



Strategic Investment Analysis for the Gas Station Projects Using Build Operate and Transfer (Case Study: PT Pertamina, Besakih Bali)

Raisa Marsya Wulandari¹, Dr. Ir Uke Marius Siahaan, MBA²

^{1,2} School of Business and Management, Bandung Institute of Technology

ABSTRACT: One of deployment planning from Pertamina is Besakih area in Bali. In this simple requirement, Pertamina need a further study to plan which type of gas stations will be implemented, COCO (Company Own Compant Operate) or DODO (Dealer Own Dealer Operate). COCO was found to be the viable option because DODO facing a major challenge based on the PESTLE and SWOT which is an issue related to government attitude towards greener technology such as electric vehicle. A several options for funding have been identified and well documented with several restrictions which are equity, loan, venture capital, and build operate transfer. If Pertamina need a new gas stations in terms of only 20% coming from capital (80% loan). Pertamina is not entitled to fund by venture capital as Pertamina is a state own company with rigid regulation. For the deployment of new gas station, the most expensive part is the land, therefore searching the solution through land funding is the most viable option. It was found that the strategy build, operate, and transfer (BOT) is a very interesting option. For the Pertamina, it erases the necessity for buying the land, on the other hand, for the land owner, it is better that their land could be useful for them in the next 15 years before they are getting all the facility transferred. The payback period is only 3,36 years with the IRR of 27,03% which is higher than the WACC. In case of Pertamina taking 80% loan and 20% equity, the NPV will return in the 5th year in start of the investment or 4th year in start of the operation. This strategy opens up new opportunities and solution for the business because it writes out land CAPEX necessity.

KEYWORDS: Feasibility Study, Investment analysis, Pertamina, Strategy, Profitability.

INTRODUCTION

A staggering 23 million kiloliter of fuel has been consumed in Indonesia at 2021 only (Ridwan, 2022). This can be proven by the causalities between the price of fuel and rate of inflation. A 5 to 10% raise of fuel affect food and beverage price by 20 to 30% increase (Safitri, 2012). More than 90% of gas stations are corelated with PT Pertamina, the major government owned company managing the business of oil and gas. The total number of SPBU in Indonesia is 7455 in which 51% of total located at Java, Madura, and Bali. Particularly there are up to 162 corporate owner corporates operate (COCO) gas stations and 6,864 dealer owner dealer operate (DODO) gas stations. There is a significant difference between COCO and DODO in terms of investment and profit distribution. COCO is fully invested by Pertamina through their subsidiary which is Patra Niaga and Pertamina Retail. Therefore, all the costs and profit are subject to Pertamina. On the other hand, DODO is invested by private with a certain mechanism to divide their fuel profit depends on the fuel sales. Looking through the background above COCO and DODO differences may impact Pertamina in different way. Focusing more on the growth of COCO may require continuous high capital expenditure (CAPEX), on the other hand, focusing the growth of DODO may decrease the profit gained by the Pertamina. In addition, a relatively smaller gain for the NFR business since COCO get the most of NFR. Moreover, the number of DODO is projected to be declining because some of the owner argued that the business other than gas station is having more profit potential (Christianta, 2022). Based on the statement above, there is a necessity for Pertamina to review and adjust their strategy in terms of determining their focus for growing COCO or DODO gas station in Besakih area Bali. A step-by-step approach required from determining the framework (Ivey, 2015), collecting the data by available sources and interviews, making analysis through available framework, doing the financial analysis (Myers, 1984), and combining the analysis to make a good strategic recommendation.

BUSINESS OVERVIEW AND ISSUES EXPLORATION

Pertamina is a State-Owned Enterprise that has changed its name to PT. Persero, which is engaged in energy, petrochemical, and other businesses that support Pertamina's market-oriented domestic and international operations (P. Pertamina, 2021).



Table 0.1 Source: Annual Report Pertamina 2021

Pertamina Products	
1. Fuel Oil (BBM)	a) Gasoline Oil b) Kerosene c) Diesel Oil d) Diesel Oil e) Fuel Oil
2. Special Fuel (BBK)	a) Aviation Gasoline (Aircraft Fuel) b) Aviation Turbine Fuel c) Bio Pertamax d) Bio Solar e) Pertamax f) Pertamax Plus g) Pertamina Dex h) Pertamax Racing i) Peralite
Subsidized Fuel	a) Premium b) Solar
Non-fuel	a) Asphalt b) Lubricants (Lube Base Oil) c) Solvent (Solvent) d) Green Coke e) Calconed Coke f) Slack Wax g) Heavy Aromate h) Sulfur
GAS	Consists of LPG (Liqueifield Petroleum Gas), BBG (Gas Fuel), Misicool (Eco-Friendly CFC Substitute). a) Fuel Gas b) Liquid Petroleum Gas (LPG) c) Musicool
Petrochemical	a) Pure Terephthalic Acid b) Benzene c) Paraxylene d) Polytam e) Propylene
Lubricants	a) Circulating Oils b) Heavy Duty diesel Engine Oils Industrial And Marine Engine Oils c) Industrial and Hydraulic Oils d) Oassenger Car Oils e) Powershift Transmission and Heavy Equipment Hydraulic Oils f) Refrigerating Oils g) Two Stroke Gasoline Engine Oils

PT Pertamina Retail is a subsidiary of PT. Pertamina (Persero) This company was founded on June 17, 1997, initially named PT Pertamina Lubrindo, in the lubricant business. On September 1, 2005, the company changed its name to PT. Pertamina Retail



which conducts business in the retail sector as a distributor of fuel at gas stations. Their activities include the management, development, new partnerships, and sales synergies between Pertamina businesses units and customers. PT Pertamina Retail has helped provide profit (profit) to its parent company and continues to grow until now (P. Pertamina, 2021).

Pertamina have an imbalance number of COCO and DODO in which DODO are the majority. This situation raises questions about how to manage the number for optimizing profitability while ensuring sustainability of the company. According to the interview (Christianta, 2022), there are many DODO gas stations are closing or planned to be closed because their profit margins is not adequate due to expensive land or another business opportunity. COCO gas stations in the other hand require extensive CAPEX upfront. The necessity is to review these two-business model, compare their profitability, and analyze the business driver and limitation. A step-by-step approach required from determining the framework (Ivey, 2015), collecting the data by available sources and interviews, making analysis through available framework, doing the financial analysis (Myers, 1984), and combining the analysis to make a good strategic recommendation.

RESEARCH QUESTION

The goal of this research, referring to the proposed question, its elaborate as the following:

This research aims to answer the following research questions:

- What is the profitability of COCO?
- What is the profitability of DODO?
- Which is the best profitability and capital liquidity?
- What is the business situation affecting COCO and DODO at Besakih area?
- What is the recommendation strategy for PT Pertamina Retail to maintain sustainability and optimizing profit?

RESEARCH FRAMEWORKS

The analysis path of this research will be based on the conceptual framework at figure II.1. The path after analyzing the general business of Pertamina would be determining the business of DODO and COCO for their differences, the method for a deeper understanding can be done with interview. After the business has been identified, then the profitability of each model will be defined. Only then the data is enough to do a deep analysis based on other supportive analysis framework such as porter five, SWOT, PESTLE, and Business model canvas. With these analyses and combined with finance and funding analysis the complete strategical approach can be fully determined.

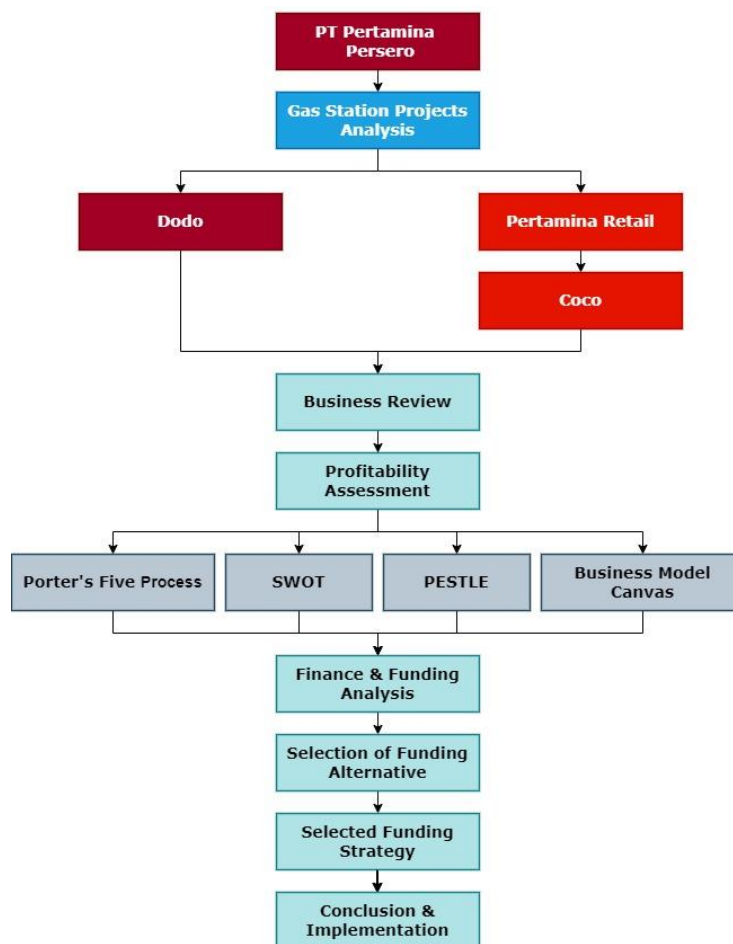


Figure 0.1 Conceptual Frameworks

A. Research Method

Using qualitative and quantitative following steps were taken in this research: identifying problems, conducting literature studies related to related problems, formulating problems, determining research objectives, conducting data collection, data processing, and analysis of the results using the Investment Criteria method, drawing conclusions and making recommendations for improvement.

B. Current Business Situation Analysis

The first step of strategic analysis is to determine the current situation by analyzing the business using BMC and interviews, making a global assessment using PESTLE analysis, competition and risk analysis based on porter’s five, and financial review.

BUSINESS SOLUTION

Expert respondents were determined by the purpose sampling method consisting of 2 people from PT Pertamina Retail Mr. Prama Christianta as a Head of Marketing Pertamina Retail and 1 consultant from the Integrated Mr. Bramantyo as a Vice President PT. Istana Kohinoor:

- a. Identifying the PT. Pertamina Coco & DODO business model through the analysis of nine elements of the business model canvas consisting of, customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure.



b. Researchers will have an easier time getting a comprehensive understanding of the state of the company's business if they use a BMC analysis as their method of choice. In addition, the PT Pertamina Coco and Dodo business model canvas (BMC) has been broken down and analyzed further down in this paragraph.

a) **BMC SPBU Global Scale PT. Pertamina**

Table 0.2. BMC SPBU Global Scale PT Pertamina

Key Partners <ul style="list-style-type: none"> Subsidiaries Geological services providers Infrastructure operators Indonesian governments Banks 	Key Activities <ul style="list-style-type: none"> Gas transportation Trading and processing Drilling service management Maintenance Marketing 	Value Propotion <ul style="list-style-type: none"> World Class National energy company Energy distribution Production of oil and gas NFR 	Customers Relationships <ul style="list-style-type: none"> Long term contracts Performance based relationships Self-Services Customer service Presence (gas stations) 	Customers Segments <ul style="list-style-type: none"> Spot Market Refineries Petrochemical plants Massive market (fuel and lubricants) Airliness (Jet Fuel)
	Key Resources <ul style="list-style-type: none"> Oil & Gas reserves Refineries Gas Stations Infrastructure Government Support Employees Renewable energy activities 		Channels <ul style="list-style-type: none"> Gas Stations Retailers Corporate Offices Email Website E-Papers Social Networks 	
Cost Structure <ul style="list-style-type: none"> Exploration Geological Prospection Extraction Costs Transport and refining Infrastructure maintenance Taxes and royalties 			Revenue Streams <ul style="list-style-type: none"> Fuel Sales Natural gas and refined products Sales of non-fuel products Third party consumables sales in Gas Station 	

b) **PESTLE**

Political

There is a strong interconnection between fuel business and Indonesia and political. Fuel is highly subsidized by the government. Government believe that rising fuel prices affect translates to inflation rise (Winarto, 2012). Based on this condition, the owner of DODO gas station authority is very limited. Pricing will be coming from the government especially for subsidized fuel. Operation wise, because gas stations are dealing with dangerous highly flammable substances there are various standards need to be implemented. Even Pertamina also restrict which non-fuel businesses can be implemented inside of the gas stations (Christianta, 2022). On the other hand, for consistency, everything applied for DODO is also applied for COCO to make healthy competition. This is implying that the rise of world pricing for fuel will make instability for political conditions, moreover, not much Pertamina Retail and private gas stations owner can do about this condition.

Economical

Fuel is vital for Indonesian economy as logistic is very important factor because Indonesia consist of huge territory with thousands of islands. For now, logistic need fuel, and failure in fuel distribution or rising price will translate to inflation (Marvy, 2014). Indonesia is high in gross domestic product (GDP) and Indonesia is a member of highest GDP countries (G20) (Salim, 2011). There is some level of uncertainty in the business of gas station in Indonesia because the limited economic power of the society. If the price is going up to high, then there will be portion of the society that would not afford to buy fuel. This will directly hit the gas station owner COCO and DODO.

Social

Indonesia has an enormous population size currently more than 200 million lives and expected to have more than 300 million lives in 2035 (Indonesia, 2013). The age demographic is more inside the productive range in which have heightened mobility which contributes for fuel usage, assumed start as early as 17 until 65

Table 0.3 Fuel Usage Distribution

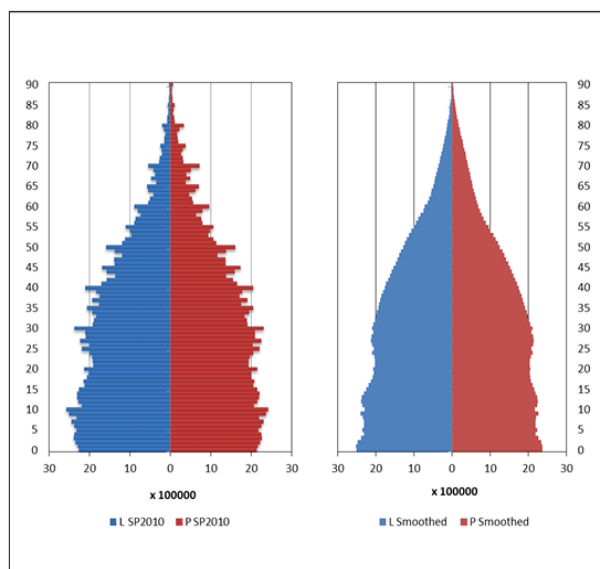


Figure 0.2 Demographic Fuel User in Indonesia

Provinsi (1)	Tahun					
	2010 (2)	2015 (3)	2020 (4)	2025 (5)	2030 (6)	2035 (7)
11 Aceh	4 523,1	5 002,0	5 459,9	5 870,0	6 227,6	6 541,4
12 Sumatera Utara	13 028,7	13 937,8	14 703,5	15 311,2	15 763,7	16 073,4
13 Sumatera Barat	4 865,3	5 196,3	5 498,8	5 757,8	5 968,3	6 130,4
14 Riau	5 574,9	6 344,4	7 128,3	7 898,5	8 643,3	9 363,0
15 Jambi	3 107,6	3 402,1	3 677,9	3 926,6	4 142,3	4 322,9
16 Sumatera Selatan	7 481,6	8 052,3	8 567,9	9 004,4	9 345,2	9 610,7
17 Bengkulu	1 722,1	1 874,9	2 019,8	2 150,5	2 264,3	2 360,6
18 Lampung	7 634,0	8 117,3	8 521,2	8 824,6	9 035,2	9 136,1
19 Kep. Bangka Belitung	1 230,2	1 372,8	1 517,6	1 657,5	1 788,9	1 911,0
21 Kepulauan Riau	1 692,8	1 973,0	2 242,2	2 501,5	2 768,5	3 050,5
Pulau Sumatera	50 860,3	55 272,9	59 337,1	62 898,6	65 938,3	68 500,0
31 DKI Jakarta	9 640,4	10 177,9	10 645,0	11 034,0	11 310,0	11 459,6
32 Jawa Barat	43 227,1	46 709,6	49 935,7	52 785,7	55 193,8	57 137,3
33 Jawa Tengah	32 443,9	33 774,1	34 940,1	35 958,6	36 751,7	37 219,4
34 DI Yogyakarta	3 467,5	3 679,2	3 882,3	4 064,6	4 220,2	4 348,5
35 Jawa Timur	37 565,8	38 847,6	39 886,3	40 646,1	41 077,3	41 127,7
36 Banten	10 688,6	11 955,2	13 160,5	14 249,0	15 201,8	16 033,1
Pulau Jawa	137 033,3	145 143,6	152 449,9	158 738,0	163 754,8	167 325,6
51 Bali	3 907,4	4 152,8	4 380,8	4 586,0	4 765,4	4 912,4
52 N T B	4 516,1	4 835,6	5 125,6	5 375,6	5 583,8	5 754,2
53 N T T	4 706,2	5 120,1	5 541,4	5 970,8	6 402,2	6 829,1
Bali dan Kep. Nusa Tenggara	13 129,7	14 108,5	15 047,8	15 932,4	16 751,4	17 495,7
61 Kalimantan Barat	4 411,4	4 789,6	5 134,8	5 432,6	5 679,2	5 878,1
62 Kalimantan Tengah	2 220,8	2 495,0	2 769,2	3 031,0	3 273,6	3 494,5
63 Kalimantan Selatan	3 642,6	3 989,8	4 304,0	4 578,3	4 814,2	5 016,3
64 Kalimantan Timur	3 576,1	4 068,6	4 561,7	5 040,7	5 497,0	5 929,2
Pulau Kalimantan	13 850,9	15 343,0	16 789,7	18 082,6	19 264,0	20 318,1
71 Sulawesi Utara	2 277,7	2 412,1	2 528,8	2 624,3	2 696,1	2 743,7
72 Sulawesi Tengah	2 646,0	2 876,7	3 097,0	3 299,5	3 480,6	3 640,8
73 Sulawesi Selatan	8 060,4	8 520,3	8 928,0	9 285,5	9 521,7	9 696,0
74 Sulawesi Tenggara	2 243,6	2 499,5	2 755,6	3 003,0	3 237,7	3 458,1
75 Gorontalo	1 044,8	1 133,2	1 219,6	1 299,7	1 370,2	1 430,1
76 Sulawesi Barat	1 164,6	1 282,2	1 405,0	1 527,8	1 647,2	1 763,3
Pulau Sulawesi	17 437,1	18 724,0	19 934,0	21 019,8	21 953,5	22 732,0
81 Maluku	1 541,9	1 686,5	1 831,9	1 972,7	2 104,2	2 227,8
82 Maluku Utara	1 043,3	1 162,3	1 278,8	1 391,0	1 499,4	1 603,6
Kep. Maluku	2 585,2	2 848,8	3 110,7	3 363,7	3 603,6	3 831,4
91 Papua Barat	765,3	871,5	981,8	1 092,2	1 200,1	1 305,0
94 Papua	2 857,0	3 149,4	3 435,4	3 701,7	3 939,4	4 144,6
Pulau Papua	3 622,3	4 020,9	4 417,2	4 793,9	5 139,5	5 449,6
Indonesia	238 518,8	255 461,7	271 066,4	284 829,0	296 405,1	305 652,4

Indonesia demographics serve as a perfect recipe for fuel huge market potential. It is a rare sight that a gas station is empty except in productive hours. Mass transportation in Indonesia is still at under develop level except at the growing capital Jakarta. But even in this case, traffic jam is still major problem in Jakarta (Endarnoto, Pradipta, Nugroho, & Purnama, 2011).

Technology

Oil and gas industry technology is already at a mature state. The technology step based on the supply chain is exploration, extraction, refinery, and logistic handling is mature. However, the technology is growing at the digitalization especially at the operation and retail for end customer in which directly connected to COCO and DODO (Kusuma, Suryoko, & Pradhanawati, 2022).



Legal

Gas stations is the last place where fuel reach end customers in which has been elaborated before as highly political business. In this case nothing much to discuss in legal aspect besides their heavy legal bounded terms and conditions for deploying COCOs and DODOs.

Environment

The environmental aspects of oil and gas business is a very hot topic to discuss. Recently, the government pushing towards greener alternative than fossil fuels. Fossil fuel has been accused of pollution resulting for health risks and global warming (Blumer & Sass, 1972; Bose, 2010; F. Perera & Nadeau, 2022; Smith, 1993). In this case, government is pushing towards the usage of electric vehicles (Asfani et al., 2020). This is a contra productive initiative with gas stations which caused uncertainty for the business.

c) **SWOT Analysis PT Pertamina**

Table 0.4 Table SWOT PT Pertamina

	STRENGTHS	WEAKNESSES
INTERNAL	The biggest oil and gas company in Indonesia with more than 90% market share Buying power	Highly regulated and prone to political issue Single point of failure for distribution (managed end to end by the company) Relying too much to private business for gas stations (DODO)
	OPPORTUNITY	THREATS
EXTERNAL	Growth for gas stations Digitalization	Growing competition Political Change Customer dissatisfaction Sustainable energy issue

FINANCIAL ANALYSIS PT PERTAMINA WITH BUILD OPERATE AND TRANSFER STRATEGY

2) **COCO with Build Operate and Transfer (BOT)**

Strategy that performed is doing collaboration with land owners in which deal would be 20% profit sharing and a 15 years operation. After 15 years of operation the whole facility will be given to the land owners. This method will obliterate the needs of land investment which is the major component of CAPEX.



Table 0.5 NPV Coco with Build Operate Transfer (BOT)

YEAR	EBIT	NAT	DEPR.	FCF	Kum. FCF	Disc. Rate	Disc. FCF	Kum. Disc. FCF
1				-498260000	-498260000		0	-498260000
2	1143092927,37	1048216214,40	433886667,00	1482102881	-3500497119	0,932835821	1382558658	-3600041342
3	1143092927,37	1048216214,40	433886667,00	1482102881	-2018394237	0,870182669	1289700241	-2310341101
4	1143092927,37	1048216214,40	433886667,00	1482102881	-536291355,8	0,811737564	1203078583	-1107262519
5	1143092927,37	1048216214,40	433886667,00	1482102881	945811525,6	0,757217877	1122274797	15012278,78
6	1143092927,37	1048216214,40	433886667,00	1482102881	2427914407	0,70635996	1046898132	1061910411
7	1143092927,37	1048216214,40	433886667,00	1482102881	3910017288	0,65891787	976584078	2038494489
8	1143092927,37	1048216214,40	433886667,00	1482102881	5392120170	0,614662195	910992610	2949487099
9	1143092927,37	1048216214,40	433886667,00	1482102881	6874223051	0,573378913	849806539	3799293639
10	1143092927,37	1048216214,40	433886667,00	1482102881	8356325933	0,534868389	792729981	4592023619
11	1143092927,37	1048216214,40	433886667,00	1482102881	9838428814	0,498944393	739486922	5331510542

Table 0.6 Payback Period Coco with BOT

	1	2	3	4	5	6	7	8	9	10
INITIAL INVESTMENT	498260000									
CASH FLOW	(4.982.600.000)	1.482.102.881	1.482.102.881	1.482.102.881	1.482.102.881	1.482.102.881	1.482.102.881	1.482.102.881	1.482.102.881	1.482.102.881
CUMMULATIVE	(4.982.600.000)	(3.500.497.119)	(2.018.394.237)	(536.291.356)	945.811.526	2.427.914.407	3.910.017.288	5.392.120.170	6.874.223.051	8.356.325.933
Fractional		n/m	n/m	n/m	0,361844891	0,638155109	1,638155109	2,638155109	3,638155109	4,638155109
PAYBACK PERIOD	3,36									



Table 0.7 US' INDEX Coco with BOT

IRR	27,03%			
Payback Period	3	Tahun	4,3421387	Bulan
NPV	5331510541,72			
ROI	15,97%		<i>average PV EBIT / investment</i>	
	73,20%		<i>average PV NAT / equity</i>	
BGP	15,97%		<i>average PV EBIT / total assets</i>	
US INDEX	2,00		<i>BGP / interest rate</i>	

This strategy provides amazing result in which the payback period is only 3,36 years with the IRR of 27,03%. In case of Pertamina taking 80% loan and 20% equity, the NPV will return in the 5th year in start of the investment or 4th year in start of the operation. This case is also providing the best US index of 2 out of other strategy. For the land owners, 20% of the profit per year is already a good deal provided the land have no other usage, in addition, the gas station facility will be theirs after 15 years of service.

CONSLUSION

After review, it can be concluded that DODO is not a viable option as the SWOT and PESTLE shown major challenge as the government going towards electric vehicle make businessman hesitating for spending huge capex due to uncertainty. The next challenge is new land acquisition which is not easy to find and expensive. Therefore, as the necessity for gas station is high, implementing COCO is the only way out.

The essential aspects that will considerably influence on SPBU Besakih are the selection of land, selection of funding, selection of strategy.

The clear winner of the alternatives is COCO with BOT in which Pertamina can have a short payback period under 5 years. This is also a viable option provided the land have no other use in which usually the case. It is a good bargain for the land owner because the gas station facility will be handed over to the owner after 15 years of service. The second best is renting the land, however, the NPV still show the return more than 5 years even the payback period stating 4.02 years. The first two option with buying the land with or without loan is not advisable because both of the payback period and NPV showing more than 5 years for return.

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