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Transformation of Toronipa beach tourism: Valuation and exploring the socio-economic factors on tourist attraction

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ABSTRACT

Toronipa beach is one of the famous marine tourism destinations in Southeast Sulawesi, particularly in Konawe. With its beautiful natural potential and relatively straightforward accessibility, Toronipa Beach attracts many local and out-of-town tourists. However, this region has not fully realized its economic potential. To facilitate the decision-making process for its management and development, Economic valuation is very much needed. This study was carried out to estimate the economic value of Toronipa Beach and to identify the socioeconomic factors that influence the number of tourist visits. This study uses the individual travel cost method as an analytical approach and multiple linier regression. The findings indicate that the economic value estimation of Toronipa beach tourism using the individual travel cost method results in an economic value estimate of Rp 75.280.509.614,00 with a consumer surplus value per individual of Rp 450.000,00 per year. According to socio-economic factors that travel costs are inelastic even though the parameter elasticity value is less than 3% and visitor income is positive indicates that visits to Toronipa beach is negative inferior, means that income increases demand to Toronipa beach will increase. The implication of the study that accessibility can be improved by lowering the cost of renting tourist facilities, which can reduce the cost of tourist travel.

1. Introduction

Southeast Sulawesi is a province in Indonesia, located in the southeastern region of Sulawesi Island. This province is renowned for its exceptionally plentiful natural resources, encompassing mountains, scenic beaches, and clean lakes. The tourism sector in Southeast Sulawesi possesses significant and varied potential, particularly in the realms of nature, culture, and marine tourism. According to the 2023 data on visitor numbers by tourism type in the Regency/City published by the Central Statistics Agency of Southeast Sulawesi, beach tourism is the third most preferred tourist destination in Southeast Sulawesi Province (Badan Pusat Statistik Provinsi Sulawesi Tenggara, 2024). Southeast Sulawesi Province boasts 296 beach tourism sites distributed throughout its regencies and cities. Konawe Regency is the second most popular destination for beach tourism. Southeast Sulawesi has excellent potential for developing tourist destinations, mainly focusing on ecotourism and sustainable tourism. The Southeast Sulawesi Provincial Government continues promoting and enhancing infrastructure to attract domestic and international tourists. One form of Southeast Sulawesi provincial government contribution is the road infrastructure development between Toronipa Beach and Kendari. Overall, Southeast Sulawesi Province offers a perfect combination of natural beauty, cultural richness, and marine tourism potential, making it one of the must-visit tourist destinations in Indonesia (Anggraini & Syahrir, 2024).

Toronipa beach is administratively located in the Konawe regency of Southeast Sulawesi Province. Toronipa beach is in Toronipa village, Soropia district, and Konawe regency. This beach is located at the bay's eastern end, bordering Southeast Sulawesi. This beach stretches 4 km wide, with a blanket of white sand along the bay. This tourist attraction is quite popular among residents and visitors from surrounding areas, as it is a beach destination highly favored by local tourists due to its captivating natural beauty (Haeruddin et al., 2022). This beach is approximately 20 km from the city of Kendari, with a travel time of 30-45 minutes by private vehicle. The road to Toronipa beach is straightforward to access. In addition to the beach's stunning beach beauty, Toronipa beach has complete facilities, including gazebos, a prayer room, public toilets, food stalls, ample parking, and various water play attractions. The described occurrence indicates that the Toronipa beach tourism destination is highly promising due to its natural beauty and excellent road infrastructure, facilitating access to the place. The potential of this tourist attraction must be harnessed through effective planning and suitable development techniques to attain sustainable tourism growth. To facilitate the decision-making process for its management and development, we present the assessment or valuation of the potential benefits of this tourist attraction as numbers or quantitative values, particularly in rupiah (Rusciano et al., 2023). The problem formulation in this research is how to estimate the value of the natural tourism of Toronipa beach in Konawe regency by calculating the travel costs incurred by tourists, commonly known as the Travel Cost Method (TCM). Economic valuation provides quantitative benefits such as: a). Calculating tourism's economic benefits and contribution to regional economic growth (Simorangkir et al., 2024); b). Identifying economic problems that will arise from damage to tourist attractions; c). Specifying the management and development budget and the potential revenue that can be generated; d). Identify ways to improve the market value of existing natural resources and update them with new values; e). Assisting in arranging local incentives to enhance tourist attractions' benefits.

The economic valuation of Toronipa beach is crucial for several reasons, such as which is a critical component of the development strategy, serving as an essential input for governmental decision-making concerning the management and development of economically advantageous and environmentally sustainable resources (Castaño-Isaza et al., 2015; Galindo et al., 2022; Prochazka & Abrhám, 2024; Riesti & Indah, 2018). Besides that, tourism can contribute to the local economy, and economic contribution and potential growth can be revealed by valuating this tourism (Mandela et al., 2021). Understanding tourists' socio-economic characteristics and willingness to pay for improved facilities can help design better tourism experiences and services. For example, tourists' willingness to pay for conservation at Chifron Beach indicates the potential to generate beach maintenance funds (Galindo et al., 2022). Previous research on beach tourism valuation has focused on economic valuation (Castaño-Isaza et al., 2015; Jo et al., 2014; Rahayu & Haryati, 2022), but does not fully integrate socioeconomic factors influencing tourist behavior. There is a lack of specific data on Toronipa Beach and limited research specifically addressing how different socio-economic factors influence tourist behavior and their economic impact on beach tourism; then, more comprehensive and location-specific valuations are needed.

Advantage of study on economic valuation provided data of tourism attraction. Study from García-Jiménez et al (2021) found the economic valuation of the recreational and educational experiences brought by avian scavenger-based tourism in Spain, concretely, at vulture supplementary feeding sites (SFS) in the Pyrenees and their important contribution to the incomes of the local human population. We estimated that photography and avian scavenger-watching at SFS produce an average of US $4.90 ± 2.67 million annually, including US $2.53 ± 1.36 million in direct economic benefits to the local population. Another study from Alqahtani (2025) states the estimate annual economic value of the Saysed National 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. Economic valuation can detect losses, such study from Hatan et al (2021) argued in the case of urban sprawl, the welfare loss is estimated at US$29,000–53,000 per km2, depending on the type of ecosystem that is forgone, whereas in agricultural sprawl over natural areas, the welfare loss is estimated at US$38,000 per km2. This welfare loss can be considered the economic value of landscape aesthetics services to the agritourism market. Economic valuation helps assess the direct and indirect economic impacts of tourism on the local community. Study from Suharno et al (2025) provided by the monetary approach mainly reflects the cost of accessing cultural heritage tourism -ceteris paribus preference- the time spent approach shows that those who invest more time in the visit are fanatics, avid enthusiasts, fascinated visitors, engagement visitors, and educated adults, these results provide more efficient

policy implications in cultural tourism management and market valuation. This aligns with Sustainable Development Goal (SDG) 11's objectives, which encourage making cities and human settlements inclusive, safe, resilient, and sustainable.

The study aims to calculate tourism's from economic benefits and contribution to regional economic growth using economic valuation through TCM. TCM has been used widely to assess the economic value of recreational sites. Leon et al (2024) identified that over 50 million people worldwide practice recreational surfing, and the presence of high-quality waves is an increasing appeal for surf-rich locations, using TCM found consumer surplus A$48 per surfing trip to the Noosa World Surfing Reserve in Australia. A study from Adu et al (2024) estimates visitors' net benefit (consumer surplus) for embarking on an eco-park recreational trip to Bunso using a sample size of 440, that the annual person value of the site is Gh¢ 191.06 ($ 22.29) translating into an annual economic value of Gh¢ 9,170,880 (US$ 1,070,114.35). There is an inverse relationship between the rate of visits and the travel cost. TCM is not only applied to consumer surplus but can also be used to estimate the revenue received by tourist attractions. Wubalem et al (2023) estimates Lake Tana has a yearly recreational value of around USD 68.5 million. However, it also demonstrates that if lake settings were to improve in quality, the value of Lake Tana would rise considerably, reaching USD 151 million. TCM has the power to estimate consumer surplus and tourist attractions so that research contributions can be meaningfull for managers and visitors to Toronipa beach tourism.

2. Method

The study conducted in the Toronipa Beach area of Konawe Regency, Southeast Sulawesi, a potential tourist attraction with good road infrastructure. This research was conducted in June – August 2024. This study is a quantitative study that is applicative in nature and involves applying theories or methods in the real world, specifically assessing the economic benefits of the Toronipa Beach tourist attraction. Two types of data are used: primary and secondary data. The primary data consists of questionnaires and interviews with visitors to Toronipa Beach and the management of the tourist attractions. The secondary data includes visitor numbers from the tourism site's management, tourism profile data from the Southeast Sulawesi Tourism Office, and tourism statistics from the Central Statistics Agency of Southeast Sulawesi Province. The respondent used in the study are tourists who visit Toronipa Beach. The study employs the accidental sampling technique to identify respondents. We cannot yet determine the exact number of visitors, but we have set the number of respondents to 100 using on-probability sampling. This method involves selecting samples based on non-random criteria. It is often used when a complete population list is unavailable (Aprilia & Kusumawati, 2021).

This study uses the travel cost method as an analytical approach. We utilize this strategy to compute the travel expenses incurred by travelers until they arrive at the tourist destination. The Travel Cost Method (TCM) is an economic valuation technique employed to assess the economic value of natural resources or tourist attractions lacking a direct market price This study employs the Individual Travel Cost Method (ITCM). This method utilizes data from individual visitors instead of regional regions. The collected data, divided into several categories. The first category concerns tourists' data, including age, gender, education, occupation, and income. The second category is information about tourist visits, including place of origin, total visits per year, distance, and travel time from origin to destination. The third category is information about travel costs, including transportation, accommodation, food and beverages, entrance fees, etc. The cost of individual travel using the following formula:

$$BPT = BT_r + BA + (BK_r - BK_h) + L \quad (1)$$

Where BPT is total travel cost; BT_r is transportation cost; BA is accommodation cost; BK_r is the cost of consumption during recreation; BK_h is the cost of consumption without recreation; and L is other expenses. The TCM uses regression to measure the relationship between travel costs and the number of tourist visits. The study use regression to calculate consumer surplus and analyze the impact of social and economic factors on the total number of tourist visits. This study employs multiple linear regression analysis. To determine the consumer surplus value of a recreation site or site characteristics, the TCM calculates the annual or daily number of recreation trips as a function of travel costs and socio-economic factors. Consumer surplus measures how much benefit visitors receive above the costs they incur to visit. The equation for consumer surplus as follows:

$$Consumer\ Suplus = \frac{(\beta_0 - \beta_1 TC)^2}{2_{\beta_1}} \quad (2)$$

Where β is the regression coefficient of travel costs in the demand function and consumer surplus refers to how much benefit individuals perceive from their visits to tourist attractions. The larger the negative value of β, the higher the consumer surplus, meaning that the benefits visitors receive are more significant than the costs. To calculate a tourist attraction's total economic value by multiplying the consumer surplus per individual by the annual number of visitors and the equation as follows:

$$TEV = CS\ x\ N \quad (3)$$

Where TEV is the total economic value; CS is consumer surplus per visitors and N is the total number of annual visitors.

3. Results and Discussion

Cost is one of the variables that can provide an overview of Toronipa beach's appeal compared to other tourist destinations, if the costs of traveling to Toronipa beach are relatively low, then this can attract tourists. The tourist visit costs to Toronipa beach (Per Visit) as shown on Table 1(b) shows that Toronipa beach's expenses are affordable for all groups, including middle-class and lower-class individuals. The table shows that the range of costs incurred for a single visit starts from fifty thousand to eight hundred thousand rupiah, where tourists usually go with family, colleagues, or office friends. Table 1(a) shows the frequency of tourists' visits to Toronipa beach and the associated costs, suggest that tourists perceive the expenses as commensurate with their experiences, and their positive experiences are likely to motivate them to return to Toronipa beach (Lin et al., 2024). The recreational location's consumer surplus (access value) is multiplied by the cost of transportation to arrive at the usage value (Ruhaized et al., 2023).

Table 1. Characteristic of Respondents

Number of Visits	Respondents	Cost of Visits	Respondents
(a)		(b)	
1-5	88	10.000-200.000	52
		210.000-400.000	25
		410.000-600.000	12
6-10	12	610.000-800.000	6
		810.000-1.000.000	5
Total	100	Total	100

Source: data processed

The regression used in this study to calculate consumer surplus and analyze the impact of social and economic factors on the total number of tourist visits. The result of regression shown on Table 2, and the equation for the result as follows:

$$LnY = -0.3046 - 2.650LnX1 + 3.660LnX2 - 0.131LnX3 - 0.1832X4 - 0.1235LnX5 - 0.3567LnX6$$

The constant value is -0.3046, which means that when the independent variable increases by one unit, the dependent variable will decrease by 0.3046. The coefficient value of X1 (visitor travel costs) is -2.650, which means that when the X1 variable increases by one unit, the Y variable (number of visits) will decrease by 2.650. The coefficient value of X2 (visitor income) is 3.660, which means that when the X2 variable increases, the Y variable will increase by 3.660. The X3 (visitor age) coefficient value is -0.13, which means that when the X3 variable increases by one unit, the Y variable will decrease by 0.13. The X4 (visitor gender) coefficient value is -0.1832, which means that when the X4 variable increases by one unit, the Y variable will decrease by 0.1832. The X5 (visitor education) coefficient value is -0.1235, meaning that when the X5 variable increases by one unit, the Y variable will decrease by 0.1235. The last one is the X6 (distance to the tourist attraction) coefficient value of -0.3567, which means that when the X6 variable increases, the Y variable will decrease by 0.3567. Table 2 shows that regression is BLUE (best linier unbiased estimators) because it is free from the classic assumption problems of normality, multicollinearity and heteroscedasticity.

Table 2. Result of Regression

Variables	Coefficient
C	-0.3046
	(-0.0916)
LnX1	-2.6503
	(-2.9434)***
LnX2	3.6603
	(3.6711)***
LnX3	-0.1318
	(-0.7042)
X4	-0.1832
	(-1.5502)
LnX5	-0.1235
	(-0.4561)
LnX6	-0.3567
	(-4.2383)***
Diagnostic Tools	
Normality Test	0.6552
Heteroskedasticity Test	0.3848
Multicolinearity Test	The VIF value < 10

Source: data processed

Based on Table 2 and equation (2) to conduct consumer surplus and the value of β_0 is -0.3046, which is a constant value; the value of $\beta_1 1$ is -2.650, and the total cost (TC) is Rp 900,000, result indicate an individual consumer surplus is Rp 450.000. To calculate the economic value of Toronipa beach by multiplying the individual consumer surplus and the number of visitors to Toronipa beach per year. The consumer surplus is a critical component of this valuation and indicates the additional benefit visitors receive from the beach over and above what they pay to visit it. This surplus can be used to justify investments in maintaining and improving the beach.

Table 3. Result of Economic Value of Toronipa Beach

Number of Visitors / year (people)	Cost of Visitors (Rp)	Economic Value of Toronipa beach (Rp)
170.000	Rp. 450.000	Rp. 72.280.509.614

Source: data processed

Table 3 shows high estimate of the economic value of Toronipa Beach, sustainable natural resource management is needed, such as investment in infrastructure and tourism support facilities, waste management, and the need for conservation efforts to maintain the attraction and also maintain its ecological health so that the benefits of this tourism can be felt in the long term (Juwana & Albar, 2019) and support increased tourist visits, ultimately influencing local income and growing business opportunities around tourism (Anggraini et al., 2024). Based on Table 2 or result of regression shows that socio-economic factor plays important role on tourist attraction in Toronipa beach. Travel costs can significantly impact travelers' behavior and decisions for long-distance travel, higher costs can affect the number of visits, especially for low-income tourists. There is a difference parameter between travel cost and income. While Higher income levels are associated with increased travel frequency and longer mileage. The coefficient value of travel cost is negative means travel costs increase, visits to Toronipa beach will decrease, this indicates that travel costs are inelastic even though the parameter elasticity value is less than 3% but the coefficient of income is positive indicates that visits to Toronipa beach is negative inferior, means that income increases demand to Toronipa beach will increase too. The findings opposite with the study from Moreno-Gutiérrez et al (2024) that income has positive inferior to Balandra Marine Park in Mexico, means that visits to BNPA are an inferior positive, meaning that the demand will reduce if income increases. The distance from the place of origin of tourists to the tourist destination significantly affects the visit of tourists. The farther away the tourist attraction is, it can reduce the number of visits that can be caused by high travel costs and long travel times (Anggraini et al., 2021). This aligns with the assumption that longer distances increase travel costs and travel time, thereby reducing the number of visits (Yang et al., 2011). Kristoffersson et al (2025) suggest to requires policies that reduce the time spent in transit and enhance the comfort of

visitors. This necessitates the development of strategies that mitigate the impact of each component of travel time, including, access, waiting, in-vehicle, and egress times.

4. Conclusion

The tourism sector in Southeast Sulawesi possesses significant and varied potential, particularly in the realms of nature, culture, and marine tourism. Toronipa beach is administratively located in the Konawe regency of Southeast Sulawesi Province. Toronipa beach is in Toronipa village, Soropia district, and Konawe regency. This beach is located at the bay's eastern end, bordering Southeast Sulawesi. This beach stretches 4 km wide, with a blanket of white sand along the bay. The economic valuation of Toronipa beach is crucial for several reasons, such as which is a critical component of the development strategy, serving as an essential input for governmental decision-making concerning the management and development of economically advantageous and environmentally sustainable resources. The study employs the accidental sampling technique to identify respondents and using TCM and ITCM. TCM has the power to estimate consumer surplus and tourist attractions so that research contributions can be meaningfull for managers and visitors to Toronipa beach tourism.

The economic value estimation of Toronipa Beach tourism using the Individual Travel Cost Method results in an economic value estimate of Rp 75.280.509.614, with a consumer surplus value per individual of Rp 450.000 per year. This method effectively estimates the economic value of non-market resources by using travel costs as a price proxy. Based on regression analysis, the number of tourist visits to Toronipa Beach is influenced by three main socioeconomic factors: travel costs, which higher travel cost tend to reduce the number of visits; visitor income, where higher income increases the number of visits; and distance, with longer distances reducing the frequency of visits due to higher cost and time. The implication of the study Accessibility can be improved by lowering the cost of renting tourist facilities, which can reduce the cost of tourist travel. Marketing efforts should also be more intensive, utilizing various social media platforms to introduce the uniqueness and appeal of Toronipa Beach more widely. The development of local facilities such as lodging, dining, and recreational activities needs to be optimized to provide a more enjoyable tourist experience.

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References

Adu, K., Ankomah Damoah, E., Bour, K. B., Oppong-Kusi, B., & Sackey, F. G. (2024). An economic valuation of the Bunso Eco-Park, Ghana: an application of travel cost method. *Cogent Social Sciences*, *10*(1). doi: 10.1080/23311886.2024.2341481

Alqahtani, R. A. (2025). Economic valuation of Saysed national park in Saudi Arabia using the travel cost method. *Research on World Agricultural Economy*, *6*(1), 614–623. doi: 10.36956/rwae.v6i1.1550

Anggraini, Y., Prima, S. R., Triani, N., & Hariono. (2024). Exploring the interaction between

Kendari's economic growth and its hinterland. *Optimum: Jurnal Ekonomi Dan Pembangunan*, *14*(2), 253–262. doi: 10.12928/optimum.v14i2.9456

Anggraini, Y., Rosnawintang, & Matoka, U. (2021). Perkembangan ruang terbangun kawasan strategis Kota Kendari sebagai penentu perkembangan penduduk dan sarana prasarana dasar kawasan. *Eksis: Jurnal Ilmiah Ekonomi Dan Bisnis*, *12*(2), 241–247. doi: 10.33087/eksis.v12i2.274

Anggraini, Y., & Syahrir, S. N. (2024). Economic growth in Southeast Sulawesi: The pivotal role of infrastructure (2010-2022). *International Journal of Economics Development Research (IJEDR)*, *5*(1), 31–50.

Aprilia, F., & Kusumawati, A. (2021). Influence of electronic word of mouth on visitor's interest to tourism destinations. *The Journal of Asian Finance, Economics and Business*, *8*(2), 993–1003.

Badan Pusat Statistik Provinsi Sulawesi Tenggara. (2024). *Jumlah Wisata Menurut Jenis Wisata dan Kabupaten/Kota Tahun 2023*.

Castaño-Isaza, J., Newball, R., Roach, B., & Lau, W. W. Y. (2015). Valuing beaches to develop payment for ecosystem services schemes in Colombia's Seaflower marine protected area. *Ecosystem Services*, *11*, 22–31. doi: 10.1016/j.ecoser.2014.10.003

Galindo, J. W. ., Roldán-Clarà, B., & Mendoza, A. P. . (2022). Economic benefits to conserve the tourism potential of Chifron beach in the district of Capachica, Puno, Peru. In *Soft Computing and Fuzzy Methodologies in Innovation Management and Sustainability*. Springer, Cham. doi: 10.1007/978-3-030-96150-3_8

García-Jiménez, R., Morales-Reyes, Z., Pérez-García, J. M., & Margalida, A. (2021). Economic valuation of non-material contributions to people provided by avian scavengers: Harmonizing conservation and wildlife-based tourism. *Ecological Economics*, *187*. doi: 10.1016/j.ecolecon.2021.107088

Haeruddin, Jawiah, S., Lebang, N. S., Togala, R., & Erfain. (2022). Analisis perubahan perilaku ekonomi masyarakat sebagai dampak pengembangan pariwisata berbasis masyarakat. *Arus Jurnal Sosial Dan Humaniora (AJSH)*, *2*(3), 196–208. doi: 10.57250/ajsh.v2i3.136

Hatan, S., Fleischer, A., & Tchetchik, A. (2021). Economic valuation of cultural ecosystem services: The case of landscape aesthetics in the agritourism market. *Ecological Economics*, *184*. doi: 10.1016/j.ecolecon.2021.107005

Jo, E., Yun, H. S., Suh, Y. C., Lee, J., & Lee, J. L. (2014). Economic analysis of beach safety level on the contingent valuation in Haeundae beach. *Journal of Coastal Research*, *72*(sp1), 112–116. doi: 10.2112/SI72-021.1

Juwana, I., & Albar, M. S. (2019). The improvement of solidwaste management in Cibodas Botanical Garden through environmental economic valuation using the travel cost method. *The 4th International Conference on Science and Technology (ICST 2018)*. doi: 10.1051/e3sconf/20197603001

Kristoffersson, I., Liu, C., & Klar, R. (2025). Large-scale modelling of visitors' long-distance trips to Sweden. *Transportation Planning and Technology*. doi: 10.1080/03081060.2025.2465560

Leon, J. X., Manero, A., Lazarow, N., Spencer-Cotton, A., Wegener, T., Jarratt, P., & Pearce, T. (2024). Surfing at the Noosa World surfing reserve, Australia: Direct expenditure and travel cost analyses of recreational surfing. *Coastal Management*, *52*(6), 449–470. doi: 10.1080/08920753.2025.2443376

Lin, G., Gurgel, A., & Reilly, J. M. (2024). Quantifying the recreation use value of New England natural lands. *Environmental Challenges*, *14*. doi: 10.1016/j.envc.2024.100849

Mandela, V. T., Sudrajat, & Harini, R. (2021). Study on the economic valuation of Gemah beach tourism during the Covid-19 pandemic in Tulungagung regency, East Java. *E3S Web of Conferences 325*. doi: 10.1051/e3sconf/202132503008

Moreno-Gutiérrez, M., Hernández-Trejo, V., Valdivia-Alcalá, R., Juárez-Mancilla, J., Cruz-Chávez, P. R., & Jakes-Cota, U. (2024). Linking tourist willingness to pay and beach management: A travel cost analysis for Balandra Marine Park, Mexico. *Tourism and Hospitality*, *5*(4), 922–941. doi: 10.3390/tourhosp5040053

Prochazka, P., & Abrhám, J. (2024). Evaluation of environmental assets value on Borneo using the travel cost method. *BioResources*, *19*(3), 5811–5824. doi: 10.15376/biores.19.3.5811-5824

Rahayu, Y., & Haryati, I. (2022). Consumer surplus analysis using the Travel Cost Method (TCM) at the Petrus Kafiar beach tourist attraction, Manokwari regency, West Papua. *Jurnal Pengelolaan Sumberdaya Alam Dan Lingkungan (JPSL)*, *12*(3). doi: 10.29244/jpsl.12.3.534-542

Riesti, T., & Indah, S. (2018). Characteristics and economic value of tourism services in coastal area of Gunungkidul regency. *E3S Web of Conferences 73*. doi: 10.1051/e3sconf/20187310026

Ruhaized, I. S., Hassin, N. H., Abas, M. A., Hambali, K. A., Sulaiman, C., Noor, A. N. M., Abdullah, M., Mamat, M. P., Koshy, N., & Kamaludin, M. (2023). Visitor willingness to pay using travel cost method at Taman Negeri Gunung Stong, Kuala Krai, Kelantan. *5th International Conference on Tropical Resources and Sustainable Sciences (CTReSS 5.0 2023)*. doi: 10.1051/bioconf/20237302003

Rusciano, V., Ruberto, M., Baralla, S., Fasolino, N. G., Pellegrini, E., & Zucaro, R. (2023). Assessing the touristic activities of Westlands through the travel cost methods: A case study. *Water*, *15*(23). doi: 10.3390/w15234146

Simorangkir, C. O., Ramadhan, G., Sukran, M. A., & Manalu, T. (2024). Tourism development impact on economic growth and poverty alleviation in West Java. *Jurnal Kepariwisataan Indonesia*, *18*(2), 175–196. doi: 10.47608/jki.v18i22024.175-196

Suharno, Ahmad, A. A., Lestari, U., & Elfaki, K. E. (2025). Valuing Banyumas cultural heritage tourism: A comparative analysis in support of SDG's 11 for sustainable cities and communites. *E3S Web of Conferences 609*. doi: 10.1051/e3sconf/202560905001

Wubalem, A., Woldeamanuel, T., & Nigussie, Z. (2023). Economic valuation of Lake Tana: A recreational use value estimation through the travel cost method. *Sustainability (Switzerland)*, *15*(8). doi: 10.3390/su15086468

Yang, Y., Wong, K. F., & Zhang, J. (2011). Determinants of length of stay for domestic tourist: Case study of Yixing. *Asia Pacific Journal of Tourism Research*, *16*(6), 619–633. doi: 10.1080/10941665.2011.610144