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Assessing Economic Value of a Cultural Heritage Site Using Travel Cost Method

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Abstract: This study aims to calculate the economic value and analyze the effect of independent variables (travel costs, age, education, income, satisfaction, residence, time spent, and facility) on the number of tourists visits to Sonobudoyo Museum of Yogyakarta, Indonesia. This study uses primary data with a total of 257 tourist. The calculation of economic value is carried out using the Travel Cost Method approach to to Sonobudoyo Museum tourist objects in Yogyakarta. Analyzer in this research is multiple linear regression. The results of this study indicate that variable travel cost, income, satisfaction, and time spent has a significant effect while the other variable such as age, education, residence, and facility have no effect on the number of tourists visit to Sonobudoyo Museum. It is also known that the economic value of Sonobudoyo Museum is IDR 5,461,932,433 per year.

Keywords: Heritage Site; Economic Valuation; Travel Cost Method; Sonobudoyo Museum

JEL Classification: L83, Z32

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Introduction

In many nations throughout the world, tourism ranks first or second in terms of cash generation, and historic tourism is a growing trend. Given the size of the tourism industry's influence, it is hoped that each region would protect its unique cultural and historical history as a tourism resource. Most visitors savor the opportunity to explore various cultural sites for a longer period of time. As long as a cultural heritage site is nurtured and safeguarded by both the local community and the government as a destination for tourists to visit and enjoy, it will continue to draw visitors. Additionally, it makes it possible for nearby towns to profit from ongoing tourism improvements. There is a substantial amount of knowledge regarding the importance of tourism to natural heritage sites. McDonald and Wicks (1986) and Pearson et al. (2000) studied the economic impact of visitor spending associated to visits to natural heritage sites. Unfortunately, cultural legacy has been relatively overlooked and is just now receiving attention.

Culture is multifaceted not just in terms of its content, but also in terms of its definition. This is reflected in several definitions of culture that attempt to capture its dimensions, characteristics, and inclinations. For example, culture is described as "the outcome of human effort; it is an expression of

the human intellect in a material sense (e.g. monuments) or in an immaterial one" in Nijkamp and Blaas (1995) (e.g. music or literature). Give life meaning by providing context and content. Culture includes things like the performing arts, literature, historical or archaeological sites, built environments, monuments, etc. It is described as "an expression of human values" in cultural perception.

Intense and conscious, as in artistic creations and performances, or unconscious, as in religious practices. It embraces both extremes and the middle ground in family gatherings, time management, and cooking rituals. It is pervasive and largely unconscious. To feel human, you only need culture. Heritage tourism, according to Boniface and Fowler (2002), is a type of travel that combines educational activities, travel, cultural and natural protection, and economic activities. Lancaster (1966) defines cultural heritage places as utility consumers versus cultural resources based on features. Cultural resources and natural resources have many traits (Báez & Herrero, 2012). Heritage tourism in the form of a building, place, or object as a man's work of the past is done in a historical district. Historic sites comprise not only the physical shape of the community, but also the social character of the society. The cultural heritage itself reflects the noble values of the community's past that must be preserved. We will conserve the current cultural heritage as one of the tourism resources and carry out integrated development of the nearby tourist regions as part of our initiative to grow the cultural heritage tourism industry. The existence of these websites is, nonetheless, incredibly susceptible to various dangers, particularly in the present. Trends in urbanization, population expansion, and the exploitation of towns as tourism sites pose the major challenges. Therefore, action is required to save and conserve these cultural heritage places (Damanik & Saragih, 2018).

Both domestic and international tourists find Indonesia's vast cultural diversity to be particularly appealing. In retrospect, the tourism sector was largely unaffected during the global economic shock. On the other hand, encouraging tourism is thought to be a solution to the world economic crisis. because tourism can stimulate the domestic market and the physical industry. As a result, the government has long wanted to further grow the tourism industry. Today, historical education and understanding of culture have been influenced by tourist attractions. Heritage tourism travelers want to know more about the local culture and way of life, not just sightseeing. Culture-seeking tourists spend more than sightseeing-only tourists. Rich in cultural heritage, Indonesia has great potential for the development of cultural heritage tourism. In addition to having the most well-known UNESCO World Heritage Sites in Southeast Asia, Indonesia has a lot to offer visitors from around the world.

The Special Region of Yogyakarta, also known as DIY for short, is one of Indonesia's culturally rich regions. Yogyakarta's presence in his one of Indonesia's most popular tourist cities remains uncompetitive with Bali as Yogyakarta failed to attract foreign tourists after the first visit. Nevertheless, Yogyakarta has little trouble expanding its tourism industry on a global scale. We are glad of the fact that Yogyakarta won the International Tourism Award from the Tourism Promotion Organization (TPO) under the category of "Best Print Promotion" as a result of the efforts of the government and other

stakeholders. Winning an award. For Asia Pacific cities based in Korea. Since 2009, Yogyakarta City has won him four consecutive awards in different categories from TPO.

Yogyakarta's tourism products are not without cultural relevance either. It is inextricably linked to the ideals of Yogyakarta's wisdom since it represents the city's desire to give kids and the general public the opportunity to understand patterns and culture in a relaxed setting. Preserving cultural heritage Given the importance of doing so, the government intervened in hopes of preserving cultural heritage in each region of Indonesia. It needs to be protected and maintained in order to advance public awareness and national interests.

Sonobudoyo State Museum is one of the many cultural gems in DIY State. A regional technical implementation unit in the cultural services of the Special Region of Yogyakarta, the Sonobudoyo Provincial Museum, or simply the Sonobudoyo Museum, houses a collection of scientific and cultural values. You are in charge of looking after the exhibits in a specific museum. It is tasked with collecting, maintaining, and preserving the collections of the Sonobudoyo State Museum, conducting research, library services, and teaching and presenting cultural education.

There are numerous non-market techniques of valuing recreational facilities, one of which uses the Travel Cost Method, although recreational facilities have no market value (TCM). TCM calculates the cost of a traveler's trip from their place of residence to the location of the attraction and return, with the goal of determining the economic value of a tourist object. This approach is frequently used to describe demand for services related to recreational areas' natural resources. Wildlife sanctuaries, fishing and hunting areas, ecological parks, and undeveloped areas of land are a few examples. Visitors to these locations travel from various locations. This approach looks at how people travel and gauges how willing they are to spend money to go somewhere. It is envisaged that this approach will offer an economic assessment of the Sonoboyo Museum of Children's Songs as a starting point for thinking about future management strategies that will be more effective.

The amount of visitors to tourist attractions can be influenced by a number of factors, including the average income and the prices that tourists incur. The frequency of visits to attractions increases by 0.251% for every 1% increase in visitors' average monthly income. People with higher incomes are more likely to travel to tourist places for vacations, while people with lower incomes are less likely to do so (Badar, 2013). The breadth of tourist visits to the marine tourism islands of Untun Java is significantly impacted by fluctuating travel expenses, income, and visit duration, according to research done by Zulpikar et al. (2018). On Untung Jawa Island, ecotourism has a potential economic impact of IDR 68,505,101,600, and one visit results in an IDR 397,592 consumer surplus. This is more than the IDR 296,860 per trip that the average physical visitor spends.

Research conducted by Saptutyningsih and Ningrum (2017), entitled "Estimated the Economic Value of Goa Cemara Beach Attraction in Bantul Regency". Income, travel expenses, distance, impressions of amenities, leisure time, and age are the variables used

in this study. The purpose of this study was to identify the factors that affect how intensely tourists visit Goa Semara Beach and to calculate the potential consumer surplus that may be accessible to visitors. The travel cost approach, part of the revealed preference methodology, is used in this study. 100 tourists were the sample used in this investigation. According to the study's findings, the cost of travel, the distance traveled, and dummy impressions of amenities in the linear model and logs all affect the number of visitors to Goa Cemara Beach attractions. Variable travel expenses had little impact on the frequency of visits to these attractions, according to the semi-log model. In addition, the results of the study also obtained the size of the consumer surplus in the linear, semi-log and loglog model of IDR 3.6 million, IDR 7.1 million and IDR 5.8 million, respectively.

Previous research conducted by Hadi (2015) with the title "Economic Evaluation of Banyak Mountain Tourism Objects in Batu City Using Individual Travel Cost Approach", aims to analyze the perceived benefits of visitors from the Banyak Mountain tourist attraction and analyze the visitor's willingness to pay in order to participate preserve and improve better management. Some variables used in this study are travel cost, distance from home, travel time and income, where travel costs, distance of tourist attraction from home, and travel time required affect the level of visits to attractions. The travel cost coefficient which is negatively significant, the distance coefficient that is significantly positive, and the travel time that is significantly negative. While income is not a significant positive effect on the visit of Banyak Mountain tourism objects in Batu City. Consumer surplus per individual per year is IDR 121,847.5 and one-time consumer surplus of IDR 47,596.68.

To ascertain the volume of visitors to the Kalibiru Ecotourism attraction, Gravitiani et al., (2018) conducted a study titled "Economic Valuation of Kalibiru Ecotourism using the Individual Travel Cost Method." The approach or methodology employed in this study is the individual travel cost approach, with Kalibiru Ecotourism guests as the subject. In this survey, 68 respondents made up the sample, which was rounded to 70 respondents. Primary and secondary data are used in this investigation. An interviewing strategy was used to gather primary data. Linear Regression is the analytical tool utilized. The dependent variable in this study is the number of visitors to Kalibiru Ecotourism, whereas the independent factors are age, visit dummy, number of dependents, education level, income, and gender. Based on the analysis that has been done, it is determined that just two of the seven variables studied—varying travel costs and education level—have a substantial impact on the dependent variable. The number of visitors to Kalibiru Ecotourism is not significantly influenced by other factors like age, visit dummy, number of family dependents, income, or sex. From this research it is also known that the economic value of Kalibiru's ecotourism is IDR 692,296,875,000, with a consumer surplus of IDR 175,000,000 or IDR 1,562,500 per visit.

Sahlan (2008) conducted research about "Economic Valuation of Otak Kokok Gading Natural Tourism with the Travel Cost Approach (Case Study in Montong Betok Village, Montong Gading District, East Lombok Regency)". This study uses multiple linear regression analysis tools with depenedent variable is visiting number and for independent variables used including the variable travel costs, time costs, visitor perceptions, substitution characteristics, facilities, and individual income. The sample used is all local

tourists who visit the Otak Kokok Gading nature tourism as many as 100 people. According to the study's findings, the number of visitors to Otak Kokok Gading's natural attractions was positively and significantly influenced by the individual income variable, while negatively and significantly impacted by the substitute characteristics variable. Then for the variable travel costs, time costs, visitor perceptions, and facilities in the Otak Kokok Gading nature tourism, those has no effect on the number of tourist visits to Otak Kokok Gading. Based on the research results, it also can be seen that the largest economic value of Otak Kokok Gading natural tourism comes from West Lombok Regency, as much asIDR 491,686,957.7- / year for every 100 people.

Grilli et al. (2018) conducted a study entitled "The Value Of Tourist Angling: a Travel Cost Method Estimation of Demand for Two Destinations Salmon Rivers in Ireland". The goal of this study is to estimate, using the trip cost approach, the economic benefit that tourists or fishers derive from visiting the Salmon River. The number of visits (angler) was the dependent variable in this study, while the six other factors (group size, price, distance, location, age, and foreign visitors) were utilized as independent variables. It is a multiple regression analysis that. The journey cost approach is used to estimate the demand for salmon recreation. The findings of this study indicate that 5 of the 6 variables—variable travel expenses, distance, position placement, age, and international visitors—have a substantial impact on the growth in the number of visits to the Moy and Corrib fisheries. Despite the fact that studies on the variable group size suggests that it has little impact on the frequency of visits in the Moy and Corrib fisheries, The large estimates of consumer surplus suggest that visitors are fishing at the Moy and Corrib fisheries. According to econometric analysis, the average consumer surplus each fishing day is estimated to be €424, or roughly half of the entire daily willingness to pay.

Using data from Zulpikar et al. (2018) with the title "Economic Valuation of Marine Tourism in Small Island Using Travel Cost Method (Case Study: Untung Jawa Island, Indonesia)." The number of tourist visits is the dependent variable, while the independent factors are travel expenses, income, distance, respondent age, gender, educational attainment, and duration. This study's methodology employs the Individual Travel Cost Method (ITCM). Samples were obtained from visits during he three different seasons: weekdays, weekends and public holidays. The findings indicate that travel expenses, income, and distance to destinations are the main factors influencing the degree of tourism demand in Untung Jawa Island. He made a consumer surplus of IDR 397,592 from one trip, which is equivalent to the potential economic value of marine tourism on Untung Jawa Island of IDR 68,505,101,600. This is more than the IDR 296,860 per trip that the average physical visitor spends. The economic state of nearby communities is positively impacted by tourism-related activity.

Torres-Ortega et al. (2018) conducted a study entitled “Economic Valuation of Cultural Heritage: Application of Travel Cost Method to the National Museum and Research Center of Altamira”. In order to determine the demand curve and economic worth of the Altamira National Museum and Research Center, TCM will be used in this study. Where this study using both methods of TCM that are individual and zonal. The variables used for the calculation of individual travel costs method (ITCM) are travel cost (TC), age, gender,

education, labor situation, income, and number of observations. Travel expenses and income are the variables utilized in the zonal travel costs method (ZTCM) computation. The obtained travel cost coefficients for the ITCM and ZTCM were both negative for coefficient estimations, supporting the notion that visits decline as travel expenses rise. To determine the museum demand curve, two different TCM methods were used. A forecast of the National Museum and Research Center in Altamira's yearly economic value was also provided. This ranges from €4.75 million to €8 million annually. The Altamira Museum's visitors were found to be sensitive to price changes, raising overall trip expenses and lowering visit rates, according to price elasticity of demand forecasts. Both approaches provide statistically significant results (the number of trips requested and trip costs are highly correlated), but the consumer surplus results provided by both approaches are very different. (the consumer surplus obtained by ITCM is 31.95 compared to ZTCM). 18.55 euros per visitor).

Lamsal et al. (2016) conducted the research entitled "Tourism and Wetland Conservation: Application of Travel costs and Willingness to pay an Entry Fee at Ghodaghodi Lake Complex, Nepal". This study aimed to determine the number of tourist visits to the Ghodaghodi Lake Complex (GLC) in Nepal by analyzing variables that may influence tourist visits there. is. The number of lakes visited in the previous year, the visitor's domicile, age, sex, travel distance (km) from the visitor's residence to the glc, and the total cost of travel to the lake were the independent variables for this study (NPR is in thousands). Utilizing the Individual Travel Cost Method (ITCM) analysis method and tools, multiple regression analysis is carried out. According to research, the price of travel is NPR 540 ($7.71) per person. For each visitor making an entry, the average willingness to pay for admission is NPR 34 ($0.48). More than 50% of the tourists surveyed were middle-class, and costs increased with distance. Their fundamental needs take up the majority of their consumable money, not leisure. It was determined that a visitor's travel expenses and leisure time had a good and significant impact on her GLC. The GLC entrance charge was also accepted as payment from visitors in order to preserve the lake's natural setting.

Ezebilo (2016) conducted the research entitled “Economic value of a non-market ecosystem service: an application of the travel cost method to nature recreation in Sweden”. The purpose of this study was to provide an analysis of recreational visits to natural areas, the economic value of such visits, and the factors that affect such visits. Additionally, it sought to investigate the viability of creating nature-based recreational management plans that may satisfy society demands for recreational facilities. A negative binomial regression model was used to examine data from a survey of Swedish citizens who were randomly chosen from a national registry. Variables used are: opportunity cost of travel time, travel cost, duration, disposable income, membership in recreational organizations, city or place of residence, fishing in the wild, owning a dog, water predominance Areas, mountainous areas, grassy areas grassland, gender, forest, education level, age, and park. The survey discovered that journeys to natural regions are taken on average 80 times annually, with each trip costing an average of 117 SEK (16 USD). Mountainous places have the least influence over forests, and vice versa. The most expensive travel destinations were those near mountains, followed by those near water, and the cheapest were those near forests. 72) was. Travel expenses, the type of natural

area, the amount of time spent traveling to and staying in natural regions, leisure pursuits, income, and domicile all had an impact on how frequently people visited these places. If Sweden's outdoor recreation policy (access rights) is meant to encourage more frequent visits to natural areas, facilities that lower the cost of these visits should be made available. Natural spaces should be managed to accommodate social preferences and recreational needs.

Research conducted by Fonseca and Rebelo (2010) estimates what factors influence the frequency of visits to the Lamego Museum, Alto Douro Wine in Portugal using 42 TCM approaches and contingent valuation method. The number of visits, travel expenses, education level, gender, income level, age, and the number of visits to other museums are among the variables utilized in this study. The findings of this study suggest that travel expenses have a detrimental impact on how frequently tourists visit the Lamego Museum. The amount of education a person has and their gender have a beneficial impact on how frequently they visit the Lamego Museum. The amount of visits to other museums and one's income had no bearing on how frequently one visited the Lamego Museum.

Research conducted by Ali et al. (2018) with the title "Assessment of Non Consumptive Wildlife Oriented Tourism in Sukau, Sabah using the Travel Cost Method" determines the quantity of tourist visits by using the TCM analysis method. Age, income, travel expenses, accommodation costs, duration of stay, satisfaction level, and time costs are among the independent factors used in this study. By doing this research, it can be known what factors influence the demand in WRC activities, including significant factors are the cost of travel and the level of satisfaction with wildlife river navigation. Higher travel costs lead to fewer annual visits to Sukau, Sabah, while higher satisfaction with the WRC leads to more annual visits. This demonstrates how crucial it is to keep Scow as the nation's NCWOT site in good condition.

Previous research concerning travel costs conducted by Parenti et al. (2019) with the title research “Quantitative methods for the economic valuation of a cultural tourism destination: case study of the Pisa Charterhouse”. The purpose of this study is to evaluate cultural tourism sites using the utility of museum visitors as the dependent variable. Age, gender, income, education, occupational position, location of residence, and country of origin are examples of independent variables. charterhouse, kind of transportation, number of tour participants, and overall mileage and costs; Two different methods were used to measure cost factors. Based on information about the distances between respondents' homes and Carthusian structures, the first method is used. The study's findings imply that public funding of cultural institutions is beneficial and probably will have a favorable effect on tourists' interests. More specifically, preserving a site that makes it possible for it to exist ensures the continuation of its highly valued function, whilst valuing can boost the number of visitors.

The research was conducted by Islam and Majumder (2015) with the title “Economic Evaluation of Lake Foy, Chittagong Using the Travel Cost Method”. This study's goal was to discover and evaluate the effects of travel expenses, number of visits, gender, age, education, income, family size, satisfaction, visits to other places, on the number of tourist

visits of the Chittagong Lake Foy tourist attraction. Sampling in this study was carried out using a random sampling method in which the sampling technique was carried out randomly from 200 visitors. Analysis was used to create a multiple regression model with an R2 value of 0.084. With a p-value of 0.05, the sum of family size and attendance costs was significant. Foy Lake is expected to be worth 294,165,270 BDT (Bangladesh Taka), or $3,792,034.49, in 2014.

To ensure openness and support management decisions, it is crucial to assess the worth of cultural resources (such as museums, heritage sites, historic sites, etc.) as they are being managed. There are two approaches to determine the economic worth of non-market resources (as previously mentioned): articulate and expose your preferred method. People are asked to give a resource a value (determined by Willingness to Pay, or WTP). Techniques such as conditional scoring and choice modeling are used. Methods for discovering preferences are based on data that was inadvertently gathered and observed behavior. Numerous research have sought to explain the variations between these two methodologies' typical results [1-3].

Harold Hotelling suggested a method to link the price of tourism to the economic value of natural regions in 1947 in response to a request from the US National Park Service to examine the economic value of natural places. The Travel Costs Method (TCM) has been widely adopted due to its continued growth in places of high recreational use [4,5]. (lakes, beaches, forests, etc.). This study aims to employ TCM to ascertain Sonobudoyo His Museum's economic value. Studies have examined the financial benefits of heritage tourism. The goal of this study is to use the travel cost method to assess the economic worth of cultural assets. It also identifies the determinants of visiting the Sonobudoyo Museum as one of his cultural heritage sites in Yogyakarta, Indonesia.

Research Method

Study site

The subjects in this study were the visitors at the Sonobudoyo Museum Tourism Object location located in the city of Yogyakarta, precisely at Jalan Pangurakan Number 6, Ngupasan, Gondomanan District, Yogyakarta. While the object in this study is the Sonobudoyo Museum. The reason why the research was carried out in this area is because the Sonobudoyo Museum Tourism Object is very potential to be developed to the fullest because besides having a place to store artifacts from the past, it also has educational facilities to get to know many cultures and also so that people do not forget history.

This type of data is obtained by using survey techniques or obtained directly from sources that are the subject of research that can be in the form of interviews or by using questionnaires distributed to visitors of the Sonobudoyo Museum tourist attraction. Primary data in this study include, the cost of travel incurred by the respondent, the age of the respondent, the level of education of the respondent, the level of income of the respondent in one month, what transportation the respondent used to reach the tourist

attraction, the duration of the visit during the tourist attraction, the distance the respondent traveled for reach tourist attractions, and respondent ratings of facilities contained in the Sonobudoyo Museum attractions. Secondary data used in this study were sourced through intermediaries such as internet, books and notes.

To summarize the relationship between variable dependent and independent variables based on previous research see Table 1.

Table 1 The References of variable correlation

Dependent Variable	Independent Variable	Correlation	References
Number of Visit	Travel Cost	-	Saptutyningsih & Ningrum (2017); Hadi 2015); Gravitiani et al. (2018); Grilli et al. (2018); Sahlan (2008); Torres-Ortega et al. (2018); Fonseca & Rebelo (2010); Ali et al. (2018); Ezebilo (2016); Parenti et al. (2019); Islam & Majumder (2016); Zulpikar et al. (2018); Lamsal et al. (2016)
	Age	+	Saptutyningsih & Ningrum (2017); Gravitiani et al. (2018); Grilli et al. (2018); Zulpikar et al. (2018); Torres-Ortega et al. (2018); Lamsal et al. (2016); Fonseca & Rebelo (2010); Ali et al. (2018); Ezebilo (2016); (Parenti et al. (2019); Islam & Majumder (2016)
	Education	+	Gravitiani et al. (2018); Islam & Majumder (2016); Torres-Ortega et al. (2018); Zulpikar et al. (2018); Fonseca & Rebelo (2010); Ezebilo (2016); (Parenti et al. (2019)
	Income	+	Saptutyningsih & Ningrum (2017); Hadi (2015); Gravitiani et al. (2018); Zulpikar et al. (2018); Torres-Ortega et al. (2018); Fonseca & Rebelo (2010); Ali et al. (2018); Sahlan (2008); Ezebilo (2016); Parenti et al. (2019); Islam & Majumder (2016)
	Satisfaction	+	Ali et al. (2018); Fonseca & Rebelo (2010); Islam & Majumder (2016)
	Residence	-	Lamsal et al. (2016); Zulpikar et al. (2018)
	Time spent	+	Ali et al. (2018); Zulpikar et al. (2018); Zulpikar et al. (2018); Sahlan (2008); Ezebilo (2016)
	Facility	+	Saptutyningsih & Ningrum (2017); Sahlan (2008)

Sampling Technique

The method used in this study uses simple random sampling. The simple random sampling method is that all populations have the same opportunity to choose as a sample. The determination of sample size is based on the number of tourists coming to the Sonobudoyo Museum in 2018 of 148,666 visitors. The Isaac and Michael formula was then used to calculate the sample size for this study, which resulted in 257 tourists being included.

Survey Design and administration

There are many data collection methods in research. The distribution of questionnaires was the method of data collection employed in this study. The community was asked to participate as respondents by providing answers to particular questions. The questionnaires used for data collection were questionnaires containing respondents' profiles and their responses to questions that were asked regarding the indicators of each study variable. Surveys will be distributed through social media.

Table 2 Descriptive statistics of the survey participants (n = 270).

Variables	Mean	Std.
Travel Cost (IDR)	114,358	76,509
Age (year)	25.02	10.165
Years of schooling (year)	11.20	2.869
Income per month (IDR)	1,792,917	1,508,180
Satisfaction (1: satisfied; 0: otherwise)	0.60	0.490
Residence (1: Yogyakarta; 0: outside Yogyakarta)	0.87	0.339
Time spent visiting the site (hours)	1.55	0.598
Facility (1: complete facilities; 0: otherwise)	0.63	0.483
Number of visits the site (times)	2.33	1.291

The travel cost of visitors to the Sonobudoyo Museum with 257 respondents has an average of IDR114,358, with a maximum value of travel costs incurred by respondents is IDR450,000 and a minimum value of IDR15,000. Travel expenses of 257 respondents have a standard deviation value of 76509.567. The average age of visitors to the Sonobudoyo Museum with 257 respondents was 25.02 years, while the eldest respondent was 73 years and the youngest respondent was 11 years old. Young respondents were students. The standard deviation of age is 10.165. The average education level for visitors to the Sonobudoyo Museum with 257 respondents is 11.20 years or it can be said that the average level of education is Senior High School. The highest level of education is undergraduate (S1) which is assumed to have studied for 16 years and for the lowest level of education is Elementary School which is assumed to have taken 6 years of education. The standard deviation value for the education level variable is 2.869 (see Table 2).

The average income for visitors to the Sonobudoyo Museum with 257 respondents was IDR1,792,917, while the lowest income was IDR100,000 and the highest income was IDR9,500,000. The standard deviation value for the income variable is 1508180,257. The average satisfaction level for visitors to the Sonobudoyo Museum with 257 respondents was 0.60 people, with the lowest level of satisfaction felt by visitors to the Sonobudoyo Museum with a value of 0 (the lowest value), while for the highest level of visitor satisfaction with a value of 1 (the highest value). The standard deviation value for the satisfaction variable is 0.490. Satisfaction is seen from the quality of security, cleanliness, security, road conditions, facilities and access to the Sonobudoyo Museum. The average residence for visitors to the Sonobudoyo Museum with 257 respondents is 0.87 people. For the minority of visitors originating from outside the province of Yogyakarta, it is assessed with a value of 0 (the lowest score), while for the majority of visitors from

Yogyakarta Province, it is assessed with a value of 1 (the highest score). The standard deviation value for the place of residence variable is 0.339.

The average time spent by visitors to the Sonobudoyo Museum with 257 respondents is 1.55 hours or the equivalent of 115 minutes. For the minimum time spent by visitors to visit Sonobudoyo Museum is 1 hour and the maximum time is 3 hours. The standard deviation value for the place of residence variable is 0.598. The average facility for visitors to the Sonobudoyo Museum with 257 respondents is 0.63 people. Conditions for incomplete facilities are assessed with a value of 0 (lowest score) while for complete facilities with a value of 1 (highest score). The standard deviation value for the facility variable is 0.483. The facilities are seen from the parking area, places of worship, the beauty of the collections they have, the arrangement of collectibles in the museum, and other supporting facilities. Based on Table 2, it can be explained that the average number of visitor visits to the Sonobudoyo Museum with 257 respondents was 2.33 per individual, the minimum number of visits was 1 and the maximum number of visits was 6. The standard deviation value for the place of residence variable is 1.291.

Data analysis

The link between the factors Travel cost, age, education, income, transportation, distance, time spent, and facilities on the number of visits in the Museum Sonobudoyo tourism was examined using this multiple linear regression test.. The model can be systematically written as follows:

$$VISIT = \alpha_0 + \alpha_1 TC + \alpha_0 AGE + \alpha_0 EDUC + \alpha_0 INCOME + \alpha_0 SATISFACTION + \alpha_0 RESIDENCE + \alpha_0 TIME + + \alpha_0 FACILITY + e \quad (1)$$

where VISIT = Number of visits to the site; TC = Travel Cost; AGE = Age; EDUC = years of schooling; INCOME = Income per month; SATISFACTION = dummy satisfaction; RESIDENCE = dummy residence; TIME = Time spent in the site ; FACILITY = dummy facilities; e = error term.

Result and Discussion

Based on the regression results in Table 3 it can be seen how the influence of the independent variable travel costs, age, education, income, satisfaction, residence, time spent, and facility to the dependent variable number of tourist visits. The travel cost variable (LnTC) has a probability value of 0.000 or less than 0.01 is on the level of significance at the 1% level, which means that there is a significant influence between the variable travel cost on the number of visits.

The age variable has a probability of 0.554 which is greater than the significance level of 1%, 5% and 10%, this implies that the number of visits are unaffected by the age variable. The education variable has a probability value of 0.405 which is greater than the significance level of 1%, 5% and 10%, which means that this education variable has no

effect on the number of visits. Income variable (LnInc) has a probability value of 0.005 or less than 0.05 is on the significance level at the 5% level, indicating a strong relationship between the income variable and the number of tourist visits.

The satisfaction variable has a probability value of 0.029 or less than 0.05 is on the significance level at the 5% level, which means that there is a significant influence between the satisfaction variable on the number of tourist visits. The residence variable has a probability value of 0.672 which is greater than the significance level of 1%, 5% and 10%, which means that this residence variable has no effect on the number of visits. Time spent variable has a probability value of 0.073 or less than 0.1 is on the level of significance at the 10% level, data demonstrates that the relationship between variable dwell duration and visits is highly substantial. The facility variable has a probability of 0.226 which is greater than the significance level of 1%, 5% and 10%, which means that this facility variable has no effect on the number of visits.

Table 3 Regression result

Variable	Coefficient
Constanta	19.621
	1.327
LnTC	-1.191***
	(0.101)
Age	0.003
	(0.006)
Edu	-0.017
	(0.020)
LnInc	-0.264**
	(0.092)
Satisfaction	-0.307**
	(0.140)
Residence	-0.073
	(0.172)
Time	0.179*
	(0.099)
Fac	0.171
	(0.141)

Dependent Variable: Number of Visit; () Standard Error; ***: Significant at the level 1%; **: Significant at the level 5%; *: Significant at the level 10%

Based on the regression model estimation results, the constant value is 19.621. furthermore, we explain how to interpret the results of fitting the number of tourist visits to explanatory variables using a linear regression model. Travel costs can be defined as the total costs incurred by each respondent in one recreational activity. Travel costs include transportation costs, documentation, consumption during recreation, parking, souvenirs, and other costs, except for entrance fees for tourist objects (see Table 3).

Based on the results of the coefficient of the travel cost variable, which is equal to -1,191. The probability value amounted 0.000 or less than 0.01 is on the level of significance at the 1% level, which means that there is a significant effect of the travel cost variable on

the number of tourist visits. The coefficient value of the travel cost regression in this model is negative, this is in accordance with economic theory, where if a price increases, consumers will tend to reduce the amount of goods consumed, that means if there is an increase of 1% in travel costs, then the number of visitors to the Museum Sonobudoyo will decrease as much as 1.19 visitors. This research is strengthened by research conducted by Saptutyningsih and Ningrum (2017); Torres-Ortega et al. (2018); Gravitiani et al. (2018); Ezebilo (2016); Ali et al. (2018); Islam and Majumder (2016); and (Parenti et al. (2019) their findings show travel costs have a negative impact on tourist visits. Meanwhile, this research contradicts the research conducted by Sahlan (2008) because in his research, variable travel costs do not affect tourist visits. Because, in order to decide which tourist attractions you want, you must not only consider the cost of visiting these tourist attractions, but also your experience and preferences of visiting them.

If this number is greater than 0.05, then the probability value for the age variable is 0.554. This means that the age variable does not significantly affect tourist visits. This could happened because the age of the respondents who visited the Sonobudoyo Museum varied, seen from the number of age variations who visited and tended to be dominated by teenager to adults and there were even visitors who were more than 50 years old. They come for recreation, research, and education. It can be concluded that there is a variation in the age of the respondents which explains rationally that age does not affect the frequency of visits to the Sonobudoyo Museum. Previous studies that is in accordance with this study is studies conducted by Gravitiani et al. (2018), Saptutyningsih and Ningrum (2017), Ezebilo (2016), Ali et al. (2018), and Islam and Majumder (2016) where the quantity of tourist visits is unaffected by the age variable. However, studies conducted by Grilli et al. (2018), Torres-Ortega et al. (2018), Parenti et al. (2019) and Lamsal et al. (2016) we disagree with this study because the age variable had a positive effect on tourist visits, with younger visitors having more visits. The probability value of the education variable for tourist visits to the Sonobudoyo Museum is 0.405, and the value of the regression coefficient is -0.017. This indicates that the education variable has a negative nonsignificant effect. That is, if the respondent's education increased her by 1. year, it reduces the number of tourist visits by a year, which is not significant. 0.017 times to the vineyard.

This is because the higher a person's education, the higher a person's level of activity will be so that the person does not have more time to often vacation or travel. Demographic variables, including the level of education, are the uniqueness of a research location (Poor & Smith, 2004). This study contradicts research done by Gravitiani et al. (2018) and Parenti et al. (2019). However, this study is supported by previous research conducted by Torres-Ortega et al. (2018), Islam and Majumder (2016), and Zulpikar et al. (2018) this is because education variables did not significantly affect tourist visits in this study. The data processing results show that income has a large negative impact on the number of tourist visits to the Sonobudoyo Museum, with a probability value of 0.005 and a coefficient value of -0.264, indicating a 10% increase in individual visitor income. I mean As a result, the number of visitors to the Budoyokan will decrease by up to 2.6 people. This is because income is an important thing related to economic activities, such as recreational activities, it need money or funds that come from income. So it can be said that respondents who

have high income prefer to allocate their income for savings and once collected they will tend to choose other tourist destinations that are memorable or destinations far from their homes. For example, they will prefer to vacation outside the city or even abroad. So it can be said that the higher a person's income to be able to enjoy other tourist attraction, it will reduce the level of tourist visits to the Sonobudoyo Museum. This is different from the research results of Gravitiani et al. (2018), Ali et al. (2018) stated that the income variable does not affect the number of visits, but has the same results and this research is strengthened by the results of previous research conducted by Hadi (2015) this indicates that income has a large negative impact on the number of tourist visits to tourist facilities. Many mountains.

The analysis of the data reveals that the satisfaction variable has a significant negative impact on the number of tourist visits, with a probability value of 0.029, which is lower than 0.05. Additionally, based on the value of the regression coefficient, the satisfaction variable has a negative sign, it indicates that tourists who are unsatisfied have the higher WTP than tourist who satisfied This could happened because visitors are loved and care about historical relics to get to know the history of an area, place, or event more, so that they can recount again to their family and child descent or just to gaining knowledge about history, therefore even if visitor feels unsatisfied but they are still visiting the Sonobudoyo Museum. The findings of this study support those of an earlier study by Ali et al. (2018), finding that survey satisfaction had a negative and significant impact on the number of tourists visiting Sukau, Sabah's wildlife-oriented tourism. inconsistent with research. In their study, satisfaction variables did not affect the number of visits to the Alto Douro wine region museum.

Unlike the initial hypothesis which has a positive effect, the variable of residence has no significant effect of 0.672 where this number is more than the significant levels of 1%, 5%, and 10%. Most of the visitors to the Sonobudoyo Museum come from the city of Yogyakarta, this can be seen in the table in the attachment of respondent data for the residence variable, which shows that visitors from Yogyakarta Province are 87% while visitors from outside Yogyakarta Province are only 13%. The variable of residence has no effect on the number of visits to the Sonobudoyo Museum due to the current condition of large-scale social restrictions or commonly known as PSBB. To stop the coronavirus from spreading throughout Indonesia, PSBB was put into place. The municipality has minimized activities outside the home and from outside Yogyakarta as a result of these restrictions, which also include restrictions on activities in public places and facilities and socio-cultural activities. Rarely do outside tourists stop by this tourist site. This study's findings agree with those of Lamsal et al. (2016) Survey conducted. However, the results of this study differ from those of his Zulpikar et al. (2018) conducted a study in which their study found that visitor residency status did not significantly affect visit predictions.

The results showed that the variable time spent has a positive effect of 0.179 and was significant at 0.073 or less than 0.1 is on the level of significance at the 10% level on the number of tourist visits. This means that the longer it takes tourists when they are at the Sonobudoyo Museum, It will have an impact on the rise in tourist attendance at the Sonobudoyo Museum. This happens with the longer the duration of the visit, indicating

that visitors feel comfortable in these tourist attractions, therefore it can increase the number of visits at the Sonobudoyo Museum. Conversely, if too short in recreation, it shows that visitors does not feel comfortable in these tourist attractions, then it can reduce interest and the number of visits to the Sonobudoyo Museum. This study is supported by research by Zulpikar et al. (2018), who found that the length of visits or the amount of time spent in tourist attractions significantly affects the number of tourist visits. However, these results differ from the study of Ali et al. (2018) found that variable time did not significantly affect visit numbers in their findings.

The Sonobudoyo Museum's visitor count is not significantly influenced by the facilities variable, meaning that the presence or absence of additional tourist facilities has no significant effect on increasing or decreasing the number of tourist visits. All of these facilities were built with the intention of creating a home-like comfort and comfort with the intention that tourists will stay longer at these attractions and return on another occasion. The fact is that museums are bound by law so that in improving facilities it cannot change the original form of the museum itself, therefore many museums still retain their authenticity to attract tourists, even though the facilities at these tourist attractions do have an impact on the frequency of visits because tourists usually feel comfortable with complete facilities. But it is different between museums and non-historic tourist objects, if tourist objects such as beaches and playgrounds can be overhauled so that the frequency of visitors can increase, but museums cannot. This study is consistent with research conducted by Sahlan (2008). However, this result is different from previous research which examined using facility dummy variables, namely Saptutyningsih and Ningrum (2017) where the study's findings support the original hypothesis, which contends that the facility dummy positively affects the number of visits. The economic assessment of Sonobudoyo Museum uses the Travel Cost Method as follows (Djijono, 2002):

Total value = average travel costs x number of visitors per year
= IDR 114,358 x 53.887 people
= IDR 6,162,409,546

Based on the calculation results, the economic value of the Sonobudoyo Museum is IDR 6,162,409,546 per year.

Conclusion

Based on the results of the research conducted, the following conclusions can be drawn: The economic value of the Sonobudoyo Museum by travel cost approach is known, namely IDR 6,162,409,546 per year. The travel cost variable has a large negative impact on the number of visitors to the Sonobudoyo Museum. College students and pupils who have never been able to earn money make up the majority of the visitors. The income variable has a large negative impact on the number of tourist visits to the Sonobudoyo Museum. The satisfaction variable has a negative and significant effect on the number of

visits to the Sonobudoyo Museum. The time spent variable has a positive and significant effect on the number of visits to the Sonobudoyo Museum.

Based on the results of the study, the author tries to submit suggestions or input in the hope that it can help the authorities in the management of the tourism object Sonobudoyo Museum. The authors' suggestions are as follows: To increase the economic valuation of the Sonobudoyo Museum in the future, the museum management must improve and add several sophisticated facilities in order to attract more new visitors than before, such as creating a playground or recreation park around the museum yard so that visitors feel at home at the museum, added an electronic diorama which tells about the collections in Sonobudoyo Museum so that visitors feel satisfied and eventually volunteered to visit the museum again in the future regularly. Visitor' travel costs has a negative and significant effect on the number of visits. With a relatively affordable entrance fee to the Sonobudoyo Museum, making many visitors feels happy and interested in visiting the Sonobudoyo Museum. Therefore, it is hoped that the management of the musuem will be better and provide adequate quality so that it will attract the attention of visitors, where if the cost of the trip increases, visitors are still interested in coming to visit. Because the income level affects to the high number of visits to the Sonobudoyo Museum, it is therefore necessary to add various kinds of facilities so that the Sonobudoyo Museum can be enjoyed by both low-income and high-income visitors. The regression results of satisfaction variable is indicate that this variable has a negative and significant effect on the number of tourist visits at the Sonobudoyo Museum. In order to increase the level of visitor satisfaction, the museum manager can do various things, one of which is by improving supporting facilities such as toilets, layout and lighting to further highlight the historical items on display in the museum. Because the variable time spent has a positive and significant effect on the increase in the number of tourist visits to the museum, it is hoped that the managers can improve the quality and facilities at the museum such as collaborating between existing facilities and adding new facilities by providing new technology that does not damage or change the authenticity of relics that are there in the museum. One of them, as previously mentioned by the author, the manager can add electronic dioramas, besides that the museum can also take advantage of today's technology such as virtual reality (VR) boxes which can provide new experiences and knowledge for visitors to attract interest and increase visitor visit times at the Sonobudoyo Museum.

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