ECONOMICAL FEASIBILITY STUDY OF SAGARA UPALA HOTEL CONSTRUCTION IN PANGANDARAN

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Abstract- *Any investations are hopefully make a positive return in long term or mid term, but it is always have risk when you spend a money for investation. This research aimed to find the investment feasibility of the company project so the company can make the correct decision for the investment plan. To solve the problem this research calculate the value of Net Present Value (NPV), investment Interest Rate of Return (IRR), the Investment Payback Period (PBP) of the project The object of this research is a hotel construction in Pangandaran beach, Jawa Barat, Indonesia by PT Graha Mitra Properti. The project will stated as feasible if the Net Present Value (NPV) is higher than 0 (NPV>0) and the Interest Rate of Return (IRR) is higher than the rate of return. The lifetime of this project is 30 years. This research will only explain economical feasibility study based on investment, cash inflow and cash outflow and there are several assumption in this research to limit the the scope of the final project.*

Keywords: B2B marketing, e-commerce, technology acceptance model (TAM), consumer behavior, building material

Introduction

Indonesia is the biggest archipelago in the world. There are many islands outspread from Sabang to Merauke which abundant with natural beauty. It is very common to see a lot of international tourists visiting Indonesia to enjoy Indonesian's beauty. In years 2009, 17.480 islands recorded inside Indonesian territory. With lots of island, Indonesia has many beaches to visit. Seaside tourism is one of favorite destination to visit. Sunset warm, romantic atmosphere, sunrise cool and passionate atmosphere make seaside become the perfect destination for holiday with family or friends.

Pangandaran Beach is one of the favorite place for holiday destination from 30 years ago until now. Pangandaran Beach located in Pangandaran District, West Java Province. Besides beach, Pangandaran have another tourism destination such as cave, wildlife sanctuary, preserved forest, water park and seafood culinaries. Pangandaran once got the disaster which was big tsunami that demolish almost all the beach line of pangandaran in 2006, but Pangandaran succeed to rise again. It can be seen from the economic groth that turn down in 2006 but increasing rapidly in 2007 and still stable until 2012. Based on the data from Badan Pusat Statistik (BPS) Kabupaten Ciamis, the number of Pangandaran's visitors keeps increasing after the tsunami disaster in 2006. In 2013, Pangandaran's visitors increased by 11.05 percent from previous year, which the total visitors during 2013 were 1,552,153 people with international tourists were 8,587 people. The increase of tourism in pangandaran is not in line with the number of hotel that adequate, comfort and have a good management. Based on BPS Kabupaten Ciamis there are already built 182 hotels until 2012 with

only 1 star hotel and there are few hotel with very good atmosfer and management. Most of the hotel in pangandaran have the total 10-24 bedrooms which are 84 hotels.

The increase of tourist and the needs of a good hotel in Pangandaran Beach was seen as a big opportunity by PT Graha Mitra Properti which is the object of this research. PT Graha Mitra Properti is the new comer in property business. By utilizing the unused government asset, PT Graha Mitra Properti will rebuild the unused asset to be functioned as Sagara Upala Hotel with new concept which is unique, attractive, and have high sale value.

Any investation are hopefully make a positive return in long term or mid term, but it is always have risk when you spend a money for investation. PT Graha Mitra Properti spend a quite big money to build Sagara Upala Hotel as an investation, absolutely PT Graha Mitra Properti want a positive return from the investation. To avoid a negative return, PT Graha Mitra Propeti should do investment analysis before starting the project.

Literature Review

Feasibility study

Feasibility study is a study that is done to determine options and whether the preferred or optimum option for a particular project is can achieve the desired objectives and sustainable given the likely resource available. (US. Army Corps of engineering,2003:4). Feasibility can also defined as an analysis of the viability of an idea. Feasibility study is used by people to make decision about a project or business idea. By doing feasibility study, people will have a strong basic of making a decision to accept a project, reject the project or the project need another treatment.

Economic Feasibility study

Economic Feasibility study is commonly used to determine and evaluating the effectiveness of a new system or project. By doing economic feasibility study, people will know whether the project feasible or not from its economical perspective. This feasibility study also known as cost/benefit analysis. If the benefit is higher than the cost, people decision will implement the system or project. But if the benefit is less than the cost it would be better if people did not implement the project, because its not profitable.

Present value

Present value is the current worth of a future amount "the amount of money that should have to be invested today at a given interest rate over a specified period to equal the future amount (Gitman, 2009).

Below is the present value formula:

$$PV = \frac{FV}{(1-r)^t}$$

....(1)

Where:
PV = Present value (value on year 0)
FV= Future Value (value on year t)
r = Discounted rate equal to the firm's cost of capital
t = Number of year

Net Present Value

The basic idea of Net Present Value is that an investment is worth undertaking if it creates value for the owner (Ross,2008). Net present value is the difference between an investment's market value and ist cost. To determine Net Present Value, we can simply find the present value of the after tax cashflow of the project. The formula to calculated Net Present Value based on Lawrence J. Gitman (2009) is:

$$NPV = \sum_{t=1}^{T} \frac{Ct}{(1-r)^t} - C_0$$

....(2)

Where:
NPV = Net Present Value
Ct = End of year cashflow on year t
C_o = End of year cashflow on year o
r = Discounted rate equal to the firm's cost of capital
t = Number of year

Internal Rate of Return
The internal rate of return (IRR) is the discount rate that equates the NPV of an investment opportunity with $0 (Gitman,2009). The internal rate of return (IRR) of the project is equal to discounted rate which the net present value (NPV) of the project is zero. Which mean that the project revenue is equal with project cost.
An investment is acceptable if the Internal Rate of Return (IRR) exceeds the required return. It should be rejected otherwise.

Payback Period
Payback period is also known as Break Even Period. Payback period refer to amount of time required for an investment to generate cashflow sufficient to to recover its initial cost (Ross,2009).
The payback method has been used as a measure of the project riskiness, since liquidity deals with how fast an investment can be recovered.

$$PBP = \sum_{t=1}^{\theta} (Rk - Ek) - 1 \geq 0$$

....(3)

Rk= net revenues or saving for the k year
Ek= net expenditure, including any investment cost for the k year
Θ= Payback Period

Depreciation Cost
Depreciation cost is the process of allocating the cost of a long-term tengible asset, such as building or equipment, over its useful life (Garry Porter,2010). The depreciation that will be use in this research is the straigline depreciation method. Straight line depreciation method is the simplest approach to determine the depreciation cost. Straight line method assigns an equal amount of depreciation to each period.the depreciation founded by dividing the depreciable assets over the estimated useful life of that asset.

Residual Value
Salvage value is the estimated resale value of an asset at the end of its useful life. The salvage value is also the amount a company expects to receive when it sells an asset at the end of its useful life (Garry Porter,2010). A company surely doesnt want to sell the assets if the price is bellow the residual value

Sensitivity Analysis
Sensitivity, in general, means the relative magnitude of change in measure of the present worth or internal rate of return caused by one or more changes in estimated study factor values. Sometimes, sensitivity is more specifically defined to mean relative magnitude of the change in one or more factors that will reverse a decision among project alternatives or a decision about the economic acceptability of a project (Sullivan,2006).

The combined impact of changes in the best estimate values for three or more factors on the economic measure of merit for an engineering project can be analyzed by using selected combinations of changes. The technique to estimate factor values is optimistic, most likely, pessimistic approach(Sullivan,2006). An optimistic estimate for a factor that is one that is in the favorable direction. The most likely value for a factor is defined for our purposes as the best estimate value. The pessimistic estimate for a factor is one that is unfavorable direction

Data Analysis
In this section all data that already gathered will be used to analyze the investment to know if the project is feasible or not by finding net present value, internal rate of return, and the payback period.

Project Description
This project is a partnership of PT Graha Mitra Properti and West Java government, in this project PT Graha Mitra Properti manage the unused assets which is land owned by West Java government. PT Graha Mitra Properti is utilizing the unused assets of West Java governtment to build a hotel named Sagara Upala Hotel. Sagara Upala Hotel will construct in the 21,680 m2 land. It is located in front of the beach. The location have high accessibility because its located right in front recreation beach. The location is also supported by another tourist destination like as cave, wildlife sanctuary, preserved forest.

The Location of Sagara Upala Hotel

The land price is estimated around IDR 628.450,00 per m2, the price get from benchmarking the land price around the location. So the total price for land is 13.624.796.000,00. Since this project is collaboration of PT Graha Mitra Properti and West Java Government, PT Graha Mitra Properti doesnt need to pay big amount for buying the land. The government accept aggreement for sharing 30% from the profit of Sagara Upala Hotel. Sagara Upala Hotel will be build with a concept of sundanese culture, there are three types of rooms will be build in this hotel, hotel standard room with 1 bedroom, cottage type 1 with 2 bedroom, and cottage type 2 with 3 bed room. Cottage is a new innovation in Pangandaran beach, people who come together with would prefer to stay in cottage rather than they rent multiple room, because when they rent a cottage they still can spend the night together. Based on that reason Sagara Upala Hotel have a courage to build a cottage as new concept

Initial Investment

The initial investment is all expenditure in year zero before the hotel is operating. The initial investment consist of cost that should be paid in year zero, it is including:

1. Preoperation
2. Building construction
3. Support Facility

This is the total cost for initial investment:

Initial Investment Table

No	Cost Elements	Total Cost
1	Planning and legalization	IDR 1.000.000.000
2	Building Contsruction	IDR 10.152.000.000
3	Support Facility	IDR 10.391.183.500
	TOTAL	IDR 21.543.183.500

Cash Inflow

Sagara Upala Hotel will get their main income from the rent of 32 rooms, which is 24 standard rooms, 6 cottage type 1 with 2 bedrooms, and 2 cottage type 2 with 3 bedrooms. Each room has different rent price, IDR 500.000 for standard room, IDR 1.200.000 for cottage type 1 and IDR 2.000.000. In holiday season, the rent price will increase 50% so the standard room will sell in IDR 750.000, cottage type 1 IDR 1.800.000 and cottage type 2   IDR 3.000.000. The room will has occupancy rate of 25% for normal days and 75% for holiday season in the first year and increase 5% every year until reach the optimum occupancy rate.

The hotel will have another income from food and beverage. The hotel serve meals for breakfast and dinner. Each package of breakfast and dinner are set with price IDR 75.000 per package. food and baverages has occupation rate of its own. The occupancy rate for breakfast is 85% from hotel visitors and the occupancy rate for dinner is 65% from hotel visitors. There are other income which comes from income that doesn't include in that two sources of income. Other income assume as 10% of room sales. Bellow is the table of cash inflow.

Cash Outflow

Cash outflow of Sagara Upala hotel is divided into two types, direct cost and indirect cost. Direct cost consist of Room expenses, food & beverage expenses, and other expenses.room expenses consist of cleaning, bed sheet, towel, toileteries, and sandal. Food and beverage expense comes from the food ingredients and beverage ingredients. Indirect cost consist of administrative and general, salary, Property Operation Maintenance and Energy Cost (POMEC), sales and marketing expenses, Insurance and tax land and property (PBB).

Total Cash Inflow and Cash Outflow per year

Year	Cash Inflow	Cash Outflow
2015	0	21.543.183.500
2016	6.141.820.000	2.778.882.367
2017	6.806.208.000	2.977.431.667
2018	7.470.596.000	3.175.980.967
2019	8.134.984.000	3.374.530.267
2020	8.134.984.000	3.374.530.267
2021	8.134.984.000	3.374.530.267
2022	8.134.984.000	3.374.530.267
2023	8.134.984.000	3.374.530.267
2024	8.134.984.000	3.374.530.267
2025	8.134.984.000	3.374.530.267
2026	8.134.984.000	3.374.530.267
2027	8.134.984.000	3.374.530.267
2028	8.134.984.000	3.374.530.267
2029	8.134.984.000	3.374.530.267
2030-2045	8.134.984.000	3.374.530.267

Depreciation cost

It is necessary for a company to reserve a fund for the replacement of the facility because the facility is have their own lifetime to used. Sagara Upala Hotel has 5 elements that will be depreciated, which are the building, landscape, infrastructure, kitchen and furniture. Each element has their own lifetime.

Residual Value

Residual Value is the value of an assets at the end of their lifetime. In this research the lifetime of the investments is 30 years so the residual value will calculate in the year 2045. There are five assets that ar depreciated, building, landscape, infrastructure, kitchen, and furniture. Because author use a straightline depreciation method that five assets that depreciated doesnt have an excess life time in year 2045 so the value of that five assets is zero.

Taxable Income

Taxable income is the income that ready to get tax. Author will get the taxable income from deduct the operating cashflow of the project with the depreciation cost. The operating cashflow obtained from cash inflow deducted by cash outflow.

After Tax Cashflow

After tax cashflow is the net profit of the Sagara Upala Hotel. To obtain the after tax cashflow, the taxable income will deducted by cashflow for interest and tax (CFIT). The CFIT itself obtained from multiply the taxable income from the Sagara Upala Hotel with the tax rate. The tax rate for Sagara Upala Hotel is 21%. The interest is zero because the company not using bank as fund resources.

After obtaining the After Tax Cash Flow, the net profit for the company can be calculated. The company should pay the profit sharing to the company based on the agreement which has been agreed in this cooperation.

Discounted After Tax Cashflow

The after tax cashflow then discounted by minimum attractive rate of return (MARR) will become the discounted after tax cashflow (DATCF). The discounted after tax cashflow is the application of the time value of money, the value of DATCF each year is the same with the present worth for each year. As Author mention before the MARR that will be used is 11%. The Discounted after tax Cashflow then will be made cumulatively by adding the DATCF of the certain year with DATCF of the year before and become cumulative discounted after tax cashflow (CDATCF). CDATCF will be used to determine the payback period of the Sagara Upala Hotel.

Sensitivity Analysis

Sensitivity Analysis is a general non probabilistic methodology, readily available, to provide information about potential impact of uncertainty in selected factor estimates. Its commonly use to develop the decision process. In this case, author would like to know the impact that would be happened if there are a hange in the occupancy rate. in this sensitivity analysis, author will try to find the pesimistic approach and the optimistic approach of this investments project.

Pesimistic approach is the situation when the real condition is unfavorable to support the business activity. In this case the changed factor is the occupancy rate. in the pesimistic approach the occupancy ratein the first year is 5% less than the most likely aproach that already calculated before. This situation can caused by many other factor like disasters, political condition, pandemic desease or any other factors.

Optimistic approach is the situation when in the real condition the company can cahieve more than the most likely approach. In this optimistic approach the occupancy rate of the hotel is 5% more than the most likely approach in the first year. This situation can reach if the hotel do the right marketing or other external factors like city development or other factors.

Conclusion

After analyze the initial investment, cash inflow and cash outflow of Sagara Upala Hotel, author finally meet the conclusion that the Sagara Upala Hotel project that are planned by PT Graha Mitra Properti is feasible to do. The project stated feasible becasue the NPV of the project is more than zero which is positive IDR 1.150.324.800 with the payback period occur in the year 2039. Another reason is the IRR that higher than the MARR which is 11,65% while the MARR is 11%.

Besides doing the analysis before, author also doing a sensitivity analysis. The first sensitivity analysis is the pesimistic approach that have a net present value IDR317.098.473, the payback period of the pesimistic approach is occur in year 2042. The IRR of this project is 11,22%. The second sensitivity analysis is the optimistic approach that have the net present value DR 1.747.972.641 and the payback period of the optimistic approach is occur in year 2035. The IRR of the project is 12%.

Approach	NPV (IDR)	IRR	Payback Period
Pesimistic	317.098.473	11,22%	27 years
Most Likely	1.150.324.800	11,65%	23 years
Optimistic	1.747.972.641	12%	20 years

Research Limitation

This final assignment only limited on economical feasibility study for the construction of Sagara Upala Hotel by PT Graha Mitra Properti in Pangandaran beach. There are several assumptions to help authors analyze the data. These are some assumptions as the main issue of doing this final assignment:

1. This final assignment will only explain economical feasibility study base on initial investments, cash inflow and cash outflow.
2. The source of fund will only fulfilled by the owner without another source, bank.
3. This final assignment will analyze the investment for 30 years.
4. The analysis assume the economic is in the stable economic conditions so the inflation is zero.
5. The business also in stable condition so the MARR remains the same for 30 years.
6. All transactions assumed paid in the end of year.

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