

Asset Optimization in Gili Air Island, Lombok

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ABSTRACT

Gili Air Island is one of the three islands located in North Lombok Regency, Indonesia. It is a part of the Gili Tramena National Tourism Strategic Area. Tourism in Gili had been proliferating in 2013-2017. Due to the Lombok earthquake in mid-2018 and Covid-19 pandemic, however, tourism on the island has not yet reached its maximum potential. This paper applied Highest and Best Use (HBU) analysis to determine the most economic benefits an asset can provide. HBU analysis aims to determine whether or not the property is being used for its most profitable permitted use. The results of the HBU analysis show that the private villa covering an area of 1,144 m² results in an NPV value IDR20,100,000,000 and the land value is IDR3,090,000,000 or an increase of 85.47% from its original value.

Keywords: Asset Optimization, Highest and Best Use (HBU), Tourism, Valuation

INTRODUCTION

Gili Air Island is one of the three islands located in North Lombok Regency, Indonesia. The other two islands are Gili Trawangan Island, the most famous, and Gili Meno island, the quietest island. These three islands are the Gili Tramena National Tourism Strategic Area and its surroundings. The National Tourism Strategic Area is an area that has the primary function of tourism or has the potential for the development of national tourism that has an important influence in one or more aspects, such as economic, social, and cultural growth, empowerment of natural resources, environmental carrying capacity, and defense and security (see Figure 1).

Figure 1. Gili Tramena National Tourism Strategic Area



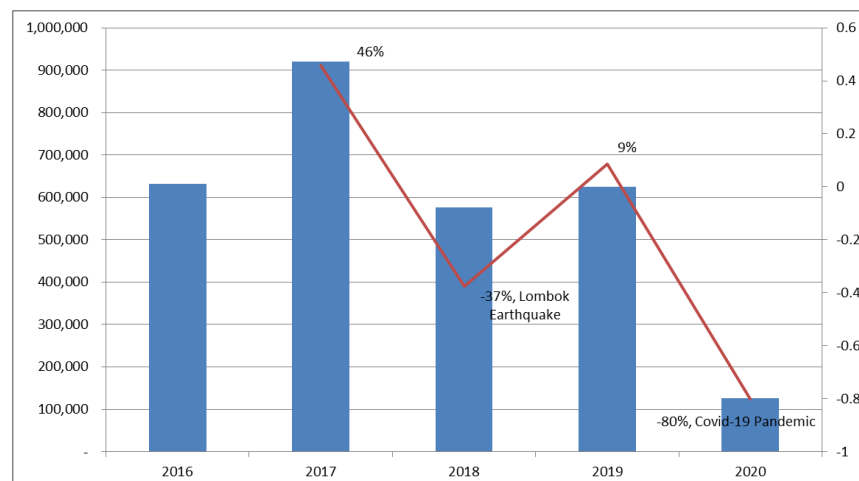
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Source: Government Regulation of the Republic of Indonesia No. 50 of 2011

Tourism in Gili is multiplying with the average increase in tourist visits per year reaching $\pm 20\%$ in 2013-2017 with the number of tourists staying $\pm 90\%$ to $\pm 95\%$ of total tourist visits. At the time of the Lombok earthquake in mid-2018, the number of tourists staying decreased by $\pm 37\%$ in 2017 and by $\pm 9\%$ in 2019. At the time of the Covid-19 pandemic, the number of tourists staying decreased by $\pm 80\%$ in 2019 and decreased by $\pm 85\%$ compared to 2017 (see Figure 2). The condition of Gili Air during the pandemic was quite concerning, in which many accommodations were closed and neglected. Gili Air is also affected by the limited tourist visits to Bali. This occurs because they are mostly tourists who have been to Bali.

Figure 2. Number of Tourist Stays in Gili Tramena National Tourism Strategic Area



Source: Central Bureau of Statistics of West Nusa Tenggara Province

Gili Air Island has the potential for accommodation development, there are still many unproductive lands available, and the high interest of tourists makes Gili Air in demand by investors. If tourism is reopened, the investor will face the biggest problem: what type of tourism accommodation will be built to use the owned assets optimally. Currently, the type of tourism accommodation in Gili is budget hotels, villas, and homestays. To determine the optimal use of a property, the Highest and Best Use (HBU) analysis is a commonly used method. Highest and Best Use (HBU) is defined as the most possible and optimal use of an asset, which is physically possible, has been considered sufficiently, legally permissible, financially feasible, and produces the highest production value of the property (Masyarakat Profesi Penilai Indonesia, 2018).

Sudharma and Rahmadani (2020) conducted a vacant land optimization study in Denpasar, Bali using HBU analysis, which showed that the land will yield the highest benefits if it is developed as a mixed-use building as a hotel and shophouse. Bravi and Rossi (2012) stated that the flexibility in the real estate investment is related to the alternative uses embedded in the land and to the characteristics of the building. The value of vacant land should reflect not only the value based on best immediate use, but also its option value. If the development is delayed and the land is converted into the

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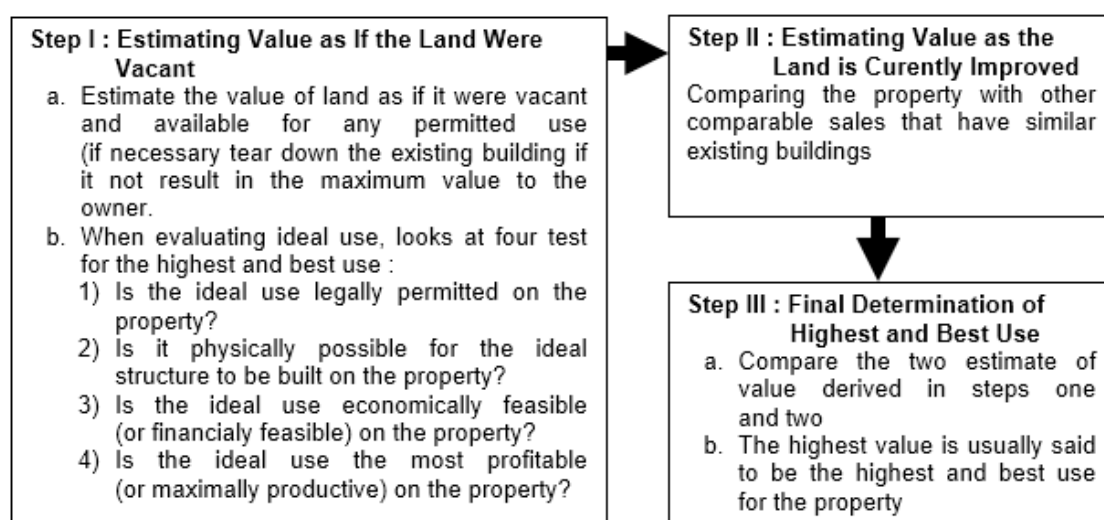
best alternative use in the future, it shows the limits of the traditional analysis (Discounted Cash Flow Model) to capture flexibility in the real estate investment.

RESEARCH METHOD

Highest and Best Use is the most possible and optimal use of an asset, which is physically possible, considered sufficiently, legally permissible, financially feasible, and produces the highest production value of the property (Masyarakat Profesi Penilai Indonesia, 2018). From this definition, four criteria must be met in the HBU analysis. They are:

1. Legally Permissible
2. Physically Possible
3. Financially Feasible
4. Produces the Highest Productivity

Figure 3. HBU Frameworks



Source: Hondros Learning™ (2011)

The Goal of Highest and Best Use analysis is determining whether or not the property is being used for its most profitable permitted use. With vacant land in an area that is changing, growing, or expanding, Highest and Best Use can be a significant point that needs to be addressed. Sometimes a change of structure is best to maximize the value of the land (Hondros Learning™, 2011).

According to Ozerov, Pupentsova, Leventsov, and Dyachkov (2017), when selecting the HBU of investment assets, the optimal number of floors of the enhancement must be determined for legally allowed and physically possible options. Cash flows must be substantiated in detail, their change and rate of return on capital, the uncertainty of the initial data must be considered, and the relative error of the expected value must be estimated.

Discounted Cash Flow (DCF) analysis is a procedure in which the discount rate is applied to the series of revenue streams and reversion. DCF is suitable for use on

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some regular income patterns and irregular. The disadvantage of DCF is greatly influenced by the projection of income as changes in revenue projections will have a significant effect on the value of the property (Appraisal Institute, 2008).

DCF is also called the multiperiod income discounting method, a model based on the idea that financial investment is the value of the total benefits that would come to be provided to the owner, each is discounted to a present value at a discount rate that reflects the time value of money and the level of risk on the expected number. Converting future benefits to present value by discounting the projected income cash flows. Prawoto (2012.443) suggested the formula:

$$\text{Present Value} = \frac{\text{NOI}_1}{(1+i)^1} + \frac{\text{NOI}_2}{(1+i)^2} + \dots + \frac{\text{NOI}_n}{(1+i)^n} + \text{TV} \quad (1)$$

NOI: Net Operating Income;

I : Discount Rate;

TV : Terminal Value;

N : Year

RESULTS AND DISCUSSION

Step I: Estimating Value as If the Land Were Vacant

The research object is a land located at Gili Air Island, Gili Indah Village, Pemenang Sub-District, Lombok Utara Regency, Nusa Tenggara Barat Province. Its characteristic is an irregular shape with an elevation equal to the road surface and flat topography. The asset's current condition is not maintained and is overgrown with bushes. Land valuation is carried out using a comparative market approach with the market data comparison method. Based on market data around the location of the asset and after making adjustments to the characteristics of the object of research, the estimated yield of the value of the vacant land is IDR3,090.000.000.

In determining the appropriate alternative properties to build, interviews were given to parties who understand the surrounding area, namely local residents and the government. The initial alternatives were obtained from direct observation of the surroundings by considering the types of properties built around the object location and permitted by government regulations.

Legally Permitted

The legal aspects are analyzed to ensure that the alternative development selection and the building planning are under government regulations and the Regional Spatial Plan of Lombok Utara Regency. The research object is vacant land located at Gili Air Island, Gili Indah Village, Pemenang Sub-District, Lombok Utara Regency, Nusa Tenggara Barat Province. Following the Regional Regulation of the Lombok Utara Regency Government No. 9 of 2011 about the Regional Spatial Plan of Lombok Utara Regency for 2011-2031, the research object is in the tourism zone. It consists of tourism service business zones, object and tourist attractions, and tourism facilities business zones. Tourism business zones are for travel agency services, convention services, incentive travel, exhibitions, impresario services, tourism consultant services, and tourism information services. Building Coverage Ratio in the tourism services business zone is maximum by 60%, floor area ratio by 3, and green coverage ratio by 20%. Tourist attractions zones are for natural attractions, cultural attractions, and special interest attractions. Building coverage ratio in object and tourist attractions zone

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is maximum by 20%, floor area ratio by 0.4, and green cover ratio by 40%. The tourism facilities business zone is for the provision of accommodation, food and drink, tourist transportation, water tourist facilities, and tourism areas, the building coverage ratio in the tourism facilities business zone is maximum by 60%, floor area ratio by 0.8, and green coverage ratio by 20%.

Based on the abovementioned provisions, the properties permitted to be built are in the form of commercial properties: hotel and restaurant buildings as high as two floors.

Physically Possible

Physical aspect analysis includes object location, land accessibility, size, elevation, topography and land shape. In our direct observation of the area, the site characteristic is an irregular shape with an elevation equal to the road surface and flat topography. The asset's current condition is not maintained and is overgrown with bushes. The land is located in the middle of Gili Air Island, from the nearest beach $\pm 500\text{m}$ and $\pm 1\text{km}$ far from the harbor. The main transportation on the island is a bicycle, horse-drawn carriage, and electric motorcycle. There is no car and motorcycle allowed for some environmental reasons. There is already a road network but only dirt roads, electricity, water, and internet. The asset environment is well developed, with tourism accommodation, shops, and restaurants.

Products that are legally permitted are then screened at a later stage. Physical studies comprise what uses suitable or physically possible to develop on the site. Based on the characteristics of the object and the location of the object, it can be concluded that hotels are physically possible to develop.

Step II: Estimating Value as the Land is Currently Improved *Economically/ Financially Feasible*

Products that are legally permitted and physically possible will be screened for the next stage: the financial aspect or the product must be financially feasible. In this study, what property products are marketable and financially feasible to develop on the site. A market study is conducted by considering economic conditions and growth, demand and supply, property prices, target markets, and competitors. In the study of the financial aspect, analysis of development costs, revenue analysis, operational cost analysis, financial projections, and feasibility analysis (NPV, IRR, & B / C Ratio) are conducted.

Market Analysis

Tourism accommodation on Gili Air Island includes budget hotels, villas, and homestays. Most budget hotels are bungalow/hut buildings with a public pool, spa, and restaurant facilities. Villas in Gili Air includes private villas with bungalow/hut equipped with a private pool in each villa and public pool, spa, and restaurant facilities. The homestay design residential buildings are not equipped with public facilities. Most budget hotels are located on the beach and overlooking the beach, while private villas and homestays are on the inside area of the island and do not directly face the beach.

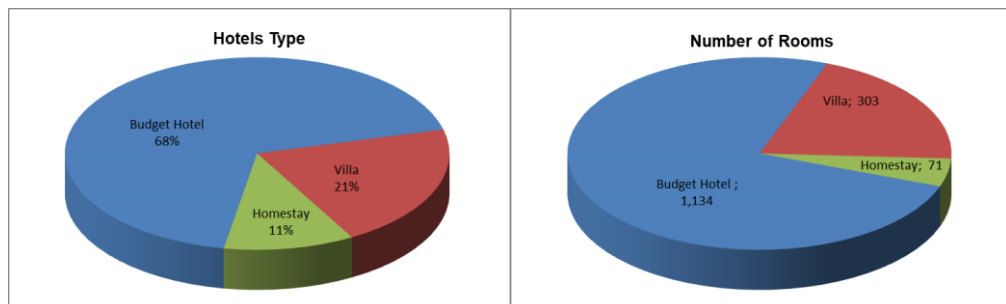
The number of accommodation businesses on Gili Air to date is 154 businesses. Of this number, the most budget hotels are 118 hotels, 36 villas, and 19 homestays. The total supply reached 1,437 rooms, consisting of 1,134 hotel rooms, 303 villa rooms,

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and 71 homestay rooms. Based on the average, the number of rooms owned by each accommodation business is not many, where the average is only nine rooms/businesses. Budget hotel business, on average, are ten rooms/hotels, while the villa business is eight rooms per hotel and homestay is three rooms (see Figure 4).

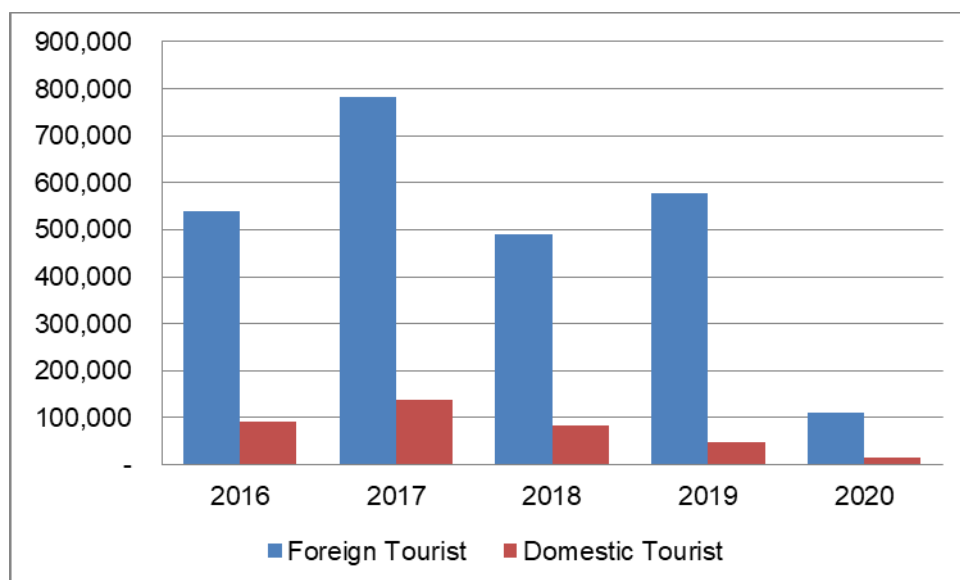
Figure 4. Tourism Accommodation Supply



Source: North Lombok Regency Tourism Office

Based on the results of field observations and statistical data, tourists staying in Gili Air come from domestic and foreign tourists. Foreign tourists are more dominant than domestic tourists. In general, foreign tourists come from Malaysia, Singapore, China, Australia, and Europe. The domestic tourists come from Lombok, Mataram, Sumbawa, Java, Jakarta, and Bali (see Figure 5).

Figure 5. Tourism Accommodation Demand



Source: Central Bureau of Statistics of NTB Province

Based on the physical characteristics and the location of the assets in the middle of the island and considering the tourism market conditions in Gili Air, three alternative tourism accommodation products can be developed. First, the development of a hotel as many as 11 rooms with a bungalow/hut building design, and hotel facilities of a

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lobby, public swimming pool, restaurant and spa. Second, the development of private villas consists of 18 rooms with bungalow/hut building designs equipped with swimming pools in each villa and hotel facilities of a lobby, public swimming pool, restaurant, and spa. Third, the development of homestays is with residential building designs consisting of 34 rooms see Table 1).

Table 1. Product Development

	Budget Hotel/ Non Private Villa	Private Villa	Homestay
Number of Rooms	11	18	34
Room Area (m²)	50	50	38
Room Rate	IDR631,000	IDR1,249,000	IDR215,000
Building Area (m²)	794	1,144	1,342
Facility	Spa, restourant, and public pool	Spa, restourant, private pool and public pool	-

Financial analysis is carried out to measure the feasibility of the alternative development investment plan (see Table 2). The analysis is carried out to calculate development investment costs, income, fixed cost, variable cost, cash flow projections and investment feasibility analysis.

Table 2. Financial Analysis

	Budget Hotel/Non- Private Villa	Private Villa	Homestay
Investment	IDR10,916,840,000	IDR17,458,840,000	IDR14,362,580,000
Property Value (Improved)	IDR11,618,000,000	IDR20,100,000,000	IDR14,424,000,000
IRR	14.70%	15.89%	13.61%
B/C Ratio	1.06	1.15	1.004
Discount Rate	13.19%	13.19%	12.91%
Conclusion	Feasible	Feasible	Feasible

Step III: Final Determination of Highest and Best Use - The Most Profitable (or Maximally Productive)

The final filtering stage is maximum production. Development products that have the highest NPV (Net Present Value) are products that produce optimally and are the conclusion of the products in this analysis or are the highest and best development products on the site.

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Table 3. Maximum Productivity

	Budget Hotel/Non-Private Villa	Private Villa	Homestay
Property Value (Improved)	IDR11,618,000,000	IDR20,100,000,000	IDR14,424,000,000
Development Cost	IDR7,826,840,000	IDR14,368,840,000	IDR11,272,580,000
Land Cost	IDR3,090,000,000	IDR3,090,000,000	IDR3,090,000,000
Land Value	IDR3,791,160,000	IDR5,731,160,000	IDR3,151,420,000
Productivity	22.69%	85.47%	1.99%

With the highest productivity, development alternatives that pass the testing for legal, physical, and financial aspects will be chosen. Land productivity is an increase in land value due to property development on it. After being built, the property value is obtained from the NPV value minus the building investment costs to get the land value. The results of productivity calculations can be seen in Table 3. It indicates that the highest productivity is obtained from private villas, showing an increase in land value by 85.47% or IDR2,641,160,000 more than before.

CONCLUSIONS

Based on the Highest and Best Use analysis, the land on the research object is located in the Allocated Area for The tourism facilities business zone is for the provision of accommodation, food and drink, tourist transportation, water tourist facilities, and tourism areas. The building coverage ratio in the tourism facilities business zone is a maximum of 60%, floor area ratio of 0.8, and green coverage ratio of 20%. The observations and market analysis show that the types of marketable tourism accommodation are budget hotels, private villas, and homestays. The financial analysis and maximum productivity results show that the private villa covering an area of 1,144 m² results in an NPV value IDR20,100,000,000 and the land value is IDR3,090,000,000 or an increase of 85.47% from its original value.

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