Jurnal Sosial dan Teknologi (SOSTECH)
Volume 2, Number 11, *November* 2022
p-ISSN **2774-5147** ; e-ISSN **2774-5155**

THE EFFECT OF SENTANI AIRPORT ON RENTAL PRICES FOR SHOPHOUSES

Akhmad Mabarun, Aryanto Dwi Nugroho, Firman Romadhon,
Wisdasari Ayu Bintari
Regional Office of Directorate General of State Asset Management (DJKN)
of Papua, West Papua
Email: mabarun.akhmad@gmail.com, aryanto13@gmail.com, firmanroma@gmail.com,
wisdabintaria@gmail.com

Abstract

The Existence of Sentani International Airport is considered as driving factor for the growth of economic activity for the region which will automatically affect the increase in the value of surrounding property. The aims of the study are: (1) explore the effect of airport distance on the rental price of shophouse, (2) explore the effect of the road width on the rental price, (3) explore the effect of the shophouse building size on the rental price, (4) explore the effect of the shophouse building frontage on the rental price. This analysis used a multiple linear regression. The result of this analysis conclude that the variable distance from the airport has significant effect of rental price 110.0602,- rupiah per square meter. While the variables of building size, road width, and building frontage have no significant effect on shophouse rental prices.

Keywords : rental price, distance, road width, building size, building frontage

INTRODUCTION

Jayapura Regency is one of the regencies in Papua Province, which has a very rapid dynamics of regional development. The various of Government policies related to the development in this area make the acceleration of regional growth in the future, especially in the economic sector (Carnis & Yuliawati, 2013). It is also supported by the existence of Sentani International Airport which has contributed significantly to the development of the regional and national economy, especially area surrounding Sentani Airport. This area relatively developed faster than other regions.

Tourism development is generally directed as a mainstay sector to encourage economic growth to increase regional income, empower the community's economy to expand employment and business opportunities, and increase product recognition and marketing in order to improve community welfare. (Suzana & Kapantow, 2017). The development of tourist areas must be a well-planned development so that optimal benefits can be obtained for the community (Setijawan, 2018). Tourist visits to Jayapura have been boosted by the Sentani Lake Festival and continue to increase from around 72,000 people in 2012 to around 87,000 people in 2013. Many of these tourist attractions have been abandoned so that the number of visitors has decreased. This happens because the state of human resources is still low in terms of capturing opportunities in the tourism sector, where the tourism sector has not been able to be relied on in improving community welfare (Behabol, 2017) (Suradnya, 2006).

To increase the role of tourism, it is closely related between goods in the form of tourism objects themselves that can be sold with the facilities and infrastructure that support them related to the tourism industry (Sambiran & Rondonuwu, 2017). Efforts to develop a tourist destination must pay attention to various factors that affect the existence of a tourist destination. These factors are related to five main elements that must be present in a tourist destination area,

e-ISSN 2774-5155
p-ISSN 2774-5147

which include tourist objects and attractions, tourist infrastructure, governance, or infrastructure as well as the conditions of the community or the environment (Bahari, 2014).

Sentani International Airport is located in Sentani District, Jayapura Regency, Papua Province. The airport distance is approximately 35 km from the city center of Jayapura. That is the largest airport in Papua as well as the main link to get to Papua island.

One of the economic activities surrounding Sentani Airport is comercial activity. This activity makes the shophouse grow around Sentani airport (Manurung et al., 2019). The closer to Sentani Airport, the denser the shophouses grow. On the other hand, the farther away from Sentani Airport, the rare the shophouses grow.

Based on the Gross Regional Domestic Product (GRDP) of Jayapura Regency data, during the period 2017 to 2021, growth in the construction sector tends to increase in a relatively stable pattern. Growth in 2017 was 11.8 percent, 8.22 percent in 2018, and increased to 9.49 percent in 2019. In 2020 buildings growth deacrease to 7.94 percent. The growth in average consumption per capita shows an increase, both on the basis of current prices and on the basis of 2010 constant prices, with the exception of 2020, during the COVID-19 pandemic. his is in line with a Statistic Central Agency (BPS) of Jayapura Regency data in 2016 which showed the existing of several shopping places , namely 12 (twelve) modern markets, 1 (one) supermarket unit, 2 (two) minimarket units, 83 (eighty three) units of shops and a total of 155 (one hundred and fifty five) units of kiosks. These conditions indicate that the level of economic growth in Jayapura Regency has increased. This can be seen from the increasing several new houses and shops (ruko) and kiosks in Sentani (Ismail, 2020).

Based on property conditions that tend to grow around Sentani Airport, this is an interesting issue to be addressed in this research (Berawi et al., 2018). This study will discuss the relationship between Sentani Airport and the growth of shop houses. The growth of shop houses around Sentani Airport will directly cause change of the rental price for shop houses near Sentani Airport. The researcher tries to measure the effect of physical character of a land on rental price, namely the distance/location factor, road width, building size, and building frontage (Triyanti et al., 2020). The purpose of this research is to explore:

1. the effect of the distance from Sentani Airport on the rental price of shophouses;
2. the effect of road width on the rental price;
3. the effect of building size on the rental price;
4. the effect of building frontage on the rental price.

In 2005, Martono Priyadi has investigated the influence of location factors, road width, land area on the selling price of residential land in Probolinggo by using multiple linear regression methodology. The results of the analysis are that the distance of the land location from the center of the business district has a negative effect on the selling price of land, road width on one side of the land has a positive effect on the selling price of land, and the area of land has a positive effect on the selling price of the land.

The main difference of this study with the previous study conducted by Martono Priyadi is on the using of research variables. Martono's research use location, road width, and land area variable to explore the selling price of residential land. In this study, research variables are distance, road width, building area, building frontage to explore the rental price of shophouses around Sentani Airport.

RESEARCH METHOD

This study uses multiple linear regression analysis tools to explore the significant independent variable. Independent variable is used to explain influence and relationship toward dependent variable. Dependent variable is Shophouse Rental Price, a primary data that measure rental price of shophouse

e-ISSN 2774-5155
p-ISSN 2774-5147

in rupiah per sequare meter per year (Rp/m2/y). Independent variable consist of Distance to Sentani Airport, Front Road Width, Building Size, and Building Frontage. Distance is secondary data collected from internet that measure distance of shophouse to Sentani Airport in meter. Front Road With is the measurement of width of road access of shophouse in meter. This variable is secondary data collected from internet. Building Size and Building Frontage are primary data. Building Size is measured in sequare meter (m2), and Frontage Size is in meter (m).

In general, the model used in this study is $Y = c + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 , + e$. From the results of data processing, it is shown that the best for the time being the best shop-house rental price estimation model is as follows:

$Y = + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$

Where :

Y : Shophouse Rental Price
C : Constanta
$\beta_{1,2,3,4}$: Coefficient of variable
X_1 : Distance to Sentani Airport
X_2 : Front Road Width
X_3 : Building Size
X_4 : Building Frontage
e : Disturbing Factor

Data is collected from rented shophouses located in the economic corridor in Jayapura Regency. This research is focused on the study around Sentani Airport. The unit of analysis used in this study is the area around the facility within a radius of 9,500 meter

RESULTS AND DISCUSSION

1. Data analysis

Research data is primary data obtained through field surveys in the Sentani area, Jayapura Regency, Papua Province. All data were processed using the EVIEWS program. Based on the results of the classical assumption test in multiple linear regression analysis (Ainiyah et al., 2016). This result can be explained that there is no autocorrelation, the data is normally distributed, and there is no multicollinearity.

Tabel 1
Summary of Research Results of Shophouse Rental Prices Around Sentani Airport in 2022

Variable	Mean	Standard Deviation	*Min*	*Max*
Shophouse Rental Price per Square Meter per Year (Rp/m2/year)	867.020	364.809	550.000	1.750.000
Distance to Sentani Airport (m)	6.772	3.319	700	9.600
Front Road Width (m)	5	1	4	10
Building Size (m2)	117	49	44	300
Building Frontage (m)	8	3	6	13
Number of Observations	30			

Tabel 2 Summary of Results of Multiple Liner Test Analysis of Shophouse Rental Prices per Year per Square Meter Around Sentani Airport in 2022

Variable	Coefficient	Standard Deviation	t-statistic	Probability
C	1616906.	199546.4	8.102906	0.0000
Distance to Sentani Airport	-110.0602	7.917045	-13.90168	0.0000

e-ISSN 2774-5155
p-ISSN 2774-5147

Front Road Width	212.9738	408.5119	0.521341	0.6067
Building Size	-12964.29	9023.043	-1.436797	0.1632
Building Frontage	14923.60	20840.26	0.716095	0.4806
R-squared	0.936132 or 93.61 percent			
Adjusted R- squared	0.925913 or 92.59 percent			

Tabel 3 Summary of Analysis Results

Variable	Probability	Influence
Distance to Sentani Airport	0.0000	Significant
Front Road Width	0.6067	Not Significant
Building Size	0.1632	Not Significant
Building Frontage	0.4806	Not Significant

Variable of Distance to Sentani Airport statistically has significant effect and negative coefficient. The regression coefficient value for Distance to Sentani Airport is -110.0602. This shows that if the shophouse distance from Sentani Airport increase by 1 meter, the shophouse rental price per year per square meter will decrease in average by 110.0602 rupiah (ceteris paribus).

The results meet the similarities with Alonso theory. The distance variable stastistically has negative coefficient results. This result means that distance variable can prove that the farther a location from the center of the business district, the cheaper the rental value of the land, and vice versa (Herath & Maier, 2013). This result also meet the similaritiy with Priyadi research that the distance has negative effect on the selling price of land (Priyadi et al., 2022).

On the other hand, the front road width variable, building size variable, and building frontage variable has no significant effect on rental value of shophouse. These variables did not affect shophouse rental value (Yung et al., 2014). Change in value of those variable did not influence shophouse rental value.

Based on the results of the multiple linear regression analysis above, the independent variables can be explained and concluded their effect on the price of shophouse rental per square meter. Variable Distance to Sentani Airport is statistically significant at $\alpha = 0.05$. This model has a good prediction based on the R-squared value of 93.61 percent with the Adjusted R-squared of 92.59 percent. The variation of shophouse rental prices per square meter per year can be explained by various types of variables in this model of 93.61 percent while 6.39 percent is explained by other variables outside this model

The degree of the responsiveness of shophouse rental value when distance vary is measured by Elasticity. Distance elasticity of shophouse rental price is a measurement of the change in the rental price of the shophouse in relation to a change in its distance. Elasticity value is greater than 1 means elastic. Elasticity value is less than 1 means inelastic

The formula for calculating the distance elasticity is as follows:
Elasticity = **β** (X/Y)
Note:
X = average value of distance variable
Y = average value of shophouse rental price variable
β = coefficient value of distance to sentani Airport variable

Tabel 4 Summary of Elasticity Calculating Results

Variable	Elasticty Value	Easticity Catagory
Distance to Sentani Airport	0,85960048673618	Inelastic

e-ISSN 2774-5155
p-ISSN 2774-5147

2. Economic Analysis

The Sentani Airport has a significant effect on shophouses rental prices. Shophouses with location close to Sentani Airport has rental price more expensive then those far from airport. The distance of a shophouse location is getting further from Sentani Airport by 1 meter unit will reduce the rental price of shophouses by average 110 rupiah (ceteris paribus). The distance elasticity of shophouse rental price is inelastic (Yung et al., 2014). Shophouse retal value does not change greatly in respose to change in distance of the shophouse to Sentani Airport.

In the Sentani Airport and area surrounding it, front road width, building size, and building frontage has no significant effect on shophouse rental price. Road access width does not affect on rental price of shophouses. Variation of shophouses building size and frontage does not affect its rental price.

CONCLUSION

The Sentani International Airport statistically has significant effect on shophouse rental price. Shophouses lacated close to airport has higher rental price than those located far from airport. Shophouse location is getting further from Sentani Airport by 1 meter will reduce its rental price by average 110 rupiah (ceteris paribus). Elasticity of shophouse rental price is inelastic in respose to change in distance to airport. Front road width of shophouse access, shophouse building size, and shophouse building frontage statistically does not have significant effect on the shophouse rental price.

BIBLIOGRAPHY

Ainiyah, N., Deliar, A., & Virtriana, R. (2016). The classical assumption test to driving factors of land cover change in the development region of northern part of west Java. *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*, *41*, 205.

Bahari, M. T. (2014). *ANALISIS POTENSI FISIK DAN NON FISIK OBJEK PARIWISATA KAWASAN LAU DEBUK DEBUK DESA SEMANGAT GUNUNG KABUPATEN KARO*. UNIMED.

Behabol, D. (2017). Strategi pariwisata dalam meningkatkan kunjungan wisata di Kabupaten Jayapura, Propinsi Papua. *Jurnal Pariwisata Pesona*, *2*(1), 16.

Berawi, M. A., Susantono, B., Miraj, P., & Nurmadinah, F. (2018). Prioritizing airport development plan to optimize financial feasibility. *Aviation*, *22*(3), 115–128.

Carnis, L., & Yuliawati, E. (2013). Nusantara: Between sky and earth could the PPP be the solution for Indonesian airport infrastructures? *Case Studies on Transport Policy*, *1*(1–2), 18–26.

Herath, S., & Maier, G. (2013). Local particularities or distance gradient: What matters most in the case of the Viennese apartment market? *Journal of European Real Estate Research*.

Ismail, M. (2020). Strategi Pengembangan Pariwisata Provinsi Papua. *Matra Pembaruan: Jurnal Inovasi Kebijakan*, *4*(1), 59–69.

Manurung, K., Basir-Cyio, M., & Basri, H. (2019). The Development and Potential Evaluation of Indonesian Lore Lindu National Park Ecotourism in Relation to the Economic Growth of the Surrounding Community. *J Environ Manag Tour*, *8*(10.14505).

Priyadi, Y. F. A., Hani, E. S., & Saito, Y. (2022). Partnership Impact on Production and Income of Indonesia Rubber Farmers. *Economics Development Analysis Journal*, *11*(3), 381–393.

Sambiran, S., & Rondonuwu, A. (2017). Strategi Pemerintah Daerah dalam Mengembangkan Objek Wisata di Kabupaten Bolaang Mongondow Utara. *Jurnal Eksekutif*, *2*(2).

Setijawan, A. (2018). Pembangunan pariwisata berkelanjutan dalam perspektif sosial ekonomi. *Jurnal Planoearth*, *3*(1), 7–11.

Suradnya, I. M. (2006). Analisis faktor-faktor daya tarik wisata Bali dan implikasinya terhadap perencanaan pariwisata daerah Bali. *SOCA: Jurnal Sosial Ekonomi Pertanian*.

Suzana, B. O. L., & Kapantow, G. H. M. (2017). Strategi Pengembangan Wisata Bahari Pantai Malalayang, Kota Manado, Sulawesi Utara. *Agri-Sosioekonomi*, *13*(1A), 277–284.

Triyanti, R., Muawanah, U., Kurniasari, N., Soejarwo, P. A., & Febrian, T. (2020). Potensi pengembangan ekowisata bahari berbasis masyarakat adat sebagai kegiatan ekonomi kreatif di

e-ISSN 2774-5155
p-ISSN 2774-5147

kampung Malaumkarta, Papua Barat. *Jurnal Sosial Ekonomi Kelautan Dan Perikanan*, *15*(1), 93–105.

Yung, E. H. K., Langston, C., & Chan, E. H. W. (2014). Adaptive reuse of traditional Chinese shophouses in government-led urban renewal projects in Hong Kong. *Cities*, *39*, 87–98.

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License