Feasibility Study for A proposed Hotel in Jericho

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Introduction

The main objective of the feasibility study is to investigate the profitability of the proposed project. It aims to help investors to take the right decision regarding the proposed project. feasibility study will give the investors much clear picture about the viability of the proposed hotel, and help them in deciding whether to proceed in implementing the proposed project or not.it shows investors how they will receive a return on their investment .

To conduct the feasibility study for the proposed hotel project we need to study the following topics:

1- Location analysis
2- Proposed project description
3- Market Analysis: competitors in the local area
4- Total investment Costs
5- Total operating Costs
6- Estimating Annual Revenue of the proposed project
7- Financial and Economic Analysis of the proposed project

1- Location and Site[1]

The proposed hotel project will be constructed in new developing area located at the south entrance of Jericho city called JERICHO Gate. Palestine telecommunication company "PALTEL "acquires 75% of all the JERICHO GATE from PADICO in year 2018 to improve and develop a 3700 Dunoum into a complete big residential and tourism project.

JERICHO GATE is situated 25 km east of Jerusalem ,7 km west of Jordan river, 8 km north to dead sea, and 3 km from mount and monastery of the temptation.

The proposed hotel site is going to be constructed on 12,000 m^2, located in the heart of residential and tourism project of Jericho gate, and is neighbored by proposed open space retail shopping, entertainment area, with main walking street next to water park. all infrastructure road construction, street lights and palm plants are already implemented.

1 : Rami Kreitem : short study for a proposed hotel in Jericho . 21/10/2019

The owner of the hotel will provide free shuttle to Jerusalem city twice daily, and free shuttle to nearby key tourist points such as, Dead sea, Baptism site, Allenby Border crossing, Jericho city center, etc.

2- Proposed Project Description[2]

The hotel will contain 110 guest rooms and suites in a five-story building. the first floor will contain the lobby, breakfast and dinner area, the outdoor pools ((one to serve the water slides, one for young children, and one for families)) small whirlpool, fitness center, a pub that will serve food for lunch, working space and administrative pace, etc.

The planned room mix will have78 double queen rings, 8 single king rooms, and 4 king suites in addition to 20 pool view and pool access suites unites on two story in a separate building attached to the pool. some guest rooms will have a separate living space and all rooms will contain flat screen televisions, a coffee maker, mini-fridge and free high-speed internet.

The total construction area of the proposed hotel equal to 7880 m^2, break down to the following:

- Main building of 5500 m^2 consisting of 5 floors at hold 80 superior double rooms, most hotel management and facility area.
- Attached building of 1000 m^2 (one floor with high ceiling)
- For multifunctional meeting and conference rooms
- Pool view “next door building “
- Bungalows 20 suites on two floors of 1380 m^2
- Pool bar/swimming area
- Green area
- Suitable fencing

The hotel will have at least 4-star rating in international hotel rating system

2 – Rami kreitem -Ibid-p.3

3- Market Analysis – competitors in the local area[3]

The following table summarize the main competitors and their basic features of the existing hotels in the Jericho city:

	Jericho Resort	Oasis	Albayara
Number of Rooms	105	179	33
Rating	4 stars	4 stars	4 stars
Average rate per night	$ 110/room	$ 142/room	$ 140/room
Average Group Rate	$ 80/room	$ 90/room	$ 70/ room
Conference Room	Yes/200 PAX	Yes /600 PAX	Yes /45 PAX

The main advantages of the proposed hotel over the competitors are the owners of the proposed hotel are well known Travel agents in the region and they maintain good relationship with all major travel agent and hotel association nationally and internationally ,that can secure a large proportion of occupancy levels , in addition to that the average rate per night for the proposed hotel is estimated to be $ 100 per room , which cannot be matched by other competitors in the area.

4- Total Investment Costs[4]

The following table summarize the midscale investment cost based on the average range of development projects across the west bank, including projects in Jericho area and resort destination.

Tale -2- indicators of estimating the total investment costs

	Land	Building a site improvement	Soft cost *	Fixture equipment	Working Capital	Total $
Costs % of total	$950,000 9.5%	$ 6. million 57.5%	$1.8 m 17%	$11.4 m 13%	$ 300,000 3%	$10 m 100%
Average per Room /110	$9000	$ 55,000	$ 16,000	$ 13,000	$ 3,000	$ 96,000

*soft cost includes the following costs: land entitlement, land closing, interior design fee, survey, cost of financing & other professional fees.

The detailed investment costs for the proposed hotel are illustrated and summarized in table 3 .

Table -3- Estimated total investment costs of the proposed hotel.

Item	Cost Per Item ($)	Salvage value
Registration of land	$ 20,000	
Land scaping	$ 200,000	
Land	$ 930,000	930,000
Building	5,470,000 Break down into: -Building Skelton $1,700,000 -Finish $2,700,000 -Air-condition $ 280,000 -Banquet Hall Decor $200,000 -Elevators $ 90,000 -Internet $ 35,000 -Hotel software $ 15,000 -Others $ 200,000	1,600,000
Gated fence	178,000	
Furniture	800,000	
Kitchen equipment	120,000	
Swimming pool	200,000	
Sport bar	100,000	
Underground water Reservoir	50,000	
Water Slides and games	70,000	
Emergency Power Generator	50,000	
Electricity installation	60,000	
Water installation	30,000	
Solar collectors	300,000	
HTL BUS	50,000	
Working capital	300,000	300,000
Project licensing	150,000	
Company Registration and other	10,000	
Total investment costs	9,080,000	2,830,000

3-Rami Keitetm -Ibid -p.7

4-Rami Kreitem -Ibid -p.9

5- Total Operating Costs

The total operating costs are estimated for the use of occupancy rate of 58% of the total number of rooms. Operating costs include mainly the following costs:

- Costs of manpower ->wages & salaries
- Costs of food & beverage
- Utilities – costs of electricity
- Laundry
- Shuttle
- Property tax &insurance
- Maintenance & maintenance supplies

Wages and salaries account for about 31 percent of total operating costs. the manpower that are needed to run the proposed project are estimated to reach 40 employees.

The following table shows the employees and their estimated costs.

Table (4) – Manpower and their wages costs

Type	Number	Yearly costs
Management	2	$ 72,000
Accounting	1	$18,000
Maintenance	1	$18,000
House keeping	8	$70,000
Reception	4	$60,000
Security	3	$27,000
Life guard (pool)	1	$15,000
Food & Beverage	13	$180,000
Sales & Marketing	1	$15,000
Health club	1	$18,000
Event Marketing	1	$12,000
Bell boys &cleaner of public areas	2	$10,440
IT company outsourcing	1	$15,600
Total	40	$537,000

The following table shows the estimated annual operating costs:

Table (5) Estimated Annual Operating Costs.

Item	Cost per item ($)
Wages & Salaries	537,000
Food & Beverage	800,000
Electricity	350,000
Laundry	48,000
Shuttle	36,000
House Keeping & cleaning supplies	25,000
Water	15,000
New appliance	12,000
Travel	12,000
Wi-Fi	9,600
Missing Towels	8,500
Stationary	8,500
Maintenance supplies	9,000
Mobile	7,000
Pool detergent	7,000
Insurance	20,000
Maintenance	40,000
Telephone	5,000
Advertising	10,000
Cleaning expenses	10,000
Property Tax	70,000
Others	18,000
Total operating costs	2,057,600

6 – Estimated Annual Revenue of The Proposed Project.

The main sources of the proposed hotel revenue are:

1- The revenue from room rent
2- The revenue from food and beverage
3- The revenue from conferences and business facilities
4- The revenue from private events and wedding parties

1- The revenue from room rent

The revenue from this source is based on the following assumptions:

a- The number of hotels room is 110 rooms
b- The occupancy rate is estimated to be 58% of total rooms
c- The rent per room per night is estimated to be $ 100

Based on the above assumption the estimated annual revenue from this source will equal to:

Revenue = $100 * 110 * 0.58 * 360= 2,292,800

2- The revenue from food and Beverage

Food and beverage revenue are consisted of income from the restaurants and bars in the main dining room, shisha pool, bar lounge, as well as from room services including minibar and room services. the revenue from this source is estimated to equal $ 450,000 per year. this income is based on the assumption of selling food & beverage on the average of $1250 per day, which is reasonable estimate for such a hotel.

3- The revenue from conferences and business facilities

The revenue from this source is based on the assumption that the hotel will host 20 conferences per year, each conference will have 200 persons, and the cost per person is estimated to equal $25

Annual revenue from conferences = 20*200*25= $ 100,000

4- The revenue from private events and wedding parties

The income from this source is based on the assumption that the hotel will hold 40 wedding parties, each party will consist of 300 person and the cost per person is estimated to equal $ 40.

Annual revenue from weeding = 40*300*$40 = $ 480,000

The Estimated annual revenue from all sources equal to:

$ 2,292,800 + 450,000 + 100,000 + 480,000 = $ 3,322,800

7- Financial and Economic Analysis

This is the most important part in the feasibility study of the proposed hotel. it will investigate the hotel proposal to see if it is feasible as a sustainable, profitable business model, it provides investors a clear picture about the return on their investment (ROI) – ROI is going to be estimated by using the following economic methods:

1- The annual worth method – A.W method
2- The present worth method – P.W method
3- The internal rate of return method – I.R.R method
4- The external Rate of Return method – E.R.R method
5- The explicit reinvestment rate of return method - E.R.R.R METHOD

The application of the above methods is based on the assumption of using minimum attractive rate of return M.A.R.R is 10 % per year and the economic life of proposed hotel is 25 years.

The analysis of the viability and profitability of the proposed hotel is based on the estimated value regarding the investment costs, operating costs and annual revenue fund in the previous parts and summarized in the table below:

Table -6- summary of estimated information of the proposed hotel

Item	Value ($)
Investment costs	9,080,000
Operating costs	2,057,600
Annual revenue	3,322,800
Salvage value	2,830,000
Economic life	25 YEARS
M.A.R. R	10%

Before we conduct our analysis, the following notations are going to be use through this part:

i = interest rate per interest period
N=Number of compounding periods
P= Present sum of money, the equivalent value of one or more cash flows at a reference point in time called the present
F=Future sum of money, the equivalent value of one or more cash flows at a reference point in time called the future.
A= End of period cash flows in a uniform series payment continuing for specifies number of periods, starting at the end of the first period and continuing through the last period.

1- <u>The Annual worth method -A.W Method</u>

The focus of this model is on the net annual worth of cash flows (N.A.W). N.A. W is equal to Annual Revenue (R) minus annual operating costs (D) minus capital recovery costs C.R.cost

N.A.W = R - D - C.R cost

Capital recovery cost of the proposal project is the equivalent annual cost of investment costs, which covers two items:

1- The loss in the value of assets (depreciation)
2- The interest on the invested capital

C.R cost can be calculated using the following formula:

C.R cost = p (A/P,i,N) - F(A/F,i,N)

WHERE: P = the cost of investment

A/P= THE equivalent annual investment cost

i=the minimum attractive Rate of return

N = the economic life of the proposed project

F = the salvage value

A/F= the equivalent annual salvage value of the proposed project.

Using the annual worth method to investigate the viability of the proposed project, we have to calculate the net annual worth of cashflows (N.A.W)

N.A.W = R -D - C.R COST

IF THE N.W.A $\geq$ 0 THE proposed project is economically justified, otherwise it is not.

To calculate net annual worth of cash flows. we need to find the capital recovery costs C.R.cost

C.R cost = P(A/P, 10,25) – F(A/F, 10, 25)

=9,080,000(A/P,10,25) - 2,830,000(A/F,10,25)

THE value of the factor (A/P,10,25)=0.1107

THE value of the factor (A/F,10,25) =0.01017

C.R cost = 9,080,000(0.1107) - 2,830,000(0.01017) = 1,005,156-28,781 = $ 976,375

N.A.W = R – D - C.R.cost

N.A.W = 3,322,800 – 2,057,600 - 976375= $288,825

SINCE N.A.W is positive the proposal project is economically justified

2- The Present Worth Method - P.W Method

The P.W method is based on the concept of equivalent worth of all cash flows during the economic life of the proposed project relative to beginning point in time called the present. that is all cash inflows and cash outflows are discounted to present point in time at known interest rate that is generally the M.A.R.R .

The P.W method is based on the calculated of N.P.W of cashflows, a positive N.P.W of cashflows for an investment project is dollar amount of over the M.A.R.R required by investors.

TO find the P.W as a function of a series of cash inflows and cash outflows, it is necessary to discount future amounts to Present By using the M.A.R.R over the appropriate study period ((economic life of the proposed project)) in the following manner:

$Pw_{(i)} = F_0 + F_1/(1+i) + F_2/(1+i)^2 + F_3/(1+i)^3 \ldots\ldots\ldots + F_N/(1+i)^n$

THE TERM $(1/(1+i)^N$ is a factor known as : single Payment present worth factor – and is written as (p/f,i,N)

The P.W method involves calculating the N.P.W of cashflows during the economic life of the proposed project that is:

N.P.W = P.W of cash inflows - P.W of cash outflows.

IF N.P.W $\geq$ 0 THIS MEANS THAT THE PROPOSAL PROJECT IS ECONOMICALLY JUSTIFIDE

N.P.W = - P + (R - D)(P/A,i,N) + F(P/F,i,N)

Using the estimated figures for the proposed hotel we get:

N.P.W = - 9,080,000 + (3,322,800 – 2,057,600)(P/A,10,25)+2,830,000(P/F,i,25)

WHERE THE VALUE OF THE FACTORS ARE:

(P/A,10,25)= 9.0770

(P/F,10,25)= 0.0923

THEN:

N.P.W = - 9,080,000 + 1,265,200(9.0770) + 2,830,000(0.0923)

= - 9,080,000 + 11,484,220 + 261,209

= 2,665,429

We highly recommend the proposed project.

3- The Internal Rate of Return (I.R.R METHOD)

To find the I .R.R on investment we are searching for the interest rate i^*=I.R.R that makes the net present worth of cashflows equal to zero .

i*= I.R.R =?

i^* that makes N.P.W OF CASHFLOWS EQUAL TO ZERO.

N.P.W (i^*) = - P + (R-D)(P/A,i^*,N) + F(P/F,i^* , N) = 0

This method involves Trial & error to find i^*= I.R.R.

To reduce the trial &error we will use interest rate that is relatively low and another interest rate that is relatively high.

Already we found net present worth ($N.P.W_{10\%}$) = 2665429 . this means that the I.R.R is higher than 10%

Now let us calculate N.P.W at i = 15%

$N.P.W_{(15\%)}$ = -P + (R-D)(P/A,15%,25) + F(P/F,15,25)

= - 9,080,000 + (3,322,800 – 2,057,600)(6.4641) + 2,830,000(0.0304)

= - 9,080,000 + 8,178,379 + 86,032 = -815,589

THIS MEANS THAT the I.R.R that we are looking for is between 10% & 15 %. through interpolation we can calculate the i^*= I.R.R using the following equation:

i^*= low interest rate + (+ N.P.W/+N.P.W-(- N.P.W))(high interest rate – low interest rate)

i*= 10% + (2,665,429/2,665,429 - (-8,15589))(15%-10%)

i*=I.R.R = 13.6%.

THE i* =I.R.R $\geq$ M.A.R.R =10% then, the proposed project is economically justified and it is recommended to go ahead & implement the proposed hotel .

4- The External Rate of Return E.R.R method

This method is based on finding e^*=E.R.R THAT MAKES THE equivalent future worth of cash flows during the economic life of the proposed project equal to zero that Is : we are searching for e^* (E.R.R) that makes the Net Future Worth of cash flows (N.F.W) equal zero

$$N.F.W = - P (F/P,e^*,N) + (R-D)(F/A,i,N) + F = 0$$

IF the e* =E.R.R $\geq$ M.A.R.R the proposed project is acceptable and will be recommended for implantation.

Using the estimated values for the proposed project we get e^* ,

N.F.W of cashflow = - p (f/p,e^*,25) + (R-D)(F/A,10,25) + F = 0

Using the estimated values, we can calculate the e^* (the External Rate of Return)

As shown in the following equation

N.F.W= - 9,080,000(F/P,e*,25) + (3,322,800-2,057,600)(98.347) + 2,830,000 = 0

9,080,000(f/p,e*,25)=127,258,624

(f/p,e^*,25)=127,258 / 9,080,000=14.01

From tables we find

11% < (f/p,e*,25) < 12%

E*= 11.5% > M.A.R.R thus the project is economically justified

5- THE EXPLICIT REINVESTMENT RATE OF RETURN =E.R.R.R METHOD

The explicit reinvestment rate of return (E.R.R.R) can be calculated using the following equation

E.R.R.R = NET PROFIT / INVESTMENT COSTS

E.R.R.R = R – D - (P - F)(A/F,10,25) / P

Using the estimated values for the proposed project we get:

E.R.R.R =3,322,800 – 2,057,600 – 63563 / 9,080,000

E.R.R.R= 1,201,637/9,080,000=13.2%

THEN E.R.R.R=13.2% > M.A.R.R = 10%

THE PROPOSED HOTEL PROJECT IS FEASIBLE AND IS HIGHLY RECOMMENDED.

8- Conclusion

The purpose of this study is to investigate the viability and profitability of the proposed hotel in Jericho city. The findings of the feasibility study indicate that investment in the proposed project is feasible and profitable with Internal Rate of Return on investment is about 13.6% , the Net Present Worth of cash flows equal to $ 2,585,422 over and above the M.A.R.R 10%, the N.A.W of cashflows equal to $288,825 . the E.R.R equal to 11.5 % and the E.R.R.R equal to 13.2 .

All the findings of the economic methods support the investment in the proposed hotel and show that the rate of return on the proposed investment more than the minimum attractive rate of return M.A.R.R = 10%

Thus , The Return on investment in the proposed hotel project is acceptable and higher than the investors desired.

The findings of the study depend on the assumption that the Jericho Gate develop as expected, and the proposed hotel will establish in the middle of residential houses, tourism and entertainment facilities and on increasing the quality services offer to the hotel‘s guests.

It should be emphasized, that external circumstances as Economic and political crises in the region may have considerable impact on the profitability of the proposed project as well as on other economic activities.

To conclude: given the assumption that Jericho Gate will develop as expected, and the stability of political and economic conditions in the area, the results of the feasibility study show that the proposed project is feasible and the investors should proceed in implementing the proposed hotel project.