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Analysis Of The Impact Of Tourism Objects On Household Welfare In Madura

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Abstract

This study aims to determine the contribution of tourism to the welfare of households living in tourist attraction areas. This method uses a quantitative research approach with Propensity Score Matching (PSM) analysis which is an alternative method to estimate the impact of a household treatment that resides around the tourist attraction and households that do not reside around the tourist attraction on household expenditure. The data source of this research uses secondary data from Susenas. The results of the treatment research from households whose residence is in the tourist attraction area as many as 101 and the control group of households whose residence is not in the tourist attraction area as many as 1300 have a match or similarity and the presence of tourist attractions has a significant effect on household expenditure. The findings in this study have several important implications for the government to make creative economic policies that lead to the development of tourist villages in Madura. The development of tourist villages has a positive impact on the welfare of the community and can be one of the solutions to the problem of poverty and unemployment..

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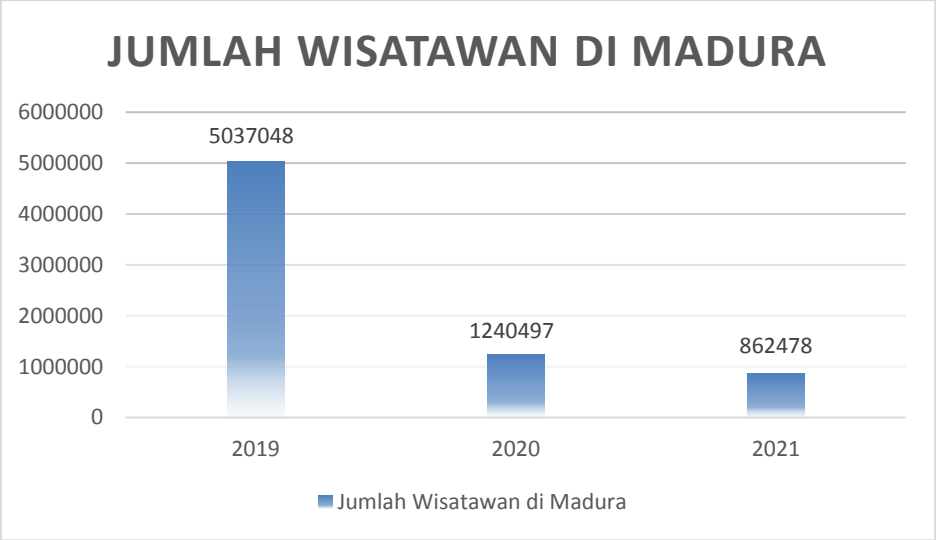
Introduction

The tourism sector in Indonesia is growing with positive achievements marked by the growth in the number of tourist visits to the country which has increased in 2017. This makes Indonesia second only to Vietnam and ahead of other ASEAN competitors such as Thailand, Singapore, and Malaysia. This is in line with the increase in foreign exchange earnings in the tourism sector, the increase in the tourism competitiveness index ranking, and the increase in the contribution of the tourism sector to the National Gross domestic product (Mahiroh,

2019). In other countries tourism also has an influence on economic growth, based on empirical evidence of tourist receipts and investment in the tourism sector affect economic growth in Malaysia. This implies that the tourism-driven growth hypothesis exists in Malaysia (Puah *et al.*, 2018).

The contribution of the tourism sector to economic growth also occurred in East Java, where in the study (Aji, Pramono and Rahmi, 2018) stated that East Java has a tourism industry that contributes to regional gross domestic product (GDP) of 17.30% in 2013, 17.14% in 2014, 17.46% in 2015 and in 2016 of 17.76%. It can be interpreted, East Java has an advantage in the tourism sector with regional areas that have tourist attractions that can attract tourists.

Madura is one of the islands in East Java with the left and right borders of the sea, straits and beaches that are suitable to be a tourist attraction. This can be achieved if the concept of the form of tourism that will be carried out can integrate environmental, social and cultural aspects and is managed by the local community and is expected to get full support from stakeholders in the field of tourism so that it can help the economic level of the community through tourism development involving the community, private sector, government and non-governmental organizations (Triyo Utomo, 2017). Tourism cannot succeed on its own. Tourism relies on efficient infrastructure that supports the movement of goods and people relies on a skilled, creative and entrepreneurial workforce that is able to meet new challenges and opportunities in innovative ways (Du, Lew and Ng, 2016).



Picture 1. Jumlah Wisatawan
Source: BPS dioalah (2023)

Based on data on the number of tourists from the 4 districts on the island of Madura in 2019 the number of visitors was quite high, but in 2020 and 2021 there was a decline due to covid - 19 so that the tourism sector experienced a downturn. It can be interpreted, Madura has advantages in the tourism sector, but after the covid - 19 pandemic, the focus of community economic development must be addressed and reviewed regarding the impact of the tourism sector on the economy of households whose residence areas are not around the tourist attraction environment.

Tourism destinations are the government's top development priority in terms of the economy in the form of tax revenue for the region, foreign exchange earnings, creating jobs and others. After the decline in the number of tourists in Madura due to the pandemic, it is necessary to study the direction of economic development of the tourism industry and its impact on the welfare of households in tourist areas whether the household's economic situation has improved or only has a small effect on the level of economic welfare in terms of expenditure. Besides that, households are part of the family, while the family is the smallest group of economic entities that can be used to consider the economic impact of tourism.

Tourism is a travel activity where individuals or groups of people visit a certain place with the aim of recreation, self-development, or to find out the uniqueness of the tourist attractions they visit within a certain period. While the place that is the center of attraction is a tourist attraction that can provide satisfaction to visitors (Harahap M. A, 2018)

According to (Siregar, 2017) tourist attraction is everything that is a tourist destination, a tourist object that is closely related to the tourist attraction. An area that becomes a tourist attraction must have a unique character and become the main attraction when visiting the tourist area. The uniqueness of a tourist area is expressed through culture, nature, local flora and fauna and spiritual elements.

Tourism according to Tourism Law Number 10 of 2009 also explains tourism according to the definition or definition as follows: All activities related to tourism and are multidimensional and multidisciplinary, expressed as an expression of individual and national needs and as an interaction between tourists and local communities, tourists, governments, local authorities, and businesspeople. Tourism is a concept of economic activity that has a major impact on society as a means of community development (Athula Gnanapala and Sandaruwani, 2016).

The concept of community-based tourism is an approach to tourism development, both natural, cultural, and artificial, both directly and indirectly related, whether realized or not, which emphasizes the active role of local communities (Prasta, 2021). Tourism development relies heavily on community pillars, which are often overlooked. Therefore, those who live in tourist areas or places often do not benefit from the growth of tourism in their area (Suta and Mahagangga, 2018). Community-based tourism aims to empower communities, encourage community involvement in decision-making, and distribute income among them (Mclntyre, 1993; Choi and Sirakaya, 2005).

According to (Andayani, Martono and Muhamad, 2017) the development of tourism villages brings direct and indirect economic benefits to local communities. Direct benefits include homestay rentals, sales of food, beverages, ornamental plants, and souvenirs, community participation in tourist attractions, and additional income from bamboo crafters and traditional food and beverage crafters. Tourism village development contributes to community empowerment. In developing a tourist village, it is necessary to involve the local community in managing the tourist village (Windayani and Marhaeni, 2019). According to (Laverack, 2006), Developing people is an important step in building communities. competency-based training can be provided to support community empowerment. (Seran, Rorong and Londa, 2017).

According to economists, welfare can be measured by the flow of income and purchasing power of the community. Based on Law No. 11/2009, social protection is a condition that fulfills the material, spiritual, and social needs of citizens to live properly, develop, and be able to carry out their social functions.

RESEARCH METHODS

Research using descriptive research with a quantitative approach. According to Sugiyono (2018: 20) "Quantitative descriptive research analysis is used to analyze data by describing or describing the collected data as it is without intending to make general conclusions or generalizations".

This research data uses secondary data, according to Sugiyono (2018: 456) secondary data is a data source that does not directly provide data to data collectors, for example through other people or through documents. The data obtained is in the form of numbers that can be processed using mathematical formulas or can also be analyzed with a statistical system. In this study, the data was obtained from the National Socio-Economic Survey (Susenas) data for Madura Island (Bangkalan, Sampang, Pamekasan, Sumenep).

The data analysis technique in this study uses the Propensity Score Matching (PSM) technique. The first step in using the Propensity Score Matching (PSM) method according to Khandker et al. (2010) is to select the model and variables that will be used in the model to estimate the propensity score. The selection of the model aims to determine the scoring and characteristics between treatment groups, namely households where there are tourist attractions and the control group is households where there are no tourist attractions. The determination of scoring is to get two groups that have a balanced average value of the tendency score of all the characteristics used.

Research variable is an attribute/trait/value possessed by people, objects or activities that have certain variables determined by researchers to be studied so that conclusions can be drawn. Because it uses the PSM method by constructing statistical comparison groups by modeling the probability of participation in the program based on observed characteristics that are not affected by the program. Participants are then matched based on these probabilities, or propensity scores, with non-participants, using different methods outlined.

This study has 3 variables, namely the dependent variable which is notated in the treatment (experimental research treatment) between households whose residence is in the neighborhood around the tourist attraction and households whose residence is not in the neighborhood around the tourist attraction, the second outcome variable as a result of treatment, namely the level of household per capita expenditure, while the third variable is the control variable is the characteristics that affect the outcome, namely household expenditure or can be called household per capita expenditure.

The model used in this study is a probit regression model. The probit regression model differs from the linear regression model in the form of the dependent variable used. Linear regression is used when the dependent variable is numeric and probit regression is used when the dependent variable data is

nominal. Because the PSM model compares two groups, the probit regression model was chosen because the dependent variable is nominal and the dependent variable in this probit regression model is 0 = Households whose residence is not in the tourist attraction environment and 1 = Households whose residence is in the tourist attraction environment.

The dependent variable with the symbol of the tourist attraction used for this study as the treatment variable and the control variable is the household where there is no tourist attraction, the characteristics of the influence of tourist attractions on household welfare, namely: family, water, power, fuel, facility, floor, wall, rooftop. See the equation used in this study as follows:

$$Obyek\ wisata = \beta_0 + \beta_1 familiy + \beta_2 water + \beta_3 power + \beta_2 fuel + \beta_2 facility + \beta_2 floor + \beta_2 wall + \beta_2 rooftop + e$$

Probit regression in this study aims to calculate the score of each value distribution of each x variable that is characteristic of the two groups and not to see the effect of the unbound variable on the dependent variable. From the output of the first step, it will produce two groups that have their respective scores on each sample in the two groups which will then be seen between the two groups which have an average tendency score based on the observed x variable that is similar. The second step is to determine the common support and balancing test. In this step, some observations were eliminated because of the large difference in scores, i.e. there were scores that were too high and too low. Common support ensures that similarities can be generated between the treatment group and the control group when compared to see their distributions.

Furthermore, the balancing test was used to determine the average value of the control PSM. The balancing test is conducted to see that in each quantile of the propensity score distribution, the average propensity score and the average X variable are the same. The treatment group and comparison group must be balanced for propensity score matching to work. Since it is not possible to examine a household when receiving treatment without receiving treatment at the same time, the treatment effect is estimated through the Average Treatment Effect on the Treated (ATT).

Average Treatment Effect on the Treated (ATT) is the difference or difference in the average potential outcome between the treatment group when receiving the treatment and the treatment group if it does not receive the treatment intervention, which is denoted by the equation

τATT=E(Y1i | D1=1)-E(Y0i|D1=1)

τATT : potential mean difference between groups

E(Y1i | D1=1) : potential outcome of households whose residence is in the tourist attraction environment and can be observed.

E(Y0i|D1=1) : potential outcome of households whose residence is not in the tourist attraction's neighborhood and cannot be observed.

E(Y1i|D1=1) is the potential outcome of households where there is no tourist attraction and cannot be observed, E(Y0i|D1=1) in ATT is the potential outcome of treatment group households (where there is a tourist attraction), if they did not receive treatment (where there is no tourist attraction) and cannot be observed because it is a counterfactual of missing data. To find the value of ATT, one must be able to find the replacement value of, E(Y0i|D1=1). One way is to utilize the potential outcome of households whose residence is not in the tourist attraction environment, namely E(Y0i|D1=0) because the potential outcome of households whose residence is not a tourist attraction is not examined at the same time when the household receives the intervention.

RESULT

The PSM model compares two groups, so the probit regression model was chosen because the dependent variable is in the form of a category or dummy and the dependent variable in this probit regression model is that the treatment group is households whose residence is in the tourist attraction environment = 1 and the control group is households whose residence is not in the tourist attraction environment = 0.

Table 1. Estimasi model probit

touristattractions	Coef.	St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
family	.11	.057	1.93	.054	-.002	.221	*
water	-.032	.03	-1.05	.292	-.09	.027	
power	-.39	.152	-2.57	.01	-.688	-.093	**
fuel	.047	.017	2.69	.007	.013	.08	***
facility	-.034	.176	-0.20	.844	-.379	.31	
floor	-.026	.023	-1.11	.267	-.072	.02	
wall	-.089	.043	-2.05	.04	-.174	-.004	**
rooftop	.12	.161	0.75	.453	-.194	.435	
Constant	-1.661	.422	-3.94	0	-2.489	-.834	***

Mean dependent var	0.032	SD dependent var	0.177
Pseudo r-squared	0.035	Number of obs	3116
Chi-square	30.828	Prob > chi2	0.000
Akaike crit. (AIC)	878.558	Bayesian crit. (BIC)	932.956

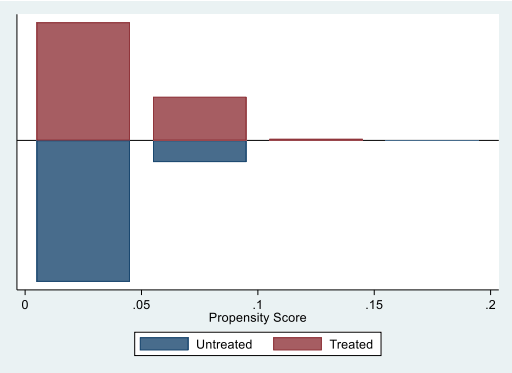
*** p<.01, ** p<.05, * p<.1*

Note: the common support option has been selected the region of common support is [.00443996, .11388957]

Sumber : olah data menggunakan stata

Based on table 2, which is used in probit regression in propensity score matcing 8 control variables are not excluded, it will be used in scoring between the two treatment groups of households whose residence is in the tourist attraction area and households whose residence is not in the tourist attraction area based on the same value distribution and the x variable used is similar so that probit regression is not used to see the effect of the control variable on the treatment variable. The two groups will have a propensity score on each sample which will then be grouped based on the average propensity score distribution, the average

propensity score and the average X variable are the same. Because the propensity score matching model looks at the treatment group and the control group that has a balanced score.



Picture 2. common support

Picture 2 shows that if the value is 0 to 1, it means that the two groups are in the common support region and the two groups are in the region of point .00443996 to point .11388957. Some observations are excluded because they fall outside the common support region or there is a large difference in values such as having a score that is too high or too low but not with the 8 control variables studied.

Table 2. Results of Estimation of Average Treatment Effect on Treatment (ATT)

n. treat.	n. contr.	ATT	Std.Err.	t
101	1300	0.259	0.097	2.666

Based on table 2 that the value of the Average Treatment Effect on the Treated (ATT) has been identified. The treatment group, namely households whose residence is in the tourist attraction area as many as 101 households and the control group, namely households whose residence is not in the tourist attraction environment as many as 1300 households have a match or similarity with a potential outcome difference (ATT) of 0.259 with a t value of 2.660 which can be interpreted as significant because it exceeds 2.

Table 3. treatment impact estimation result

expenditure	Coef.	St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
ATE touristattractions r1vs0	.255	.09	2.85	.004	.08	.431	***
Mean dependent var		0.255	SD dependent var			0.625	

*** p<.01, ** p<.05, * p<.1

Table 3 shows that the treatment of the impact of tourism on household expenditure. From the results of the propensity score matching analysis that households whose residence is in the tourist attraction area have a positive impact on assets of 0.255154 and significant at the 5% level (Pvalue below 5%). The results show the robustness of the impact of the presence of tourist attractions on expenditure. The analysis shows that the presence of tourist attractions affects household expenditure in Madura.

DISCUSSION

In this study, using a propensity score matching model to determine the scoring and characteristics between treatment groups, namely households where there are tourist attractions and control groups are households where there are no tourist attractions on expenditure. The results of this study show the positive impact of tourism objects on household welfare in terms of expenditure.

Tourism objects have directly or indirectly changed the lives of people around the destination for the better (Sudarmayasa and Lanang Nala, 2019). the community can open up job opportunities and increase income (Wuri, Hardanti and Hartono, 2015). the level of expenditure of tourism workers increases along with the increase in income earned (Sasongko and Hidayat, 2020).

A total of 101 households living around tourism objects have a positive impact on the opening of new business opportunities (Hamzah and Hermawan, 2018) This can create local community employment (Maryetti and Mahoni, 2018) creating prosperity for the surrounding community who are directly involved in tourism activities such as traders, workers, and so on (Indahsari and Oktavianti, 2014).

The results of this study can also show the importance of tourism village development involving local communities that will have an impact on the community itself and the sustainability of the tourist attraction. Tourist objects will not succeed without good management from the government and of course the local community.

Based on previous research there are differences with this research. In this study, the object of research is households that live around tourist objects and households that do not live around tourist objects taken from 4 districts in Madura. This research uses a different method that is Propersonality Score Matching (PSM).

This study shows differences in the welfare of households living around tourism objects and households that do not live around tourism objects. Households living around tourism objects have a high business opportunity with the existence of tourism objects. Tourists have needs, one example is eating while in the tourist attraction, this can be utilized by households to increase income by opening a business to meet the needs of tourists.

CONCLUSION

The conclusion of the research is that the existence of tourist attraction destinations for households whose residence is in the tourist attraction environment in Madura, has an impact on household welfare in terms of household expenditure.

The development of tourist attractions has a positive impact on households that utilize tourist attractions.

The findings in this study have several important implications for the government to make creative economic policies that lead to the development of tourist villages in Madura. The development of tourist villages has a positive impact on the welfare of the community and can be one of the solutions to the problem of poverty and unemployment.

The limitation experienced in the research process is that it does not describe the situation indirectly because this research uses SUSENAS data from BPS so that researchers cannot directly observe the situation at the research location.

Suggestions for future research, it is expected to continue this research using the same analytical tool, namely propensity score matching (PSM) using other indicators and conducting ongoing research, this is in order to see the impact over time.

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