

## ECONOMIC VALUATION OF AGROTOURISM RAWA DANAU PANGGANG SOUTH KALIMANTAN INDONESIA

Emmy Sri Mahreda\*, Idiannor Mahyudin, Rina Mustika, Irma Febrianty  
Department of Fisheries Social Economy, Faculty of Fisheries, Lambung Mangkurat  
University, Jl. Jenderal Achmad Yani Km. 35,5 Banjarbaru 70714, South Kalimantan,  
Indonesia

### ABSTRACT

*This research aims to analyse economic and social characteristic and visitors behavior agrotourism Rawa Danau Panggang, to examine agrotourism economy potency showed by willingness to pay from agrotourism Rawa Danau Panggang, and to analyse the influence of trip cost variable, income, education, distance, and ages to visiting level in agrotourism Rawa Danau Panggang. Data is collected by observation to the field using observation guide to the respondents. And observe the field of agrotourism Rawa Danau Panggang that has tourism potency based on the data from the respondents. The first research purpose analyse descriptively. The second purpose is analyse by Travel Cost Method (TCM). The third research purpose is analyse by multiple regression analysis the influencing factors visiting level to agrotourism Rawa Danau Panggang. The results is found the visitors characteristic agrotourism Rawa Danau Panggang coming from Banjarmasin, Banjarbaru, Kandangan, Barabai, Balangan, Tanjung, Tamiyang Layang, Samarinda and Java Island even from Netherland and England. The average value of visitors willingness to pay is IDR 2,312,659,00 per visitor, and the value of agrotourism Rawa Danau Panggang resources is IDR 555,038,095,00 per year. The regression analysis result is  $R^2 = 0,994$ , it means 99,4% of variables in model able to explain the variables, and the rest is explain by other variable outside the model. The conclusion is agrotourism Rawa Danau Panggang has big economic potency and factors of cost trip, income, education, distance, and ages has influence to visiting levels in agrotourism Rawa Danau Panggang.*

**Keywords:** Agrotourism Rawa Danau Panggang, Economy Potency, Regression, Willingness to Pay.

### I. INTRODUCTION

Agrotourism has an important role as economy potency and recreational tourism. The study by Catalino and Lizardo (2004) argues that a well developed agro-tourism industry would result in a market mechanism generating additional income of US \$251 to US \$364 million annually. The potency of Rawa Danau Panggang is big to support society and also as favorite agrotourism destination, but until now the magnitude value of the economy potency agrotourism Rawa Danau Panggang has not known. Economy potency assessment of agrotourism Rawa Danau Panggang need to be known to explore the potency. The research that explore about regional potency economy had been conducted [2-11, 13, 14]. This research aims to analyse economic and social characteristic and visitors behavior agrotourism Rawa Danau Panggang, to examine agrotourism economy potency showed by willingness to pay from agrotourism Rawa Danau Panggang, and to analyse the influence of trip cost variable, income, education, distance, and ages to visiting level in agrotourism Rawa Danau Panggang. The economic value of agrotourism Rawa Danau Panggang resources can be used as a basis for the Hulu Sungai Utara Government to determine the policy of development and the development of agrotourism Rawa Danau Panggang in South Kalimantan Indonesia.

### II. MATERIALS AND METHODS

The location of the study determined in deliberately ( purposive sampling ) with consideration of

potency owned by the agrotourism Rawa Danau Panggang ( the results of research introduction ) and the opportunity to the utilization of potential is still quite big [4]. In addition agrotourism Rawa Danau Panggang already has a point location of tourism. Data is collected by observation to the field using observation guide to the respondents. And observe the field of agrotourism Rawa Danau Panggang that has tourism potency based on the data from the respondents. Data taken is primary and secondary data used to make and evaluate region potency of areas of study. To reach the research purpose of this method used data analysis as follows:

The first research purpose analyse descriptively. The second purpose is analyse by Travel Cost Method (TCM). The idea of Travel Cost Method ( TCM ) is developed by Hotelling in the 1931, then introduced formally by Wood and Trice ( 1958 ) as well as Clawson and Knetsch ( 1966 ) in Adrianto et al. (3). This method most used to analyze the demand for outdoor recreation [12]. In the principle this method examines the individual cost to come to recreation place. The third research purpose is analyse by multiple regression analysis the influencing factors visiting level to agrotourism Rawa Danau Panggang. From this regression analysis it will be found  $R^2$ , result of F test is to find the influence of independent variables (cost trip, income, education, distance, and ages) to visiting levels, and the result of t test is to know the influence of independent variable partially to dependent variable.

### III. RESULTS AND DISCUSSION

The results is found the visitors characteristic agrotourism Rawa Danau Panggang coming from Banjarmasin, Banjarbaru, Kandangan, Barabai, Balangan, Tanjung, Tamiyang Layang, Samarinda and Java Island even from Netherland and England. The tourist purpose is to see the uniqueness of buffaloes bog, fishing and watched the craft woven handmade from the purun leaves by local people. The average value of visitors willingness to pay is IDR 2,312,659,00 per visitor, and the value of agrotourism Rawa Danau Panggang resources is IDR 555,038,095,00 per year. The following is the table of Willingness to Pay:

**Table 1.** Willingness to Pay (per person) travel cost by flight/car.

No	Origin region	Transportation Cost	Documentation Cost	Consumption Cost	Accommodation	Gift cost	Others			Total
							Parking	Boat cost	Public facility	
1.	Jawa	1.600.000	100.000	350.000	350.000	300.000	5.000	150.000	10.000	2.865.000
2.	Samarinda	1.600.000	100.000	350.000	350.000	250.000	5.000	150.000	10.000	2.815.000
3.	Tamiang Layang	200.000	100.000	300.000	350.000	250.000	5.000	150.000	10.000	1.365.000
7.	Banjarmasin	250.000	50.000	300.000	350.000	300.000	5.000	150.000	10.000	1.415.000
5.	Banjarbaru	200.000	50.000	300.000	350.000	200.000	5.000	150.000	10.000	1.265.000
6.	Pelaihari	250.000	50.000	300.000	250.000	150.000	5.000	150.000	10.000	1.165.000
7.	Rantau	200.000	50.000	250.000	50.000	150.000	5.000	100.000	10.000	815.000
8.	Kandangan	150.000	50.000	200.000	50.000	100.000	5.000	100.000	10.000	665.000
9.	Barabai	125.000	50.000	200.000	50.000	150.000	5.000	100.000	10.000	690.000
10.	Tanjung	150.000	50.000	250.000	50.000	150.000	5.000	100.000	10.000	765.000
11.	Balangan	125.000	50.000	250.000	50.000	150.000	5.000	100.000	10.000	740.000

12.	Amuntai	100.000	50.000	200.000	50.000	100.000	5.000	100.000	10.000	615.000
13.	Netherland	19.500.000	200.000	500.000	500.000	100.000	5.000	150.000	10.000	20.965.000
14.	England	17.500.000	200.000	500.000	500.000	100.000	5.000	150.000	10.000	18.965.000
Total										55.110.000
Average cost per person										3.936.429

Table 2. Willingness to Pay (per person) travel cost using motorcycle.

No	Origin region	Transportation Cost	Documentation Cost	Consumption Cost	Accommodation	Gift cost	Others			Total
							Parking	Boat cost	Public facility	
1.	Banjarmasin	100.000	50.000	300.000	50.000	200.000	10.000	100.000	10.000	820.000
2.	Banjarbaru	100.000	50.000	300.000	50.000	200.000	10.000	100.000	10.000	820.000
3.	Pelaihari	100.000	50.000	300.000	50.000	150.000	10.000	100.000	10.000	770.000
4.	Rantau	75.000	50.000	250.000	50.000	150.000	10.000	100.000	10.000	695.000
5.	Kandangan	60.000	50.000	200.000	50.000	100.000	10.000	100.000	10.000	580.000
6.	Barabai	60.000	50.000	200.000	50.000	150.000	10.000	100.000	10.000	630.000
7.	Tanjung	60.000	50.000	250.000	50.000	150.000	10.000	100.000	10.000	680.000
8.	Balangan	50.000	50.000	250.000	50.000	150.000	10.000	100.000	10.000	670.000
9.	Amuntai	30.000	50.000	200.000	35.000	100.000	10.000	100.000	10.000	535.000
Total										6.200.000
Average cost per person										688.889

From regression analysis it is found:

$$Y = 2,485 - 2,730X_1 + 0,0001X_2 + 2,202X_3 + 0,005X_4 - 1,36 X_4 + e$$

Y = visiting/year/person

X<sub>1</sub> = visitors cost (IDR/person)

X<sub>2</sub> = visitors income (IDR/person)

X<sub>3</sub> = education, SMP = 0, SMA = 1, Sarjana = 2

X<sub>4</sub> = location distance (Km)

X<sub>5</sub> = ages (year)

The regression analysis result is  $R^2 = 0,994$ , it means 99,4% of variables in model able to explain the variables, and the rest is explain by other variable outside the model.

The value of a = 2,485 and significance level = 95 %, it means that there is the influence of a factor besides X1 to X5 variable.

The value of b1 = -2,730 and significance level is 99 % with the value of t count is -9,163. The value of b1 is negative, it means that increasing number of cost by visitors will cause decreasing the number of visit.

The value of b2 = 0,0001 and significance level is 99 % with the value of t count of 6,754. The value of b2 is positive, it means that increasing number of visitors income will cause increasing the number of visit. This happened because the people started interesting in natural and unique tourism.

The value of b3 = 2,202 and significance level is 99 % with the value of t count of 6,754. The value of b3 is positive, it means that every an increasing level of visitors education will cause increasing the number of visit., because this place is in the waters area and away from the city, and as important for education.

The value of b4 = 0.005 and significance level is 99 % with the value of t count of 4,974. The value of b4 is positive, it means the further the distance, the more increasing visiting level. This is because agrotourism Rawa Danau Panggang has rare nature tourism and buffalo bog.

The value of b5 = -1,36 and significance level is 99 % with the value of t count of -5,204.. The value of b5 is negative, it means the older the ages, the more decreasing visiting level. This is because of body tiring level to reach the place by water and land transportation.

#### **IV. CONCLUSIONS**

From the research it can be concluded:

1. The results is found the visitors characteristic agrotourism Rawa Danau Panggang coming from Banjarmasin, Banjarbaru, Kandungan, Barabai, Balangan, Tanjung, Tamiyang Layang, Samarinda and Java Island even from Netherland and England.
2. The average value of visitors willingness to pay is IDR 2,312,659,00 per visitor, and the value of agrotourism Rawa Danau Panggang resources is IDR 555,038,095,00 per year.
3. The regression analysis result is  $R^2 = 0,994$ , it means 99,4% of variables in model able to explain the variables, and the rest is explain by other variable outside the model. The conclusion is agrotourism Rawa Danau Panggang has big economic potency and factors of cost trip, income, education, distance, and ages has influence to visiting levels in agrotourism Rawa Danau Panggang.

The suggestion that can be given is the economic value of the agrotourism Rawa Danau Panggang can be more improved with better promotion, so that the number of visitors also increased. In addition, it needs improvement of infrastructure in the location agrotourism Rawa Danau Panggang.

#### **REFERENCES**

- [1]. Adrianto, L., Mujiyo, Wahyudin, Y., 2004. Modul Pengenalan Konsep dan Metodologi Valuasi Ekonomi Sumberdaya Pesisir dan Laut. Pusat Kajian Sumberdaya Pesisir dan Lautan IPB. Bogor.
- [2]. Badan Pusat Statistik, 2012. Survey Sosial Ekonomi Kabupaten Kota di Kalimantan Selatan. Banjarmasin.
- [3]. Catalino A., Lizardo M. 2004. Agriculture, Environmental Services and Agro-Tourism in the Dominican Republic. eJADE electronic Journal of Agricultural and Development Economics. Vol. 1 (1): 87-116.
- [4]. Dadang Setiawan, 2012. Valuasi Ekonomi Kawasan Hutan Mangrove Muara Angke Jakarta. Perbandingan Hasil Penelitian 2002 dan 2012. Program Studi Ilmu Lingkungan Pascasarjana Universitas Indonesia. Jakarta
- [5]. Djijono, 2002. Valuasi Ekonomi Menggunakan Metode *Travell Cost* Taman Wisata Hutan di Taman Wan Abdul Rachman, Propinsi Lampung. Skripsi pada Departemen Sosial Ekonomi Perikanan. Fakultas Perikanan dan Ilmu Kelautan IPB. Bogor.

- [6]. Dickey, D.A., D.W. Jensen and D.L. Thornton, 2002. A Primer on Cointegration with an Application to Money and Income. In B.B. Rao (Ed) Cointegration for the Applied Economist. pp: 9-45. St. Martin's Press, Inc. New York.
- [7]. Dixon, J. A., 1980. Penilaian Taman Publik Lumpinee di Bangkok, Thailand. Economic Development Quarterly. Vol 13 No. 2 pp 183-199.
- [8]. Fauzi, A., 2000. Persepsi Terhadap Nilai Ekonomi Sumberdaya. Paper Presented at The Training for Trainers on Integrated Coastal Zone Management (ICZM) Proyek Pesisir, November. Bogor.
- [9]. Gerhard, 2013. Valuasi Ekonomi Sumberdaya Alam Rawa Pening dan Strategi Pelestariannya di Kabupaten Semarang. Fakultas Eonomika dan Bisnis Universitas Diponegoro, Semarang.
- [10]. Hakim, Z., 2007. Faktor-Faktor Yang Mempengaruhi Kunjungan Wisatawan pada Area Wisata Gili Trawangan. Skripsi.
- [11]. Kirkley, J. and D. Squires, 1998. Measuring Capacity and Capacity Utilization in Fisheries. Background Paper Prepared for FAO Technical Working Group on The Management of Fishing Capacity. La Jolla, USA, 15-18 April 1998, 160 pp. Forthcoming, FAO Fisheries Report.
- [12]. Kirkley, J. and D. Squires, 1999. Capacity and Capacity Utilization in Fishing Industries. Discussion Paper 99-16, University of California, Departemen of Economics, San Diego.
- [13]. Koentjoroningrat, 1993. Metode-metode Penelitian Masyarakat Edisi 3. PT. Gramedia. Jakarta.
- [14]. Mahreda, E.S., Mahyudin, I., Mustika, R., Febrianty, I. 2016. Agrotourism Economic Value Services in Takisung South Kalimantan Indonesia. J. Appl. Environ. Biol. Sci., 6(5)1-1, 2016.
- [15]. Rian Eka Putra, 2011. Valuasi Ekonomi Keanekaragaman Hayati Rawa Banto Kecamatan Gunung Tujuh Kabupaten Kerinci Provinsi Jambi. Program Studi Biologi Program Pascasarjana Universitas Andalas Padang.

**Authors**

Emmy Sri Mahreda

She is a professor in fisheries social economy.

