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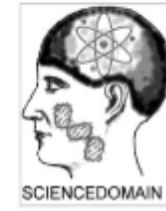
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## Consumer Preferences Analysis of Kawasan Kota Tua, Jakarta

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### **1** Authors' contributions

This work was carried out in collaboration between all authors. Author BH designed the study. Authors BH, LR and NG managed the analyses of the study and literature searches. All authors read and approved the final manuscript.

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### ABSTRACT

Tourism is one of the rapidly growing service industries. Jakarta as one of the tourism destinations in Indonesia, has a variety of unique attractions such as culture, shopping and historical attractions. One of the goals of tourism in Jakarta is the Old City. Tourism Area Development Old Town should pay attention to the economic and ecological aspects in a balanced way, which is the essence of the concept of green tourism (Green Tourism). The purpose of this study was to determine how effective the publication KKT, knowing the variables that affect consumers / travelers in deciding to visit KKT, how much consumer surplus obtained user, and how big the potential use of economic value. The method used in the study was EPIC rate and Travel Cost Method (TCM) with individual approach. Based on the results obtained by data processing variables that affect consumers/travelers in deciding been to KKT is travel cost travel, average income, group visits, and transportation. The results of this study are EPIC Rate of 3.45, the value of consumer surplus of Rp. 610,000 and potential economic value owned KKT in a year is Rp. 27 billion.

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*Keywords: Consumer surplus; economic valuation; economic value; empathy persuasion impact communication rate; travel cost method.*

## 1. INTRODUCTION

Jakarta as the capital city of the Republic of Indonesia has a variety of phenomena of business activities, the center of government and as a tourist destination cities in Indonesia, which has a variety of unique attractions such as culture, shopping, history and so on. Jakarta is the arrival gate for foreign tourists and tourist destination for domestic travelers. One tourist destination is the city of Jakarta KKT. KKT is a tourist area and conservation potential, attractive and inexpensive. Tourist area of the old city is visited by hundreds of thousands of visitors every weekend. The tourists do activities visit museums and historical attractions, some tourists find it important to explore aspects of the history of the old city and the nation, partly to try to reminisce. Now the KKT was under threat of destruction by the Development physical city, population density and environmental degradation.

Development of the KKT tourist activities have positive and negative effects, both in terms of economic, social, environment and communities. The positive impact of increased public revenues, the increase in state revenue, increase employment opportunities and public awareness of heritage tourism. The negative impact in the form of the destruction of both buildings tourism and the environment, the accumulation of garbage. It will also hinder the economic improvement of the tourism sector due to the reduction or even loss of the ability of the KKT to provide ecotourism services.

In order to develop of KKT, necessary role of the city government to encourage utilization of tourism potential in order to increase the income of the local economy. For that we need to do research on the analysis of consumer preferences which includes views on media publications KKT and affordability of the travelers when visiting KKT. This research is expected to provide benefits to all stakeholders and can be used as a recommendation like Jakarta city government in developing KKT.

## 2. LITERATURE REVIEW

Lim, C., Mc Aleer [1] study in Queensland showed that one of the primary challenges facing ecotourism management is to establish a profitable and ecologically sustainable industry,

while simultaneously achieving a satisfying experience for visitors and raising standards of living in the host community. This paper analyses the management practices and challenges faced by two ecotourism attractions on the Gold Coast and Brisbane in Queensland, Australia, namely Couran Cove Island Resort and Boondall Wetlands Reserve. As an ecotourism-based resort on one of the world's few naturally-occurring sand islands, Couran Cove is active in implementing a range of initiatives for sustainable environmental management. This is particularly important as Couran Cove is home to a wide variety of plant communities and one of the largest remnants of the rare *Livistona* rainforest on the Gold Coast. The Boondall Wetlands Reserve is internationally recognized as an important feeding and resting habitat for migratory wading birds from Alaska, China, Japan, Mongolia and Siberia.

Chen, W [2] study in China showed that the travel cost method to evaluate the recreational benefits of a beach along the eastern coast of Xiamen Island in China. Our results indicate that the total value for the beach and its associated recreation is in excess of US\$53 million. This research also discusses the protection of this significant tourism resource and considers the use of a suitable entrance fee.

Van der Duim & Calders [3] to the study in the Netherlands stated that impact and influence between biological diversity and tourism is very strong. Measuring the effect of both is very complex and requires a high cost [3].

Lordkipanidze et al. [4] study in Sweden showed that entrepreneurship is considered a central force of economic development, as it generates growth and serves as a vehicle for innovation and change. Tourism is one of the economic sectors in which a great degree of involvement is needed by the entrepreneurial sector: diversification of tourism products and services is needed to cope with increased demand for new types of tourism needs. These include opportunities for more sustainable tourism. The Söderslätt region of Sweden, which is used as a case study, is a newborn tourist destination with lots of natural and cultural characteristics. It is also one of the most agriculture intensive areas in Sweden where a potential for rural entrepreneurship development can be identified.

Alpizar [5] showed in a study in Costa Rica that price optimization protected recreation area can be reached on the price difference between domestic and foreign travelers.

Tsaur et al. [6] study in Taiwan showed that the preservation of tourism destination there is a relationship between the use of resources, local communities and sustainable tourism. The influence of the tourists and the local community is very significant to the changes in resources and local culture.

Adams C et al. [7] study in Sao Paulo state showed that the main aim of our research was to estimate the population's willingness to pay (WTP) for the conservation of MDSP and for the Atlantic Rainforest's remnants in São Paulo State as a whole, by means of the contingent valuation method (CVM). The results featured a high incidence of null WTP and of protest votes. Nevertheless, the population is willing to pay US\$ 2,113,548.00/year (R\$ 7,080,385.00/year) for the conservation of the MDSP (use and existence values), or US\$ 60.39/ha/year (R\$ 202.30/ha/year). The results indicate that the preservation value is strongly associated to the population's ability to pay, increasing with income levels.

Hasibuan [8] found that the preferences of the public want to improve the situation of the state of climate change both in agricultural commodities and tourism.

S. Mohammadi Limaiei et al. [9] study in Iran showed that the true economic value of ecosystem services may not be reflected in market transactions, because there is not any real transaction for ecosystem services in the market. Therefore, the TCM of economic valuation uses the cost of time and travel to define the value people place on something in the absence of a market price, by observing actual human behaviour. Results of this research show that the majority of visitors' ages belongs to two middle age classes (31 to 50 years). Therefore, the suggestion is that the authorities of the recreational site should provide more facilities based on the interest of this group of people. Results also show that most visitors have academic education. Hence, it may be good to have a cultural centre for the visitors in the recreational site.

### 3. METHODOLOGY

#### 3.1 EPIC Model

EPIC model is made to measure and evaluate the effectiveness of the promotion in term of communication . EPIC model consists of four dimensions, namely:

##### 3.1.1 Dimensions of empathy (E)

Dimensions of empathy inform whether consumers like promotions and how consumers view the relationship with their personal promotion.

##### 3.1.2 Dimensions persuasion (P)

Dimensions persuasion inform what can be given a promotion to increase or strengthen the character of the brand, so that marketers can gain an understanding of the impact of promotions on consumer desire to buy a product offered.

##### 3.1.3 Dimensions impact (I)

This dimension indicates whether a product can be seen more prominently than other products, and whether a sale can engage consumers in a message delivered.

##### 3.1.4 Dimensions of communication (C)

Dimensions communications provide information about the ability of consumers to recall the messages delivered, consumer understanding, strength and clarity of the impression left by the promotion.

Calculation *EPIC Rate*

$$EPIC Rate = \frac{x E + x P + x I + x C}{4}$$

Rate EPIC results will illustrate the position of promotion of a product or service in the perception of respondents, according to the scale range that had been predetermined.

#### 3.2 Travel Cost Method

Travel Cost Method will look at the basic assumption that every individual both actual and potential willing to visit a certain area to get the benefits without having to pay an entrance fee

(no entry fee). The approach used in the travel cost estimate of the value of a tourist using a variety of variables. Data were collected on the number of visitors, travel expenses incurred, as well as other factors such as income level, education level, and perhaps also religious and cultural as well as ethnic groups, and so on.

The analytical method used in this research is multiple linear regression which aims to determine the effect of variable costs visitors travel (transportation, ticket, parking, consumption, documentation, etc.), travel expenses to attraction to another, the average income of families per month, the distance, purpose of visit and purpose of visit to a number of visits as follows:

$$Y = f ( X_1, X_2, X_3, X_4, X_5, X_6 )$$

where:

- Y : The amount of travel demand KKT
- X<sub>1</sub> : The cost of a trip to the tourist area of Old City
- X<sub>2</sub> : The cost of travel to other attractions

- X<sub>3</sub> : The median income for a family per month
- X<sub>4</sub> : Distance
- X<sub>5</sub> : Group visits
- X<sub>6</sub> : The purpose of the visit

#### 4. RESULTS AND DISCUSSION

The research instrument consists of three (3) parts, namely: a part of the tour visits the old city area, the second part of the travel costs, part of the three identity of the respondent data. Questionnaires were administered to the tourists who kerkunjung to KKT. In the socio-economic data detail can be seen in the Table 1.

##### 4.1 EPIC Analysis

After each dimension of the results obtained, and then look for the value of EPIC Rate. The fourth dimension values are summed to obtain an average value to get value EPIC Rate. Overall score table of the fourth dimension can be seen in Table 2.

**Table 1. Socio-economic data and the views of respondents**

No.	Variable	Range	Frequence	%
1	Gender	Male	202	50,5%
		Female	198	49,5%
2	Age	< 25 years	220	55,0%
		25 – 30 years	80	20,0%
		31 – 35 years	39	9,8%
		36 – 40 years	16	4,0%
		> 40 years	45	11,2%
3	Education	High School	208	52,0%
		Diploma	54	13,5%
		Bachelor	104	26,0%
		Magister	26	6,5%
		Others	8	2,0%
4	Work	Government employees	33	8,3%
		Private employees	256	64,0%
		Entrepreneur	60	15,0%
		Professional	9	2,3%
		Others	42	10,5%
5	Avarage income	<Rp. 3.000.000,00	159	39,7%
		Rp. 3.000.000,00 – Rp. 4.500.000,00	137	34,3%
		Rp. 4.500.001,00 – Rp. 6.000.000,00	56	14,0%
		Rp. 6.000.001,00 – Rp. 9.000.000,00	34	8,5%
		>Rp. 9.000.000,00	14	3,5%
6	Transportation	Motorcycle	123	30,8%
		Private car	182	45,5%
		Public transportation	51	12,7%
		Car rental	7	1,8%
		Others	37	9,2%
7	Impression	Extremely dissatisfied	6	1,5%
		Not satisfied	20	5,0%
		Quite satisfied	206	51,5%
		Satisfied	137	34,3%

No.	Variable	Range	Frequence	%
8	Group visits	Very satisfied	31	7,7%
		Family	117	29,3%
		Friend	246	61,5%
		Entourage	27	6,7%
		Others	10	2,5%
9	Reasons	Access to KKT is easy	122	30,5%
		The appeal of an attractive	144	36,0%
		Cozy atmosphere of the KKT	83	20,8%
		Others	51	12,7%

**Table 2. EPIC score**

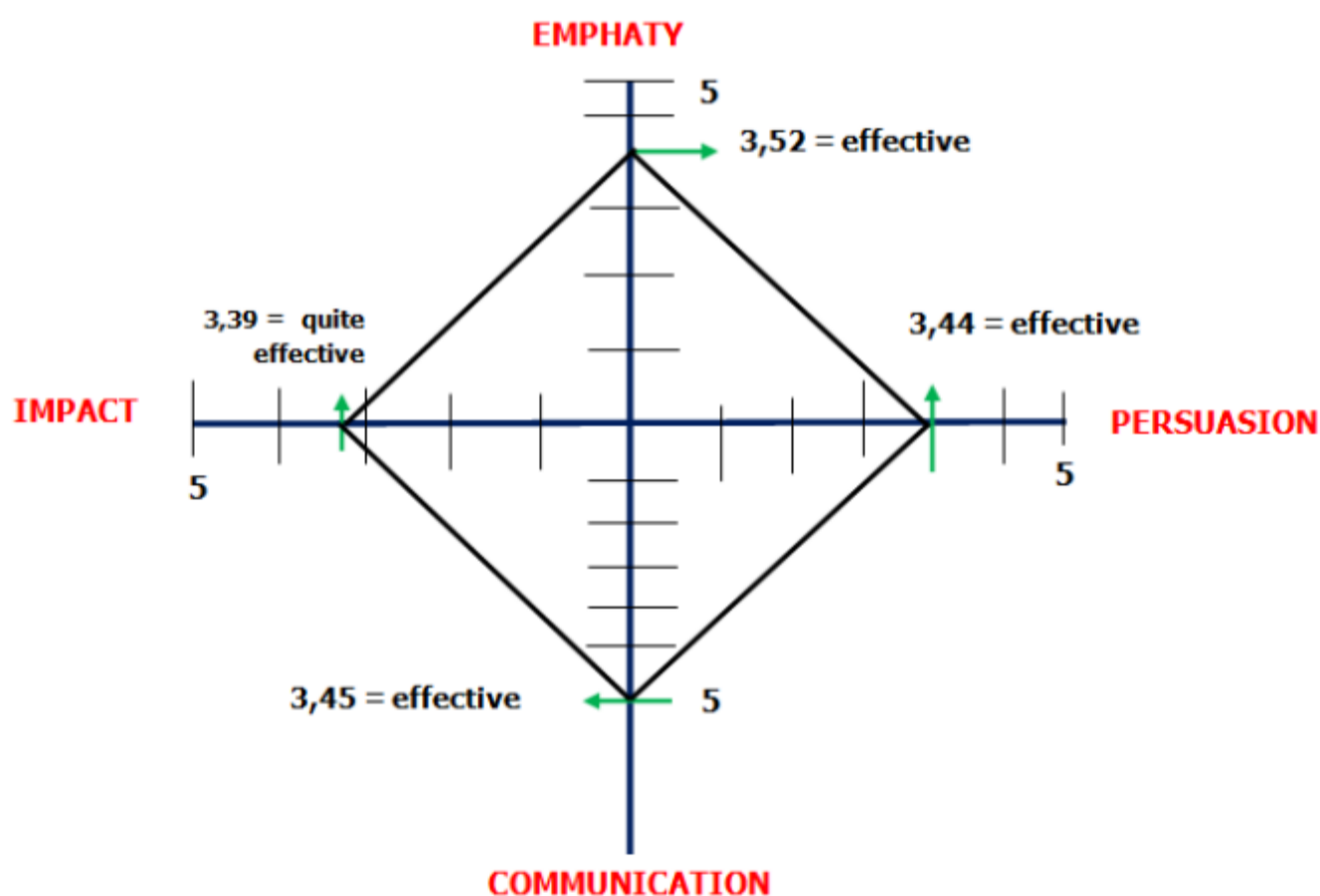
EPIC model	Score	Kesimpulan
Empathy	3,52	Efektif
Persuasion	3,44	Efektif
Impact	3,39	CukupEfektif
Communication	3,45	Efektif

$$EPIC\ Rate = \frac{3,52 + 3,44 + 3,39 + 3,45}{4} = 3,45$$

The final results of the EPIC Rate value is 3.45 which, if put into the scale of assessment included in the effective category. This shows that the publication KKT product has been effective in communicating its services for tourists. Overall graph analysis results

effectiveness KKT publication by the method of EPIC model can be seen in Fig. 1.

Based on the above can be seen dimensional images with the highest effectiveness and lowest at Emphaty dimensions with an average weighted value of 3.52 and dimensions of Impact with the weighted average value of 3.39. The more the average value of the points of intersection or corner of a rectangular approaching the point 0, then the level will decrease the effectiveness of the publication. Conversely, if the points of intersection of the rectangular corner away from the point 0 and is getting close to the point 5, it can be concluded that the level of effectiveness of publications is growing.



**Fig. 1. EPIC model publicationKKT**

## 4.2 TCM Analysis

The economic value is to describe the great economic potential that exist in an environment. The economic value can be described in the use of value and not the use of value. Use of value itself consists of the value of use of the direct and indirect use of value. In this study assessed the economic value is the value of the direct use of KKT tourist destinations. The economic value by counting the large consumer surplus of all visitors or tourists visiting KKT. Travelers are taken into account in the assessment was the visitors who have an income, because it is associated with the decision to visit KKT.

To determine the amount of consumer surplus value derived from the demand function (frequency to KKT) against the costs (travel expenses to KKT). Based on the calculation results obtained regression equation as follows: The consumer surplus is the excess of benefits or benefits perceived consumer on prices of goods/commodities there. Allowances are calculated from the difference between the market price with a maximum price that is below the demand function.

$$\begin{aligned}
 Y &= 4,370 - (5,4 \times 10^{-7}) x \\
 CS &= \int_{42500}^{182500} (4,370 - 5,4 \times 10^{-7} x) \\
 &= 4,370 - (5,4 \times 10^{-7} x) \\
 &= (4,370 - (5,4 \times 10^{-7}) \times 182500) - (4,370 - (5,4 \times 10^{-7}) \times 42500) \\
 &= 610707,5
 \end{aligned}$$

Based on the calculations, the cost is a function of demand for  $Y = 4.370 - 5.4 \times 10^{-7}x$ , with the market price of 42.500 and a maximum price of 182 500. Based on these equations obtained value of consumer surplus of 610 707, which means that consumers have more capacity of approximately 600 thousand in enjoying the tourist area of Old Town. Generally, tourists who come to KKT still have the ability economically to spend some money to get satisfaction in the tour. It can also be said that the price value that existed at several attractions in KKT still in the conditions under value of the market value.

With a large consumer surplus of 610 thousand and the total population of 45 750 were found KKT great economic value of Rp 27 billion. This means KKT have economic potential at 27 billion rupiah if managed properly.

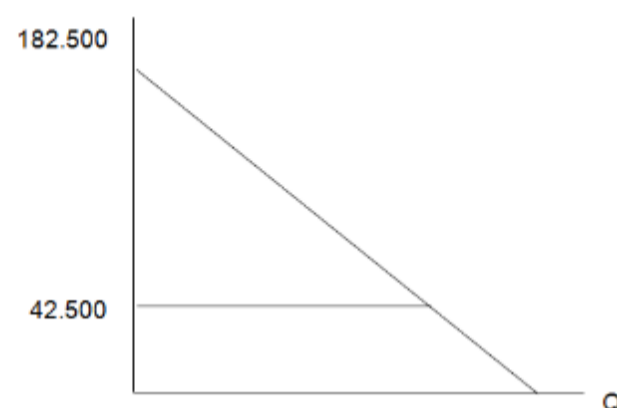


Fig. 2. Demand for cost function graphs

## 5. CONCLUSIONS

Based on the results of data processing obtained:

- The final results of the EPIC Rate value is 3.45 (effective). This shows that the publication KKT product has been effective in communicating its services for tourists.
- The variables which affect consumers or tourists in deciding been to KKT is travel cost travel, average income, group visits, and transportation .
- Consumers have a surplus (consumer surplus ) of Rp 610,000 with potential economic value owned KKT in a year is Rp.27 billion.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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