services that are not traded in markets contribute to human welfare; however, these services are often undervalued due to the fact that their economic value is not well known ^[3]. Unlike marketed goods such as houses, cars, and clothes, the market cannot easily tell the price tag of most non-marketed environmental goods and services, such as recreation resources. Lack of clear market prices for recreation resources may lead to either overvaluation or undervaluation of recreation resources in protected areas ^[4]. Accounting for the value of recreation resources could help in making rational decisions that enable the efficient allocation and use of environmental resources. In Tanzania, very little is known about the economic use values in terms of what tourists are willing to pay for nature recreation resources. In this perspective, it is not well known whether the current entrance fees charged to local and foreign tourists in Tanzania reflect the tourists' willingness to pay (WTP) for visiting nature recreation sites ^[5].

Furthermore, in Tanzania, it is not well known whether the revenue currently accrued by the government from nature recreation represents the true value of recreational resources in those protected areas. Access to recreation sites is only subject to nominal entrance fees, which may underestimate their value ^[6]. On the other hand, the current tourism charges imposed on tourists and other visitors in natural recreation areas in Tanzania are set by the government

institutions responsible for tourism activities, in this case Tanzania National Parks (TANAPA), which is considered by this study as a supply side. The consumers (demand side), which include tourists, are usually neglected in setting recreation prices such as entrance fees. Prices set from demand-side perspectives are usually more realistic in expressing true consumers' preferences and valuations of certain resources, in this case recreation resources ^[7]. Economic valuation of recreation resources provides insights into the actual and perhaps true economic use values of these resources, which are drawn from a demand perspective. In addition, factors that influence tourists' WTP for recreation services in protected areas in Tanzania are also not well known, despite claims from tourism management institutions in the country that very few Tanzanians engage in domestic tourism. The reasons for the low turnout of most Tanzanians in domestic tourism are not clearly specified ^[8]. Information on the determinants of tourists' WTP for recreation services in NNP will help to improve the tourism industry in the country. Improvements on the determinants of tourists' WTP for nature recreation services will attract more local and foreign tourists, which will positively impact the tourism industry.

To the best of the researcher's knowledge, no study has ever been conducted in Tanzania to assess whether our recreation resources are fairly priced by comparing what tourists are currently paying to access our natural recreation resources in this context, the wildlife tourism with what they would be willing to pay to enjoy our wildlife tourism services. The outcome of such a comparison may draw the attention of policymakers; for instance, if recreation resources are being either overvalued or undervalued, proper adjustments will be made accordingly to create a win-win situation between the service providers (TANAPA, MNRT, and tourist companies) and the demand side (tourists). Information on the estimated demand side's WTP will help to boost the tourism industry in the country. Additionally, factors that influence tourists' WTP for nature recreation services are not well articulated in Tanzania. Information on these factors would shed some light on how to im-

prove the tourism sector in the country. Against this background, this study seeks to answer the following three questions: (i) What are the tourists' WTP for recreation services in Nyerere National Park (NNP)? (ii) Are the residents and non-resident tourists' WTP per day lower or higher than the daily travel costs currently incurred to visit NNP? (iii) Which factors determine tourists' WTP for recreation services in NNP?

1.2 Tanzania's tourism sector

In Tanzania, the industrial sector including tourism is considered as a main driver for transforming the country's economy towards higher income status by the year 2025 as industries play a significant role in creating employment, increasing government revenues and foreign exchanges^[9]. In Tanzania, the tourism industry is considered among the key sectors that generate foreign exchanges and create employment. The tourism industry contributes a significant portion to the country's Gross Domestic Product (GDP), for instance, in 2014 it contributed about 14% of USD 6.7 billion, in 2017 contributed USD 2.19 billion and in 2018 it contributed 17% with USD 2.43 billion. Its contribution to the country's GDP is envisaged to rise by 6.6% annually in the next 10 years. This is due to the increase in the number of tourist arrivals. For example, between 2017 and 2018 the number of tourist arrivals increased by 12.03% from 1.33 million to 1.49 million. In 2022, Tanzania received 1,454,920 tourists, compared to 922,692 in 2021, and 616,491 in 2020. In 2020, revenues were down to USD 1 billion as it was severely affected by the COVID-19 pandemic and its impact on international travel, from a peak of USD 2.6 billion in revenues and 1.5 million arrivals in 2019. The sector's contribution to GDP fell from 10.6% in 2019 to 5.3% in 2020 and raised to 5.7% in 2021. The number of visitors and the contribution of this sector to the Tanzanian economy are expected to increase as a result of the Royal Tour documentary which was launched by the Tanzanian president, her excellence Dr. Samia Suluhu Hassan in April 2022 as a strategy to advertise the country's natural attractions to the world.

2. Methodology

2.1 Study area

The study was conducted in Nyerere National Park (NNP), which is found in the Eastern Zone of Tanzania. Empirical evidence shows that there is no study which has ever been conducted in NNP to measure the economic use values of nature recreation in terms of what tourists are willing to pay for its recreation resources. Again, it is not known whether the recreation resources in this park are undervalued or overvalued. Measuring the tourists' WTP will enable such a comparison, as the current rates charged by the park management will be compared with what tourists are willing to pay to visit NNP. Information on tourists's WTP will be helpful in informing policymakers in TANAPA and MNRT on how to improve tourism activities in the park and the entire country at large.

2.2 Tourist sampling strategy and methods for data collection

A convenient sampling method was used to get a sample of tourists, as it was hard to establish a sample frame for the entire tourist population. This included 215 tourists, both locals (resident tourists) and foreigners (non-resident tourists), who represented 28% and 72%, respectively. Non-resident tourists include tourists from non-East African countries, while resident tourists include tourists from East African countries, Tanzania in particular. A semi-structured questionnaire was used to collect data from tourists at Mtemere Gate, which is the main entrance gate. Mail interviews were also opted for by tourists who requested the questionnaire be sent to their personal emails. These tourists claimed to be very tired as they were coming from game drives or rushing to catch up on their return charter flights. The response to the mail questionnaire survey was good, as the majority of tourists sent their filled-out questionnaires. Secondary data on tourist information from NNP was also gathered to supplement the primary data.

2.3 Tourists’ willingness to pay for recreation activities in NNP

Tourists’ WTP for recreation services in NNP was computed using the following equation:

$$WTP = \text{Total Travel Expenses} + \text{Consumer Surplus} \quad (1)$$

It is worth noting that the values of total travel expenses and consumer surplus for both resident and non-resident tourists are drawn from our previous publication on Nyerere National Park; more details are found in Bigirwa et al. ^[10].

2.4 Determinants of tourist’s WTP for recreation services in Nyerere National Park

The following multiple linear regression model was used to identify the determinants of tourists’ WTP for recreation services in NNP.

$$WTP = \beta_0 + \sum_{i=1}^k \beta_i X_i + \mu_i \quad (2)$$

The independent variables are (1) travel costs; (2) age (year); (3) sex (1 = male; 0 = female); (4) household income (USD); (5) number of people in the group; (6) recreational quality (1 = good; 0 = poor); and (7) substitute (1 = Yes; 0 = No). WTP is the dependent variable indicating a maximum willingness to pay to visit NNP. This implies that the maximum

willingness to pay value a visitor is willing to pay to visit recreation areas is the summation of total travel costs incurred and consumer surplus.

3. Results and discussions

3.1 Tourists’ WTP for recreation services in NNP

WTP values were computed as a summation of travel expenses and tourists’ consumer surplus. Before estimating the tourists’ WTP for recreation services, it is important to first identify all the travel costs incurred by tourists to reach or access their desired natural recreation area. Travel cost information helps to understand the distribution of tourists’ expenditures during their visit, and this information also helps in making comparisons with the tourists’ WTP for recreation resources. After the comparisons, the researcher would be in a position to tell whether the recreation resources in NNP are either undervalued or overvalued. Travel expenses incurred by non-resident and resident tourists to visit NNP are respectively presented in **Tables 1 and 2**.

Table 3 also presents the consumer surplus for both the residents and non-resident tourists.

Table 3. Consumer surplus for residents and non-resident tourists in NNP.

Table 1. Non-resident tourists’ travel expenses.

Item	Average	% of the average amount	Standard deviation	Minimum	Maximum
Flight costs from home country to Tanzania	\$571.74	37.66%	262.7	\$230	\$1430
Costs from host city to NNP (charter flight, game drive vehicle, tour guide and onsite refreshments)	\$308.63	20.33%	118.76	\$103.25	\$880
Meals and accommodation costs	\$567.6	37.39%	425.6	\$118	\$2468
Park entrance fee (conservation fee) paid to NNP	\$70	4.62%		\$70	\$70
Total	\$1517.97	100%		\$521	\$4848

Source: Bigirwa et al. (2021).

Table 2. Resident tourists’ travel expenses.

Item	Average	Percentage of the average amount	Standard deviation	Minimum	Maximum
Flight/road transport costs for non-Tanzania and Tanzanians	\$62.25	30.98%	\$25.52	\$26.75	\$108
Costs for game drive vehicle, tour guide and onsite refreshments)	\$90.47	45%	\$41.49	\$23.33	\$180.43
Meals and accommodation costs	\$43.82	21.79%	\$15.75	\$22.6	\$76.95
Park entrance fee (conservation fee) paid to NNP	\$4.5	2.23%		\$4.5	\$4.5
TOTAL	\$201.04	100%		\$77.81	\$369.88

Source: Bigirwa et al. (2021).

Visitor type	Consumer surplus per trip in (\$)
Resident tourists	62.25
Non-resident tourists	490.48
Both residents and non-resident tourists	717.56

Source: Bigirwa et al. (2021).

Willingness to Pay Values, are we undervaluing or overvaluing our recreation resources?

Based on Equation (1), tourists’ WTP per day for recreation services in NNP was computed as the summation of total travel costs incurred by tourists per day and their consumer surplus values per trip. **Table 4** below summarizes WTP values for residents, non-residents and combined resident and non-resident tourists.

Table 4 depicts that resident tourists pay \$237.4 per day for recreation services in NNP, while non-resident tourists pay \$1521 per day. The WTP values exceed the daily tourist travel costs that are currently incurred by tourists to visit NNP (**Tables 1 and 2**). This shows that tourists are willing to spend more than their current expenditures on enjoying

recreation services in NNP; for instance, resident tourists are willing to spend WTP \$36.36 in addition to what they are currently spending per day to visit NNP. On the other hand, non-resident tourists pay WTP \$3.03 in addition to what they are currently spending per day to visit NNP. This reveals that recreation resources in NNP are slightly undervalued, as tourists are paying more than what they are currently paying or spending to visit this park. When comparing the daily travel costs that are currently incurred by tourists when visiting NNP and their estimated WTP values, the findings reveal that resident tourists are willing to increase their travel costs by a large amount (\$36.36) in comparison to non-resident tourists, who are willing to increase only \$3.03. This could partly be attributed to the fact that non-resident tourists spend more on transportation costs than resident tourists. However, it is worth noting that even though tourists are WTP more to enjoy recreation services in NNP, the findings disclosed that the largest part of tourist expenses is allocated to transportation services and very little is paid directly to the park as a conservation fee. It was observed that out

Table 4. Tourists’ WTP per day for recreation services in NNP.

Visitor category	Average WTP per day	Min. WTP per day	Max. WTP per day	Std. deviation
Residents (n = 60)	\$237.4	\$136.2	\$335.1	\$48.9
Non residents (n = 155)	\$1521	\$1033.2	\$2549.9	\$295.3
Both (n = 215)	\$1502.6	\$136.2	\$2549.9	\$456.4

of the total daily travel expenses currently incurred by non-resident and resident tourists, only 4.62% and 2.23% are respectively paid direct to NNP as entrance or conservation fees. This study thinks this allocation is not very fair, as transportation companies earn more profits than NNP.

Furthermore, the study noted that transportation costs, especially for hiring game-drive vehicles, consume a lot of tourists' budgets. Through discussion with tourists and game vehicle drivers, it was revealed that tour guide companies (owners of game drive vehicles) are charging \$60 per tourist per trip for tourists who stay in camps that are inside NNP. For those who stay in camps outside NNP, daily visitors are charged \$80 per person per trip, and in order for the vehicle to enter the park, it should have at least three tourists. This means each game-drive vehicle is hired at a minimum cost of \$240 per trip. Again, out of this amount (\$240), NNP charges only \$8.6 per vehicle as an access fee to allow a vehicle to enter the park, which is only 3.58%. This study observed that the tour guide companies are benefiting more from tourism activities than NNP, as they are getting more revenue than what is paid to the park (a conservation fee). In order to create fair prices for recreation resources in NNP as per tourists' WTP, adjustments need to be made by lowering the transportation costs, especially game drive costs, charged to tourists by tourist companies, while the entrance fees (conservation fees) paid to NNP (the tourist and vehicle entrance fees) need to increase slightly. This suggestion is also based on the findings revealed by some tourists, especially Russians, who complained that they were being overcharged by tour guide companies. The study findings agree with those of Bruner et al. ^[11], who reported that non-resident tourists are WTP up to \$80 per day as conservation fees for national parks with good qualities and more attractions, for instance, Serengeti National Park, while resident tourists are WTP a conservation fee of \$6 per day. However, the findings contradict with Adamu et al. ^[12], who showed that local tourists are paying a conservation fee of \$3.4 per day for nature conservation in Yankari Game Reserve, Bauchi, Nigeria.

3.3 Determinants of tourists' WTP for recreation services in NNP

Test for heteroskedasticity

Breusch-Pagan and Cook-Weisberg test for heteroskedasticity with the null hypothesis that the variance of the residuals is homogenous (Constant variance). Therefore, if the p-value is very small, we would have to reject the hypothesis and accept the alternative hypothesis that the variance is not homogenous. Results show the evidence is against the null hypothesis that the variance is homogeneous. Hence, a robust standard error was adopted in the regression model to account for heteroskedasticity.

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of wtps_ln

chi2(1) = 42.27

Prob > chi2 = 0.0000

Test for multi collinearity

When there is a perfect linear relationship among the independent variables in the model, the estimates for a regression model cannot be uniquely computed. The primary concern is that as the degree of multicollinearity increases, the regression model estimates of the coefficients become unstable, and the standard errors for the coefficients in the model can get wildly inflated. We used the VIF (Variance Inflation Factor) after the regression to check for multicollinearity (Table 5). As a rule of thumb, a variable whose VIF values are greater than 10 may merit further investigation ^[13]. Tolerance, defined as 1/VIF, is used by many researchers to check the degree of collinearity. A tolerance value lower than 0.1 is comparable to a VIF of 10. It means that the variable could be considered a linear combination of other independent variables.

Table 5. Test for multicollinearity.

Variable	VIF	1/VIF
Travel cost	2.590	0.386
Age (years)	1.870	0.535

Sex	1.680	0.594
Education (years)	1.080	0.929
Income	1.060	0.939
Site visited	1.040	0.960
Number of persons	1.030	0.970
Substitute	1.030	0.971
Quality of the park	1.030	0.975
Total	1.380	

Based on the estimated tourists' WTP values for visiting recreation resources in NNP (Table 4), the coefficient of determinations (R^2) of the estimated linear function is 0.616 and 0.924 for resident and non-resident visitors, respectively. This implies that variation in the dependent variable (WTP) is explained by the variation in the independent variables taken into consideration. The F-value ($p < 0.0000$) was found to be highly significant, which indicated a "good fit" of the estimated equation. Table 6 portrays that the travel costs incurred by tourists, monthly income earnings of tourists, and site visits were significant variables in influencing tourists' WTP for recreation services in NNP for resident visitors. Whereas, travel costs incurred by tourists, age, education, monthly income earnings of tourists, site visited, substitute site, and quality of park were significant variables in influencing tourists' WTP for recreation services in NNP for non-resident visitors.

Table 6 further shows the effect of the studied variables on the tourists' WTP for visiting NNP that were enlightened in the method. Regression analysis results depict that among the studied variables (independent variables), resident and non-resident tourists WTP for visiting NNP. For instance, an increase of 1% in travel costs results in a 0.33% decrease in their WTP for residence visitors. In other words, the elasticity is 0.33, which means that a 1% increase in travel costs is associated with a 0.33 percent decrease in WTP. Moreover, an increase of 1% in travel costs results in a 0.54% decrease in their WTP for non-residence visitors. In other words, the elasticity is 0.54, which means a 1% increase in travel costs is associated with a 0.54 percent decrease in WTP for non-residence visitors. The findings are in line with previous studies, such as Ezebilo^[3], who identified

Table 6. Determinants of tourists' WTP for recreation services in NNP.

Variables	(1) Resident visitors	(2) Non-resident visitors
Travel cost (log)	-0.328*** (0.0742)	-0.538*** (0.0134)
Age (log)	-0.0361 (0.0723)	-0.0400** (0.0172)
Sex (1 = male; 0 = female)	0.0451 (0.0476)	-0.00437 (0.00885)
Education (years)	0.00475 (0.00414)	0.00371*** (0.00102)
Monthly income (log)	0.116*** (0.0428)	0.00203** (0.00806)
Site visited	-0.157*** (0.0252)	-0.0729*** (0.00549)
Number of people in group	0.00893 (0.0267)	0.00467 (0.00308)
Substitute site (1 = Yes; 0 = No)	-0.0262 (0.0407)	-0.0300*** (0.00897)
Quality of park (1 = Good; 0 = Poor)	0.00614 (0.0377)	0.0157* (0.00891)
Constant	3.798*** (0.625)	4.157*** (0.117)
Observations	60	155
R-squared	0.616	0.924

Robust standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

that travel costs and tourists' income earnings influence the frequency of trips made by tourists in nature areas in Sweden. Sofyan and Herlina^[14] revealed that travel costs, travel time, and tourists' income influence tourists' WTP for local tourist attractions in Sabang, which borders India, Malaysia, and Thailand. Bhandari and Heshmati^[15], in their study to investigate tourists' willingness to pay conservation in Sikkim, India, reported the income level of the respondents as an important determinant of WTP. Thus, visitors' WTP depends chiefly on their income level, irrespective of their purpose^[6]. Therefore, it can be hypothesized that the level of visitors' income

has a positive impact on their contribution to biodiversity conservation.

Moreover, the tourist's age was significant at 5%, but its elasticity was negative (-0.04); this implies that a 1 percent increase in the age of non-resident tourists is associated with a 0.04 percent decrease in tourists' WTP for visiting NNP, keeping other independent variables constant (**Table 6**). From the log-log function, the impact of age on WTP was negative, meaning that tourists' WTP values decrease as they get older. Tourists' age and gender were also identified by Jurado-Rivas and Sánchez-Rivero ^[17] to influence their willingness to pay for more sustainable tourism destinations in world heritage cities in Cáceres, Spain. Older people tend to be particularly attracted to the cultural activities of ecotourism spots. As such, age is most often positively related to the WTP for conservation ^[18,19]. Adamu et al. ^[12] reported that age, gender, income, level of education, and first-time visit were the significant determinants of tourists' willingness to pay for nature conservation in Yankari Game Reserve, Bauchi, Nigeria.

Another study by Mayuri ^[20] revealed that the sex, educational attainment, distance, and income level of the surveyed tourists significantly impact their willingness to pay for conserving the natural resources of Nameri National Park in Assam. The importance of education as a determinant of WTP has been reported in many studies ^[15,18,21]. A higher level of education has been found to be positively related to WTP, as educated people are usually more aware of environmental issues and engage in conservation activities. Thus, it is expected that a higher level of education would indicate a higher awareness of natural resources, which would result in a higher WTP ^[22]. Thus, if the government of Tanzania intends to boost the contribution of the tourism industry to the country's economy, it has to initiate more efforts to reduce the travel costs incurred by tourists when visiting recreational areas in the country. In addition, male tourists were less willing to pay for visiting NNP when compared to female tourists. The coefficient for sex was not statistically significant in influencing tourists' WTP.

Furthermore, the monthly income earnings of tourists were positive and statistically significant ($p < 0.01$), thus influencing residence tourists' WTP for visiting NNP. For example, an increase of 1% in tourist monthly income results in a 0.12% increase in tourist WTP for recreation services in NNP. This signifies that resident tourists who earn a high income per month are more willing to pay and visit NNP than those who earn a low income per month. Correspondingly, the monthly income earnings of tourists were positive and statistically significant ($p < 0.05$), thus influencing residence tourists' WTP for visiting NNP. For example, an increase of 1% in tourist monthly income results in a 0.002% increase in tourist WTP for recreation services in NNP.

Conversely, the findings in **Table 6** show that the quality of the park and availability of substitute sites were not significant in influencing resident tourists' WTP. On the other hand, the quality of the park and availability of substitutes were statistically significant at 10% and 1%, respectively, for non-resident visitors.

4. Conclusions and policy implications

Tanzania's tourism sector is mostly based on national parks, which increase employment opportunities and the country's GDP. Information on tourists' WTP for nature recreation services and determinants of tourists' WTP for nature recreation services is lacking despite being vital for tourism policy actions. This study attempted to measure tourists' WTP per day for recreation services in NNP. The estimated tourists' WTP values were compared against the current daily travel expenses that are incurred by tourists to visit NNP, so as to assess whether our recreation resources are either undervalued or overvalued. Moreover, the study also identified the main determinants of tourists' WTP for tourism services in NNP. This study disaggregated tourists into resident and non-resident tourist groups, where resident tourists included tourists from East African countries, Tanzania in particular, while non-resident tourists included tourists from non-East African countries.

The study revealed that estimated tourists' WTP

per day for recreation services in NNP were \$237.4 and \$1521 for resident and non-resident tourists, respectively. The estimated tourists' WTP values exceed the travel costs currently incurred by tourists per day to visit NNP, which were calculated at \$101.04 and \$1517.97 for resident and non-resident tourists, respectively. This indicates that tourists are willing to spend more to enjoy recreation services in NNP than they are currently incurring; for instance, resident tourists are willing to spend \$36.36 in addition to what they are currently spending per day to visit NNP, while non-resident tourists are willing to spend \$3.03 in addition to what they are currently spending per day to visit NNP. This implies that resident tourists are willing to increase their travel costs more (by \$36.36) than non-resident tourists (\$3.03), which could be due to the fact that non-resident tourists spend more on transportation costs than resident tourists. As the estimated tourists' WTP per day for recreation resources in NNP exceeds the daily travel costs currently incurred by tourists, this notifies that recreation resources in NNP are slightly undervalued as tourists are WTP more than what they are currently paying or spending to access this park. In addition, it is worth noting that even though tourists are more likely to enjoy recreation services in NNP, the findings disclosed that the largest part of tourist expenses is allocated to transportation services and very little is paid directly to the park as a conservation fee. The findings revealed that out of the total daily travel expenses incurred by non-resident and resident tourists, only 4.62% and 2.23% are respectively paid direct to NNP as entrance or conservation fees. This study considers that this allocation is not very fair, as the transportation companies are gaining more than NNP. Thus, the management of NNP, in collaboration with TANAPA, needs to adjust the entrance fees that are currently charged to tourists.

Furthermore, the study noted that transportation costs, especially for hiring game-drive vehicles, consume a lot of tourists' budgets. Through discussion with tourists and drivers of game vehicles, it was revealed that tour guide companies (owners of game drive vehicles) are charging \$60 per tourist per trip

for tourists who stay in camps that are inside NNP. For those who stay in camps outside NNP, daily visitors are charged \$80 per person per trip, and in order for the vehicle to enter the park, it should have at least three tourists. This means each game-drive vehicle that enters the park is hired at a minimum cost of \$240 per trip. Again, out of this amount (\$240), NNP charges only \$8.6 per vehicle as an access fee to allow a vehicle to enter the park, which is only 3.58% of the vehicle hiring cost. This study observed that the tour guide companies are benefiting more from tourism activities than NNP, as they are getting more revenue compared to what is paid to the park (the conservation fee). In order to create fair prices for recreation resources in NNP as per tourists' WTP, adjustments need to be made by lowering the transportation costs, especially game drive costs, charged to tourists by tourist companies, while the entrance fees (conservation fees) paid to NNP (the tourist and vehicle entrance fees) need to increase slightly. This recommendation is also based on the findings revealed by some tourists, especially Russians, who complained that they were being overcharged by tour guide companies, especially on transportation costs.

The study also ascertained that travel costs incurred by tourists, monthly income earnings of tourists, and sites visited were significant factors in influencing resident tourists' WTP for recreation services in NNP. Whereas, travel costs incurred by tourists, age, education, monthly income earnings of tourists, site visited, substitute site, and quality of park were significant factors in influencing non-resident tourists' WTP for recreation services in NNP. Conversely, the sex or gender of a tourist and the number of people in a tourist group were not significant in influencing tourists' WTP for recreation services in NNP. Thus, if the government of Tanzania intends to increase the contribution of the tourism industry to the country's economy, it has to initiate more efforts to reduce the travel costs incurred by tourists when visiting nature recreational areas in the country. In this view, the government, through TANAPA and MNRT, have to regulate transportation costs that are charged to tourists by tour guide companies, espe-

cially the costs of hiring game-drive vehicles. Based on the findings of this study, these costs need to be reduced and fair prices should be set, which will encourage more tourists to visit the park. TANAPA has also worked hard to improve the quality of national parks in the country in terms of conserving the natural habitats of wildlife, building good housing facilities and camps, improving communication networks, and maintaining road infrastructure to ensure they are accessible throughout the year in dry and wet seasons.

Conflict of Interests

Authors declare no conflict of interest

Data Availability

Data are confidential, but can be provided upon request.

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