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ARTICLE

Economic Valuation of Saysed National Park in Saudi Arabia Using the Travel Cost Method

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ABSTRACT

This research assesses the economic value of Saysed National Park, a non-market recreational site in Taif, Saudi Arabia, utilizing the Individual Travel Cost Method (ITCM). The study's primary objective is to analyze recreational demand, suggesting a negative relationship between the number of annual visits and travel costs. Moreover, it investigates the impact of various socioeconomic factors—such as gender, income, education level, and family size—on visitation patterns. The model also incorporates a dummy variable to capture the effects of substitute recreational sites on demand. The findings estimate the annual economic value of the park at SR 4,208,879.70 (approximately $1,122,367.90), calculated through a zero-truncated Poisson regression model. This valuation represents the annual consumer surplus generated by the park, underscoring its significance as a valuable social and economic resource. The results offer practical insights for policymakers and stakeholders, highlighting the importance of aligning development and management budgets with the park's estimated economic value to ensure expenditures do not exceed this figure. To the researcher's knowledge, this research, the first of its kind in Saudi Arabia, thoroughly analyzes recreational benefits, establishes a methodological framework for assessing similar sites, and contributes to the advancement of sustainable tourism and resource management practices.

Keywords: Travel Cost Method; Economic Value; Recreational Sites; Recreational Demand

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1. Introduction

Several studies have sought to estimate the economic value of non-market recreational areas and activities, such as national parks and beaches, using established methodologies, including contingent valuation, travel cost, hedonic pricing, and choice modeling[1–3]. The travel cost method encompasses two distinct approaches: the Individual Travel Cost Method (ITCM) and the Zonal Travel Cost Method (ZTCM). The ITCM and ZTCM differ fundamentally in their data aggregation and analysis approaches. ZTCM relies on aggregated data using average data per geographic zone of origin[4]. This method is advantageous regarding cost and feasibility, as it requires less granular data collection. However, its aggregated nature may overlook individual-level variations in travel behavior. Conversely, the ITCM utilizes disaggregated, individual-level data, enabling a more precise estimation of economic value by accounting for factors such as personal income, travel costs, and time valuation. While the ITCM is widely regarded for its accuracy, it is more resource-intensive due to the detailed data requirements. The choice between ITCM and ZTCM depends on the research objectives, data availability, and budgetary considerations. Despite the higher costs associated with ITCM, it remains the preferred approach in contexts where precision in valuation is paramount[3, 5]. Previous studies can be divided into two groups: those using the ITCM and those using the ZTCM.

ITCM, which uses disaggregated individual-level data, has proven essential in capturing economic valuations across various contexts, such as forests[6], lakes[7], rivers[8], and national parks[9, 10]. For example, Trovato, Micalizzi and Giuffrida[11] applied ITCM to assess the benefits of the Natura 2000 network, a European biodiversity initiative encompassing 26,400 sites. Their study revealed a negative relationship between travel costs and visitor numbers, quantifying the co-benefits of conservation policies at €25,961,177.61, thereby highlighting the network's ecological and economic significance. Similarly, Menendez-Carbo, Ruano and Zambrano-Monserrate[12] estimated the economic value of Malecón 2000, an urban recreational site in Ecuador, at USD 15.72 per person per visit, emphasizing the value of urban green spaces. Špaček and Antouškova[13] evaluated the Czech Paradise Geopark using ITCM, modeling demand through a count data approach. They found significant positive correlations between income, marital status, and visitation, while travel costs negatively influenced demand. Raybould et al.[14] explored demand for Australia's Gold Coast beaches using two ITCM models—one focusing solely on fuel costs and the other considering travel time. Their findings highlighted the substantial impact of travel costs on visitation, estimating the economic values to range from AUD 365 million to AUD 1.7 billion, depending on the model used. Zandi, Limaei and Amiri[15] assessed the economic value of Ghaleh Rudkhan Forest Park by combining ITCM with ordinary least squares (OLS) regression, identifying significant relationships between travel costs, income, family size, and demand, ultimately estimating the park's value at IRR 78,390,595. In another study, Twerefou and Ababio[16] employed ITCM and a zero-truncated negative binomial model (ZTNB) to analyze a recreational site in Ghana, noting that travel costs inversely impacted visitation, alongside significant roles played by gender and awareness of alternative sites. Zhang et al.[3] assessed the economic value of the Gold Coast beaches in Australia to inform environmental conservation efforts and address policymakers' concerns regarding the feasibility of funding protection projects. Conducted with 291 participants, the study aimed to quantify the beaches' value and provide a basis for sustainable investment. The researchers employed the ZTNB model and tested four variations of the travel cost variable: fuel, parking fees, vehicle maintenance, travel time, on-site spending, and accommodation costs. Initially, no significant negative relationship was found between travel costs and visitation. However, when additional factors such as gender and family size were included, travel costs became a significant predictor of demand. The study estimated the annual economic value of the Gold Coast beaches at approximately USD 500 million, emphasizing their substantial contribution to the regional economy and underscoring the importance of strategic investments in their preservation. In a study focused on Turkey's natural areas, Ortacesme, Ozkan and Karaguzel[17] demonstrated the applicability of ITCM for evaluating recreational value, identifying key determinants such as in-

come, age, and the availability of alternative sites, with a reported annual value of $50,000 for selected parks. Preez and Hosking [18] applied ITCM to the Rhodes trout fishery in South Africa, finding that travel costs negatively influenced visitation, while access to substitute sites had a positive effect, estimating the fishery's economic value at R18 million.

The second cohort of studies utilized the ZTCM, which aggregates data by geographic zones and has been used to estimate non-market values. According to Read et al. [19], this method involves collecting data on visits to a site from various zones along with their associated round-trip travel costs. The demand curve is developed by analyzing visitation rates, travel costs, and other socioeconomic factors. Loomis, Tadjion and Thilmany [20] calculated Colorado's golf courses' price elasticity and economic value using the ZTCM. They established the demand function by determining trips per person based on the total number of visits and the population of each zone. Their findings indicated that demand for these golf courses was price-inelastic, estimating an economic value of $143.8 million annually, derived from 7.8 million rounds of golf played. Tourkolias, Skiada and Diakoulaki [21] also applied the ZTCM to assess the economic value of the Temple of Poseidon in Sounion, Greece. During the study period, they estimated a consumer surplus ranging from €1.5 million to €24.5 million per year.

This research assesses the economic value of Saysed National Park in Taif, Saudi Arabia, using the ITCM. The main objective is to evaluate the park's recreational demand, proposing a negative relationship between visit numbers and travel costs. It also considers various socioeconomic factors, including income, education level, gender, and family size, to understand their impact on visitation patterns better. This understanding can help inform targeted management strategies for the park. Additionally, the study explores how substitute recreational sites affect visitation demand. The findings indicate that the economic value of Saysed National Park is estimated at SR 4,208,879.70 (approximately $1,122,367.90) annually. This figure represents the consumer surplus generated from recreational use, based on a zero-truncated Poisson regression model. These results provide valuable insights for policymakers and investors as they assess the feasibility of developing recreational sites and justify investments when improvement costs do not exceed this estimated value. To the researcher's knowledge, this research is the first to apply the travel cost method for such evaluations in Saudi Arabia, laying the groundwork for similar research in regions like Al-Shifa and Al-Hada. By highlighting the park's economic value, the research supports informed decision-making for sustainable management and contributes to tourism development and environmental conservation.

2. Materials and Methods

Data was collected through online surveys from visitors to Saysed National Park to estimate its demand curve effectively. The number of visits in 2021 indicated the quantity demanded, while travel costs provided a solid proxy for prices. Consumer surplus was calculated and multiplied by the number of visitors, decisively determining the park's economic value. The dependent variable—count of visits—followed a Poisson distribution, and a zero-truncated Poisson regression was employed to estimate the demand function for Saysed National Park accurately. Consequently, the demand can be robustly expressed as:

$$Yi = \exp(\beta\ 1\ X4 + \beta\ 2\ Z1 + \ldots\ldots + \beta\ 10\ Z9) + \mu i \quad (1)$$

i: individual (1, 2, ……,188)

In Equation (1), the variable on the left-hand side represents the total number of visits, denoted as Yi by individual I to the park over the past 12 months of 2021. The variables on the right-hand side are as follows: X4 denotes the total travel cost associated with a round trip to and from the site, expressed in Saudi Riyals (SR). At the same time, Z6 represents the knowledge of a substitute site. Z2 to Z5 include the following: Z2 is the disposable monthly income of the visitor; Z3 indicates the family size, measured as the total number of people in the visitor's household; Z4 represents the visitor's education level in years; Z5 identifies the gender of the visitor. Additionally, Z7 indicates whether children are in the household, and Z9 denotes the visitor's job. The coefficients β 1, β 2, β 3, β 4, β 5, β 7, and β 9 are the regression coefficients representing the slopes of the respec-

tive variables X4, Z1, Z2, Z3, Z4, Z5, Z7, and Z9. These coefficients measure the extent to which each independent variable influences the dependent variable; a higher β value indicates a more significant impact of the predictor variable on the outcome. For example, $e^{\beta 1}$ quantifies how much the odds of the outcome (the number of visits to the park) change with a 1-unit increase in the predictor (travel cost X4). The term μi represents the error term in the model.

To select the appropriate estimator, this paper analyzed the demand function for a recreational site using Ordinary Least Squares (OLS) regression and found it unsuitable for modeling count data due to several violations of its assumptions. The Shapiro-Wilk test in **Table 1** revealed a significant deviation from normality (W = 0.80656, p-value = 1.615e–14), indicating that the residuals were not normally distributed. This violation directly undermined a key requirement of OLS. Additionally, **Figure 1** shows patterns and increasing variance in residuals with higher fitted values, which violate linearity and homoscedasticity. These results highlighted that OLS regression could lead to biased and inefficient estimates for count data. **Table 2** revealed that some variables, like Z4, Z7, and Z9, were not statistically significant, further questioning the use of OLS. These findings suggested that OLS regression cannot effectively handle count data's discrete and non-negative nature. Therefore, it is recommended to use count data regression models such as the Poisson or Zero-truncated Poisson models, which are better suited for count-dependent variables and provide more reliable estimates [22].

This research evaluated count regression models, specifically the standard Poisson and Zero-Truncated Poisson (ZTP) models, for analyzing count data without negative values. The ZTP model is particularly suitable since it handles count data that lacks zeros, which is relevant as non-users of the park were excluded from the analysis [3, 23–28]. The analysis revealed that the ZTP model provided more statistically significant estimates than the Poisson model (see **Table 3**). It also showed superior goodness-of-fit, with lower Akaike Information Criterion (AIC = 1148.731) and Bayesian Information Criterion (BIC = 1174.623) values, as shown in **Table 4**. The Pseudo R^2 of the ZTP model (0.4219) was higher than that of the Poisson model (0.3782632), indicating better explanatory power. Additionally, the Pearson Chi-Square Goodness-of-Fit Test value for the ZTP model (1101.051) is greater than the Poisson model's value (832.3646), further supporting its suitability. **Figure 1** demonstrated that the ZTP model's residuals were more evenly distributed around zero, indicating less curvature and heteroscedasticity than the Poisson model. Although some heteroscedasticity remained, the ZTP model effectively captured the zero-truncated nature of the data. Thus, the ZTP model was recommended for analyzing zero-truncated count data, with potential further improvement using Zero-Truncated Negative Binomial (ZTNB) models to address any overdispersion.

This research collected data through an online survey, receiving 227 responses from residents in Saudi Arabia. After excluding non-park users, the final sample size was 188 participants. This reduction was primarily due to excluding individuals who do not visit the park and the generally low response rates to online surveys in the region. The analysis revealed that the smaller sample size did not affect the validity of the results. The goodness-of-fit metrics, including the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC), and Pseudo R^2 values, demonstrated a reliable fit to the data. Previous studies using the travel cost method have found meaningful results with similar small sample sizes [15, 16]. However, increasing the sample size in future research could improve the robustness and generalizability of the findings. All participants provided informed consent, and the survey was approved by the Scientific Research Ethics Committee at Taif University (approval number 43-75,7 dated 29/5/2022). The survey included 25 questions across five sections. The first four sections addressed visit frequency, travel costs, substitute sites, and demographics such as income and age. The fifth section focused on park usage for decision-makers. The dependent variable is the total number of visits (Yi) to the recreational site in the past year. Furthermore, the primary independent variable in this study is the round-trip travel cost, measured in Saudi Riyals (X4), which serves as a proxy for price in the demand function. According to the Law of Demand, there is an inverse relationship between price and quantity de-

manded, implying that higher travel costs result in fewer visits. Previous studies [16–18, 29] confirm that travel costs significantly negatively affect visitation, though the definitions and components of travel costs vary. While some studies categorize these costs into accommodation, distance, and time [18], others include fuel, parking fees, and additional travel expenses [3]. This research incorporates three components of travel costs—distance, accommodation, and time—based on local data and previous research conducted in similar contexts. Distance costs were calculated assuming a medium-sized car traveling at an average speed of 60 km h–1 [30]. The round-trip distance is multiplied by the fuel price of 2.20 SAR per liter from 2021. Accommodation costs were estimated based on the average cost of 250 SAR per night for a hotel room accommodating two guests. Visitors from within 100 km, 200 km, and over 200 km were assumed to stay for one, two, and three nights, respectively. The value of travel time, the third component, represents the opportunity cost of time spent traveling. This was estimated at 30% of the wage rate, a commonly used benchmark in similar studies [31]. While this assumption reflects the mid-range of values typically adopted in the literature (ranging from 25% to 50%), variations in this coefficient could affect the results [13, 18, 29, 31]. For instance, increasing the time value to 50% of the wage rate would amplify the total travel cost, potentially reducing the estimated consumer surplus and, consequently, the park's economic value. Conversely, lowering this percentage would yield a higher consumer surplus. According to Twerefou and Ababio [16], the variable measuring knowledge of a substitute site (Z6) is binary: 1 indicates knowledge of a substitute site, while 0 indicates no knowledge. In economic theory, the availability and price of substitutes are significant independent variables influencing the quantity demanded in the demand function. However, determining the prices of alternative sites poses challenges due to their inherent differences. Therefore, knowledge of an alternative site acts as a proxy for the price of the substitute variable in the demand function. A negative relationship is anticipated between knowledge of an alternative site and the number of visits to the study site. This variable has been referenced in various ways in the literature. For instance, Preez and Hosking [18] suggested that the round-trip travel time for each visitor to a preferred alternative site (measured in hours) has a positive and significant effect on the dependent variable. Zhang et al. [3] included the substitute site location as a dummy variable, coding it as 1 if the respondent visited that site more than any other park in the city during the previous year and 0 otherwise. Their study found that the substitute site variable positively and significantly impacts the dependent variable. Additional independent variables in this analysis include socioeconomic characteristics such as education level, gender, age, family size, and household income. The respondent's age (Z1) is classified into five groups based on age ranges. Older adults are expected to be less inclined to travel further for leisure than younger adults, leading to an anticipated negative correlation [10]. The monthly disposable income of Visitor I (Z2) is categorized into five groups based on income levels. According to economic theory, a positive relationship exists between income and quantity demanded; thus, a positive sign is expected, indicating that higher income allows for more frequent trips to a location [16]. Family size (Z3) is measured by the total number of individuals in the visitor's household. A negative sign is anticipated because tourists with larger families may allocate more of their income to essential goods rather than leisure activities [15]. The visitor's education level (Z4), measured in years, is an ordinal variable categorized into five groups based on educational attainment. Previous studies suggest a positive correlation, indicating that individuals with higher education levels tend to make more frequent trips to a location [15, 17]. Visitor gender (Z5) is a binary variable, where 1 indicates males and 0 indicates females. A positive sign is anticipated for male visitors [11]. The variable related to having children (Z7) is also binary; 1 signifies the presence of children in the family, while 0 indicates otherwise. A positive sign is expected if children are present, as families with children are generally more inclined to visit parks than those without. Lastly, employment status (Z9) is a categorical variable presumed to positively impact park visits, as employed individuals tend to visit parks more frequently than unemployed visitors [13].

Table 1. Goodness-of-fit for the OLS model.

Goodness-of-Fit Tests	
Durbin-Watson test	DW = 1.694 p-value = 0.01395
Shapiro-Wilk normality test	W = 0.80656 p-value = 1.615e−14
AIC (Akaike Information Criterion)	1249.227
BIC (Bayesian Information Criterion)	1278.355
Number of fitted (predicted) values less than 0	24

Table 2. The demand function estimation of Saysed National Park using the OLS model.

Variables	Coefficient
Travel cost (X4)	−0.0041982 (0.0007036) ***
Income (Z2)	1.1577688 (0.4295837) **
Education level (Z4)	−0.8464702 (1.0307565)
Gender (Z5)	−2.8432295 (1.0729201) **
Knowledge of substitute site (Z6)	−2.1871932 (1.0018214) *
Having children (Z7)	−1.3799034 (1.0280544)
Job (Z9)	−0.4553017 (0.4955774)
_cons	16.2142955 (4.8226932) ***
Residual standard error	6.536 on 180 degrees of freedom
Multiple R-squared	0.3094
Adjusted R-squared	0.2825
F-statistic	11.52 on 7 and 180 DF
p-value	4.677e−

Note: Significant. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 '1'.

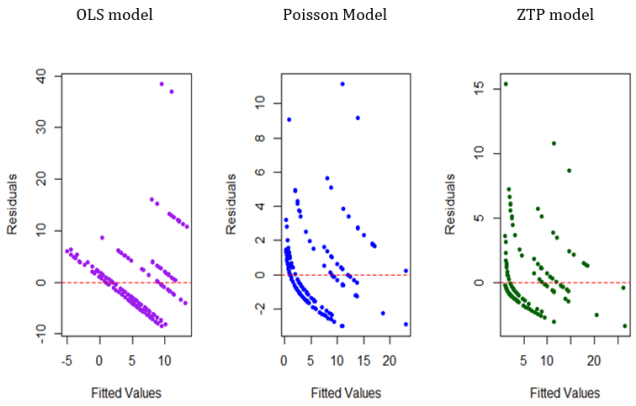

Figure 1. Residual plot for OLS model, Poisson model, and ZTP model.

3. Results

3.1. Descriptive Statistics

Table 5 presents the descriptive statistics for the analyzed variables, based on 188 observations representing the number of visitors. The travel cost variable ranges from a minimum of 4.508295 SR to a maximum of 2,523.244 SR. The average travel cost per visitor is 651.8312 SR, with a standard deviation of 718.8504 SR. For further details on the other independent variables, please refer to **Table 1**. The survey results indicate that most visitors to the park fall within the age group of 36 to 45 years, while older adults represent the smallest segment of visitors.

3.2. Model Results

3.2.1. Poisson Regression Results

The analysis of factors influencing visits to Saysed Park in 2022 yielded several significant findings, detailed in **Table 2**. The value of μ_i represents unobserved variables that affect the dependent variable. Travel costs (X4) showed a statistically significant negative impact on visitation, consistent with economic theory and previous studies findings [3, 11, 14, 16, 17], with higher travel costs associated with fewer visits. Similar to the findings of previous studies [12, 15], income (Z2) had a significant posi-

Table 3. The demand function estimation of Saysed National Park using both the Poisson and ZTP regressions.

Variables	Coefficient	
	Poisson Model	ZTP Model
Travel cost (X4)	–1.122e–03 (6.689e–05) ***	–0.0014093 (0.0000865) ***
Income (Z2)	3.240e–01 (3.300e–02) ***	0.3907829 (0.0367909) ***
Education level (Z4)	–1.048e–01 (5.380e–02)	–0.1176649 (0.0545105) *
Gender (Z5)	–6.017e–01 (7.583e–02) ***	–0.6941135 (0.0826816) ***
Knowledge of substitute sites (Z6)	–4.478e–01 (6.619e–02) ***	–0.5158594 (0.0707056) ***
Having children (Z7)	–3.001e–01 (6.696e–02) ***	–0.3363144 (0.0705513) ***
Job (Z9)	–1.052e–01 (3.253e–02) **	–0.1214127 (0.0341501) ***
_cons	3.080e+00 (2.616e–01) ***	3.116845 (0.267684) ***

Note: Significant. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 '1'.

Table 4. Goodness-of-fit for the Poisson model and ZTP model.

Goodness-of-Fit Test	Poisson Model	ZTP Model
Pseudo R2	0.3782632	0.4219
Log likelihood	–609.4925	–566.36551
Pearson Chi-Square Goodness-of-Fit Test	832.3646	1101.051
AIC (Akaike Information Criterion)	1234.985	1148.7310
BIC (Bayesian Information Criterion)	1260.876	1174.623

tive effect, indicating that higher-income individuals visited more frequently, supporting the study's hypotheses. Specifically, as income increased, so did the number of visits to Saysed Park. Knowledge of substitute sites (Z6) significantly reduced park visits by 68% (1-exp(−0.5158594) = 0.68) aligning with economic theory and the conclusions of Ortacesme [17]. In contrast to the findings of previous studies [3, 15, 17], the educational level (Z4) showed a negative association with visitation. This suggests that individuals with higher education levels visited less frequently than those with lower education levels. One possible explanation is that people with higher education tend to prefer destinations with better facilities. Gender (Z5) analysis revealed that females visited the park more frequently than males [16], with males exhibiting an

11% (1-exp(−0.1176649) = 0.11) reduction in visits. This may be attributed to recent policy changes in Saudi Arabia allowing women to drive. Employment status (Z9) had an unexpected negative relationship with park visits, as unemployed individuals and students were more frequent visitors than employed individuals. Families with children (Z7) also visited the park less often, possibly due to prioritizing essential expenditures over recreational travel. This result aligns with the conclusions of Zandi et al. [15]. Age (Z1) and family size (Z3) were found to be statistically insignificant and were excluded from the final model. These findings offer valuable insights into the socioeconomic and demographic factors influencing park visitation. However, the limited sample size (fewer than 200 responses) may affect the accuracy and generalizability of the results, highlighting the need for further research with a larger sample size.

3.2.2. Estimating WTP and Consumer Surplus

Following Ortacesme [17], this study estimates the consumer surplus (CS) per trip per individual using the ratio of the negative average annual visits to the park and the demand function slope (cost coefficient estimated in the demand function). The travel cost coefficient is (–0.0014093), while the average total annual visits are (5.617021). The consumer surplus is calculated as follows:

CS = average of the total annual number of visits (5.617021)/–demand function slope (cost coefficient which equals –0.0014093) = 3985.68 SR (1062.85 $)

To find the total consumer surplus, we multiply CS

Table 5. Descriptive statistics of the independent variables.

Variables	Observations	Mean	Std. Dev.	Min	Max
Travel cost (X4)	188	651.8312	718.8504	4.508295	2523.244
Age (Z1)	188	2.654255	1.242145	1	5
Income (Z2)	188	3.191489	1.366338	1	5
Family size (Z3)	188	5.260638	2.434411	0	15
Education level (Z4)	188	4.771277	0.4914504	2	5
Gender (Z5)	188	1.462766	0.4999431	1	2
Knowledge of substitute sites (Z6)	188	0.5478723	0.4990319	0	1
Having children (Z7)	188	0.6542553	0.4768804	0	1
Job (Z9)	188	2.760638	1.161386	1	4

by the number of visits (1056):

Total CS = 3985.68 * number of visits (1056) = 4208879.7 SR ($1122367.9). This value represents the park's annual recreational use value and reflects the total consumer surplus (TCS), indicating the social benefits provided by the park each year.

4. Discussion

This research assessed the economic value of Saysed National Park and examined factors influencing visitor attendance using the Individual Travel Cost Method (ITCM) and a zero-truncated Poisson regression model. The model identified travel costs as the primary independent variable, including transportation, accommodation, and travel time expenses. Additional variables, such as income, knowledge of substitute recreational sites, gender, employment status, parental status, and education level, were also analyzed. The results showed that travel costs significantly reduced visitation, consistent with economic theory. Awareness of substitute recreational sites further decreased visits [17]. Income positively influenced park attendance, indicating that higher-income individuals were more likely to visit [12, 15]. Contrary to most studies, higher educational attainment was associated with fewer visits, suggesting that individuals with advanced education levels opted for other recreational activities. Gender analysis revealed that females visited more frequently than males, potentially reflecting recent policy changes in Saudi Arabia allowing women to drive [15, 16]. Families with children were less likely to visit, likely due to prioritizing essential expenses over recreational travel [15]. The annual economic value of Saysed National Park was estimated at SR 4,208,879.70 (approximately $1,122,367.90) based on consumer surplus calculations. This valuation underscores the park's importance as a significant recreational and economic asset. Policymakers are encouraged to align budget allocations for park rehabilitation and management with its estimated economic value to ensure efficient resource use. The broader implications of this research extend beyond Saysed National Park. It highlights the economic advantages of conserving natural recreational sites and provides a methodological framework for evaluating similar locations [11]. Insights into visitor preferences and socioeconomic factors can inform sustainable tourism development strategies, attract diverse visitors, and enhance regional tourism. Applying this approach to other sites can support improved decision-making for sustainable tourism and resource management. A key limitation of this study was the low survey response rate, which may affect the generalizability of the findings. Future research should incorporate travel costs for alternative sites to improve accuracy and expand the application of this model to other regions in Saudi Arabia and beyond. Additionally, integrating variables such as environmental attributes, visitor satisfaction, and seasonal effects can further refine future analyses.

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Institutional Review Board Statement

Not applicable.

Informed Consent Statement

Not applicable.

Data Availability Statement

Data were collected from an online survey with 227 responses from residents of Saudi Arabia. Survey results are available at this link: https://docs.google.com/spreadsheets/d/11Vv7KMsu02eNJwNmKT7UywwXbgehYerE/edit?usp=sharing&ouid=107378543196500403041&rtpof=true&sd=true.

Conflicts of Interest

The authors declare no conflict of interest.

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