

Influence of Cost Recovery Towards Profit Before Tax at PT. Chevron Pacific Indonesia

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INFLUENCE OF COST RECOVERY TOWARDS PROFIT ACHIEVEMENT BEFORE TAX AT PT. CHEVRON PACIFIC INDONESIA

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Abstract: *The principal purpose of enterprise is to increase income for the owner of enterprise. For the owner of enterprise the principal purpose are to get profit and to maximum assets. profit constitute short phase approachment meanwhile to maximum assets constitute a long phase approachment. Finances report is information data finances an enterprise at certain accountancy period which be able to use or reflect enterprise's performance. The element that related with measuring finances position is assets, obligation and equity. Meanwhile element that related with measuring enterprise's performance are ultimate and load or cost. Cost constitute power source current which count in monetary unit that turn out to buy or pay goods and service which use for utility of enterprise operation. At PT. Chevron Pasific Indonesia, in perform their operation start from activities area achievement, exploration, development and production need cost or expenditure. Process in petroleum industry like PT. Chevron Pasific Indonesia, Based on cooperation contract, where included that contractor have to prepare, Technology, capable official, and Money which necessary for investment and as operation cost. The cost that turn out in efforts to remove oil from earth stomach which is called with operation cost can called as cost recovery. Cost recovery is technical term for cost that pay by government to contractor for replace investment cost and operation cost from contractor activities during carry out activity exploration, exploitation and development at oil and natural gas block that are executed. In this research, researcher try to explain how influence of Cost Recovery towards profit achievement before tax at PT. Chevron Pasific Indonesia.*

Keywords: *Cost Recovery and Profit Achievement before tax*

1. INTRODUCTION

Until nowadays role of natural gas and oil still very big and dominant for national development, that are as domestic acceptance in APBN (Income Estimate Expenditure State), foreign exchange acceptance, domestic energy provider and as provider of standard material industry. Natural gas and oil

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industry it self include effort exploration, development, refinery, also tanker, and distribution.

Nature and characteristic of natural gas and oil industry different with another industry. Search process of natural gas and oil constitute undertake activity, meaning that activity of natural gas and oil exploration not get sure give results, while cost which location where contains reseve natural gas and oil that commercial manner enable to produce be far under the earth surface.

Another characteristics that also very unique is that natural gas and oil constitute/to form things which can not produce again (unrenewable). Related with the characteristics mentioned, so oil industry need high technology full of fund, and loaded with risk, so that management which really professional must really attention. With this oil industry characteristics, so have some special accountancy treatment of natural gas and oil industry which different with another industry (Haryono : 1998).

Indonesian which use *Production Sharing Contract (PSC)* in natural gas and oil beginning industry, where revenue that accept by natural gas and oil enterprise not directly to form multiple results of products with price, and enterprise didn't have that oil. Enterprise/ contractor will get pay (free) some of them to form cost recovery and contractor share of profit oil.

Cost Recovery is returning fee which out by contractor for necessary of exploration fee, development and operation out of dirty income. Ordinary Results Part Contract have limitation on sum of contractor income which admit to get returning fee but not all of fee can request the returning, like as : for fee last year and return at that year event. Limitation returning fee or standard limit returning fee as known general appoximately between 30% - 60% (Johnston. D., 1966; 56). Cost Recovery appear because there is operation fee and capital fee which very big before that enterprise get profit or advantage.

According to law number 22 year of 2001 abou natural gas and oil at chapter 31 explain about state acceptance that contains attempt corporation which implement source attempt activity obliged pay state acceptance in the form of tax and state acceptance non tax. In the cooperation contract definitely that obligation to pay tax be held concordant with definitely rule of law in tax sector which occur at cooperation contract signed by contractor party.

PT. Chevron Pacific Indonesia (PT. PI) is one of oil enterprise which have work area mining for examples 1) Rekan Block (SMD), 2) KLO Block and CICO Block at East Kalimantan, 3) Derajad Geothermal at Garut – West Java.

In Undertake their operation PT. CPI not be lost fro fund or fee well operation fee although capital fee. These fee which influence the ig of Cost Recovery toward that enterprise.

From the background above so searcher interested to research how the impact which appear from there fee at enterprise which move on exploration and exploitatiion natural oil toward get operation profit, that constitute one f source important information for management in get decision.

According to fenomena above so the searcher can formulate problems : “How the ipact of change cost recovery towards profit achievement operation (Net Income Before Tax) at PT. Chevron Pacific Idnonesia?”.

In this research kind of data that used by searcher is secondary data that include cost recovery data which influence towards profit achievement before tax which source from PT. Chevron Pacific Indoensia at work Area Mining Rokan Block which collected from year of 2010 – 2013.

In definite research variable, searcher divide on two variables that are independent variable and dependent variable. In this research, Cost recovery constitute independent variable whercas profit achievement variable constitute dependent variable.

Technique which use in data analysis that is used simple regression technique, that simple regression equality can picture like this :

$$Y_r = b_0 + b_x$$

This simple regession equality will help searcher in predict dependent variable and to clarify connection with influence that appear by independent variable (cost recovery) towards dependent variable (operation profit achievement)

2. COMPONENT OPERATIONAL EXPENSE OF INDONESIAN OIL AND NATURAL GAS INDUSTRY

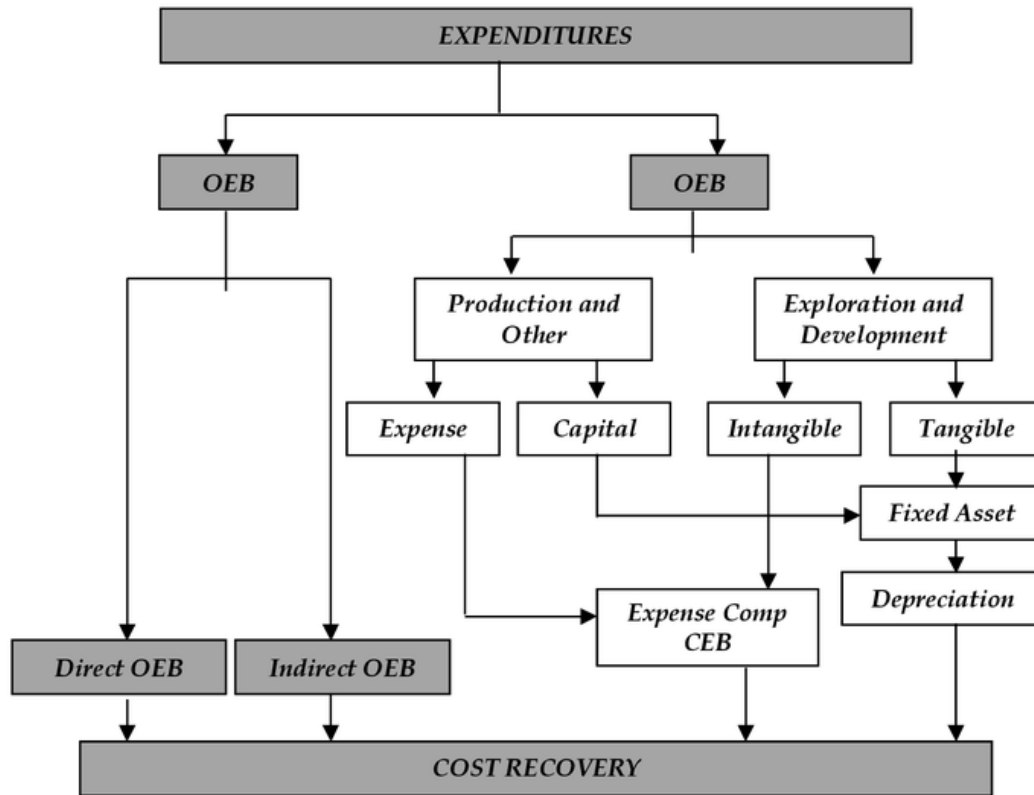
Operating expense in oil and natural gas industry different with definition of ordinary manufacture industry. Operating expense (operation cost) in definitely Production sharing Contract, is operating cost can define like this :

Operating cost meand expenditures made and obligations incurred in carrying out petroleu operations. (PSC generation 3)

In definitely production sharing contract, contractor will cover all of the operating cost during will produce (term of barrel) or also called with cost oil. After the production produce so, that operating cost will returned compensation (rocovered) by Indonesia Government through SKK Oil and natural gas concordant with contract in PSC.

Therefore coponents operating cost which vail at PT. CPI, can consider as expenditure stream that picture like this:

Figure 1. Flow of Cost Recovery at PT Chevron Pacific Indonesia.



Source : PT. Chevron Pacific Indonesia (CPI Manual 2004)

At the picture flow of recovery above visible that expenditure at PT CPI divide in two big categories, that are :

- ✓ OEB (Operating Expenditure Budget)

OEB constitute expenditure which estimate for enterprise's operating, whereas

OEB consists of two main components there are Direct OEB and Indirect OEB

✓ CEB (Capital Expenditure Budget)

CEB constitute budget which arrange for expenditure of capital goods (capital) whereas CEB consists of two components, there are:

(a) Production Factory and others

Expenditure for production factory and others divide again into expense (burden) and capital (fund)

(b) Exploration and Development

Expenditure for exploration and development divide into tangible and intangible

1. Components of Cost Recovery Direct Operating Expense

(a) Direct operating expense consist in:

Salaries and wages,

- Other employee benefits,
- Other personnel cost,
- Contract Services,
- Rental / lease,
- Material and supplies ,
- Utilities and fuel,
- Postage and printing
- Telephone and telegraph
- Technology support,
- HES expense
- Direct services charges
- Inter PSC services charges
- Insurance
- All other expense

(b) Direct Operating Expense

- Expense transferred,
- Indirect service charges (Pco)
- Misc & Prior year adjustment
- Redistributed expense

- (c) Expense component of CEB
 - IDC - Exploration wells
 - IDC - Development wells
 - G & G
 - Seismic Surveys
- (d) Depreciation
- (e) Amortization
- (f) Other income / expense
 - Foreign exchange
 - Fuel gas conversion expense
 - Interest received - other non operating income
- (g) Other adjustment

So that from entire components of operating costs above, therefore total calculation of operating cost that will be recovered (into cost recovery) are:

Total Cost Recovery = Direct Operating Expense + Indirect Operating Expense + Expense Component of CEB + Depreciation + Amortization + Other Income + Expense

2. Revenue at PT CPI

In simple manner revenue can be defined as multiple products between barrel which results with price of petroleum which use as standard at that time.

In revenue calculation, therefore PT CPI consider several factors which very influence the big of revenue that will be accepted.

On contract area PT CPI respectively have type of oil which difference whereas that respectively type have difference characteristics on physical environment. Therefore respectively type oil which difference also influence on the different price. In this condition so oil that already produce. Afterwards will have difference that also can make a threat for enterprise.

3. ICP and WAP

ICP (Indonesian Crude Price), is not real market price of oil, ICP constitute price controller of petroleum which to form calculation that already agreed between SKK oil and natural gas

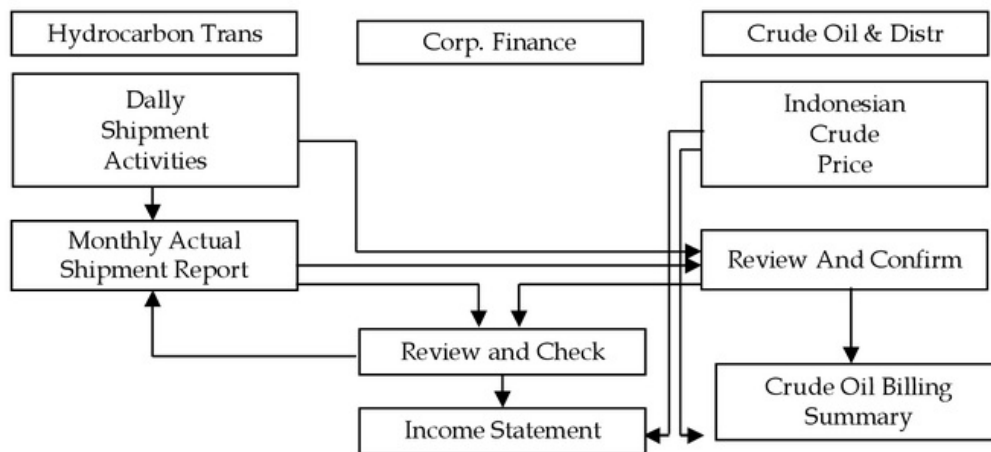
and all of oil enterprises which involved in PSC contract. ICP used by CPI for definitely their income which useful in calculate total income tax for Indonesia government for that month at respectively PSC. Therefore income of CPI get from listing in barrel that multiple with ICP, where SLC usually have little difference ICP than DC

WAP (Weighted Average Price), not directly WAP show pice average during a year. WAP use in calculation cost oil, Investment Credit Oil and DO Fee Incentive.

Base concept from calculation WAP

$$\text{YTD WAP} = \frac{\text{YTD Revenue in US \$} - \text{YTD DMO in US \$}}{\text{YTD Lifting in BARrel} - \text{YTD DMO in Barrel}}$$

Figure 2. Flow Chart or Revenue Calculation Process



Source: Introduction Oil Accountancy, Kennedy, Kasman (2005)

3. COST RECOVERY INFLUENCE TOWARDS PROFIT ACHIEVEMENT OPERATION

Cost recovery influence towards profit achievement operation, able to see on tabel 1, that is comparative profit loss report on Rokan PSC sinve tear of 2010 - 2013.

On profit loss report for Rokan PSC, searcher onlu put into score from total lifting, total contractor revenue, Total operating cost and profit achievement before tax. Numerals which use by searcher is simulation which purpose in order to facilitate searcher to perform analysis how changing influence cost recovery towards profit achievement before tax.

Tabel 1.
Income Statement on PT. Chevron Pacific Indonesia
Income State

<i>Description</i>	2010	2011	2012	2013
<i>Revenue</i>				
<i>Sales Revenue</i>				
<i>PN Lifting</i>				
<i>Joint Venture-Part, Lifting</i>				
<i>Contractor Lifting</i>	4358.17	4086.49	2616.61	3682.97
<i>Total Liftin</i>				
<i>PN Lifting-Offset</i>				
<i>Cruded Over/(Under) Lifting</i>				
<i>Overlift Value Adjusment</i>				
<i>Total Contractor Entitlement</i>				
<i>Sales-DMO Contractor Old Oil</i>				
<i>Sales-DMO Contractor (10% of WAP)</i>				
<i>Sales-DMO Contractor New Oil</i>				
<i>Total Contractor Revenue</i>	1464.44	1418.92	1030.16	1334.41
<i>Operating Expense (OEB)</i>				
<i>Total Direct OEB</i>	413	448.35	352.559	482.79
<i>Total Indirect OEB</i>	(56)	(68.36)	(48.80)	(80.47)
<i>Net Operating Expense (OEB)</i>				
<i>CEB Expense</i>				
<i>Total Expense PortantionN CEB</i>	99.4	213.15	203.44	251.05
<i>Depreciation</i>	245	213.15	203.44	251.05
<i>Amortation</i>	0	0	0	0
<i>Other Income (Expense)</i>				
<i>Total ther Incoe/(Expense)</i>	(1.4)	2.21	1.05	(1.61)
<i>Total Cost Recovery</i>	700	735	654.15	804.65
<i>Net Income Before Tax</i>	764.44	683.92	376.01	529.76
<i>Taxes</i>				
<i>Total Cost Recovery and Taxes</i>				
<i>Net Income After Tax</i>				

Source: PT. Chevron Pacific Indonesia (Stimulation Data)

Table 2.
Total Composition Cost Recovery
(in US \$ 000,000.00)

<i>Tahun</i>	<i>Cost Recovery</i>	<i>Direct OEB</i>	<i>Indirect OEB</i>	<i>OEB</i>	<i>Depr.</i>	<i>Other</i>
2010	700	413	(56)	99,4	245	(1,4)
2011	735	448,35	(68,36)	213,15	213,15	2,21
2012	65,15	352,59	(48,80)	203,44	203,44	1,05
2013	804,65	482,79	(80,47)	251,05	251,05	(1,61)

Source: PT. Chevron Pacific Indonesia (Stimulation Data)

From Table 2 above in total composition cost recovery of expenditure able to see that year of 2010 cost recovery consists of 59% Direct OEB 8% indirect OEB, 14,2%, CEB, 35%, Depreciation and the remainder 0,2% other Expenditure. Therefore year of 2011 cost Recovery consists of 71% Direct OEB, 9,3%. Indirect OEB, 19% CEB, 20% Depreciation and the remainder 0,3% other Expenditure. At year of 2012 cost recovery consists of 53,9%, Direct OEB, 7,46% Indirect OEB 22,3%, CEB 31,1% Depreciation and the remainder 0,16% other expenditure. And at year of 2013 19% CEB, 31,2% Depreciation and the remainder 0,2% other expenditure.

From Table 1 above, comparative precentage or comparison precentage (%) between total revenue, cost recovery and profit before tax (net income before tax) in the same manner as ehich seen on table 3 below :

Table 3.
Comparison (%)
Toal Revenue

<i>Tahun</i>	<i>Total Revenue (%)</i>	<i>Cost Recovery</i>	<i>NIBT</i>
2010	100	47.8	52.2
2011	100	51.8	48.2
2012	100	63.5	36.5
2013	100	60.3	39.7

Source: PT. Chevron Pacific Indonesia (Simulation)

From table 3 we can see that at year of 2010 total revenue which 100% formed by 47,8% cost recovery and 52,2% NITB, at year of 2011 Total Revenue 100% formed by 51,8% cost recovery and 48,2% NITB, at year of 2012 Total revenue consists of 100% formed by 63,5% cost recovery and 36,5% NITB, and at year of 2013 Total revenue 100% formed by 60,3% cost recovery and 39,7% NITB.

On Table 3 above we can see that from year of 2010 to 2011 cost recovery ascend 5% so that composition NITB get change, descent in the amount of 10,5%. Whereas at year of 2012 cost recover undergo decline in the amount of 11% from previously year and influence NITB, that is decline in the amount of 45%. While at year of 2013 cost recovery ascend in the amount of 23% and NITB ascend in the amount of 41%.

4. INFLUENCE COST RECOVERY TOWARDS EQUITY TO BE SPLIT

In order to understand the impact of change cost recovery towards profit achievement before tax, first we must know connection between cost recovery with equity to be split.

Equity to be split constitute base (base line) to perform calculation in percentage equity share oil between contractor with government republic Indonesia (SKK MIGAS). While calculation process equity to be split able to see at table 4 below:

Table 4.
Calculation Equity to be split
(in 000.000 barrel)

<i>Description</i>	2010	2011	2012	2013
Total lifting	219,67	208,60	219,70	215,25
Less : FTP (20% x total lifting)	(43,93)	(41,27)	(43,94)	(43,05)
Net after FTP	175,74	166,88	175,76	172,20
Less : Cost oil (CR in US\$: WAP)	(104,48)	(113,43)	(138,01)	(126,12)
Less : Investment Credit Oil	(0)	(0)	(0)	(0)
Equity to be split	71,26	53,45	37,56	46,08

Source: PT. Chevron Pacific Indonesia (Simulation)

At table 4 above be seen equity to be split value get from lessen between total lifting with FTP so that results net after FTP, after wards less with cot oil, where cost oil constitute total cost recovery in barrel. Besides less with cost recovery, total lifting also less with investment credit oil (here searcher assumption their constant value), so that get finish results in form equity to be split.

At table 4, we can see equity to be split value year of 2010 is 71.260.000 barrel, year of 2011 is 53.450.000 barrel, year of 2012 is 37.560.000 barrel and at year of 2013 is 46.080.000 barrel

Table 5.
Composition revenue and total lifting

Description	2010	2011	2012	2013
Revenue (US \$ 000.000)	1464,44	1418,92	1030,16	1334,41
Total lifting (US \$ 000.000)	4358,17	4086,49	2616,61	3682,97
Total lifting (000.000 barrel)	219,67	208,60	219,70	215,25

Source: PT. Chevron Pavific and Total Lifting

Table 6.
Composition cost oil, WAP and DMO

Description	2010	2011	2012	2013
(a) Cost recovery (US \$ 000.000)	700	735	654,15	804,65
(b) WAP (US \$ 000.000)	6,70	6,84	4,74	6,38
(c) Cost oil (000.000 barrel)	104,48	113,43	138,01	126,12
(d) DMO (US \$ 000.000)	87,87	85,14	51,51	40,03
(e) DMO (Barrel 000.000)	14,22	13,67	13,04	12,47

Source : PT. Chevron Pacific Indonesia (Simulation)

From table 5 composition revenue and total lifting can explain that get revenue year of 2010 - 2013 and total lifting (in US \$ although barrel) whereas from table 6 composition cost oil, WAP, and DMO. All of tables above necessary for guess WAP (Weighted Average Price) from year to year that is with use equality:

$$\text{YTD WAP} = \frac{\text{YTD Revenue in US \$} - \text{YTD DMO in US \$}}{\text{YTD Lifting in barrel} - \text{YTD DMO in barrel}}$$

For example for WAP year of 1996 :

$$\text{YTD} = \frac{1664,44 - 87,87}{219,67 - 14,22} = 6,70$$

From the third tables above, there are table 4, 5 and 6 be seen how influence cost recovery (cost oil) towards to be split like this :

Year of 2010, where the value of cost oil is 104.480.000 barrel so that as a consequence get equity to be split in the amount of 71.260.000 barrel.

Year of 2011, value of cost oil ascend in the amount of 9% from previously year to cause decline value of equity to be split in the amount of 25%.

Year of 2012, value of cost oil increase again in the amount of 22% and to cause decline towards equity to be split descend in the amount of 30%

Year of 2013, value of cost oil undergo decline in the amount of 9% and to cause increase in equity to be split in the amount of 23%.

From the phenomena above, can conclude that change of cost recovery will influence towards oil distribution. Where change value of cost recovery which inclined increase will cause decline towards equity to be split, likewise otherwise decline value of cost recovery will cause improvement on equity to be split.

4. CALCULATION COST RECOVERY AND EQUITY TO BE SPLIT WITH USE SIMPLE REGRESSION METHODS

To know connection between Cost Recovery and Equity to be split, so necessary be held test of simple regression with perform transformation to make cost recovery as variable X and Equity to be split as variable Y; as seen at table 7 like this :

Table 7
Calculation Cost Recovery and Equity to be split
(in 000.000 barrel)

<i>Tahun</i>	<i>Cost Recovery (X)</i>	<i>Equity to be split (Y)</i>	X^2	Y^2	XV
2010	104,48	71,26	1091,07	5077,99	7445,24
2011	113,43	53,45	12866,36	2856,90	6062,83
2012	138,01	37,56	19046,76	1410,75	5183,66
2013	126,12	46,08	15906,25	2123,37	5811,61
Σ	482,04	208,335	58735,44	11469,01	24503,34

Source: PT. Chevron Pacific Indonesia (Simulation)

From table 7 above be seen that at year of 2010 cost recovery (CR) in the amount of 104.480.000 barrel, equity to be split is in the amount of 71.260.000 barrel. At year of 011 cost recover increase in the amount of 8,57% and also seen equity to be split descend in the amount of 24,99% from previously year. For year of 2012 CR returned undergo increase in the amount of 21,67% from previously year, likewise with equity to be split undergo decline in the amount of 29,73%. Whereas for year of 2005 CR udnergo decline 8.62% from year of 2013 and equity to be split undergo increase in the amount of 22,68%.

To know influence and how big influence which appear from change cost recovery towards operation profit achievement before tax able be held steps like this:

First step, that is guess how big correlation coefficient value r , with use equality like this:

$$r = \frac{n\sum XY - (\sum X)(\sum Y)}{\sqrt{n\sum X^2 - (\sum X)^2} \sqrt{n\sum Y^2 - (\sum Y)^2}}$$

So, with use equality above, get r value in the amount of :

$$\begin{aligned} &= \frac{4(24503,34) - (482,04)(208,35)}{\sqrt{4(58735,44) - (482,04)^2} \sqrt{4(11469,01) - (208,35)^2}} \\ &= \frac{98013,36 - 100433,03}{\sqrt{234941,76 - 232362,56} \sqrt{45876,04 - 43409,72}} \\ &= \frac{-2419,67}{\sqrt{2579,20} \sqrt{2466,32}} \\ &= \frac{-2419,67}{\sqrt{2522,233}} \\ &= -0,96 \end{aligned}$$

From calculation above get correlation coefficient during four years in the amount of -0,96 (it means near - 1) or 96%

Correlation coefficient value - 96% show that there are negative linier connection which very strong between variable X (cost recovery) and variable Y (equity to be split).

This strong connection visible from r value which almost close -1 so that able to conclude that change cost recovery very influence towards equity to be split.

Second step, to know how big change cost recovery towards operation profit that is with search equality line which most near of concordant.

Method which use in here method of minimum quadrate (method of least square), with equality like this:

$$b = \frac{n\Sigma XY - \Sigma X \Sigma Y}{n\Sigma X^2 - (\Sigma Y)^2}$$

$$b_0 = \frac{\Sigma Y}{n} - \frac{b\Sigma X}{n}$$

so vaue b is :

$$\begin{aligned} &= \frac{4(24503,34) - (482,04)(208)}{4(58735,44) - (482,02)^2} \\ &= \frac{-2419,67}{2579,20} \\ &= -0,94 \end{aligned}$$

And value b0 is:

$$\begin{aligned} &= \frac{208,35}{4} - \frac{(-0,94)(482,04)}{4} \\ &= 165,37 \end{aligned}$$

From value b and b0 above get regression equality like this :

$$YR = 165,37 - 0,94X$$

On regression equality above be seen that value b0 (intersep) is in the amount of 165,37. This intersep constitute value Y with assumption X=0. Whereas value b, contitute slope from that line. Slope show how big changing Y as a consequence changing x which increase as big as one year, so that slope value from line equality is -0,94.

Third steps, after get equality regression line the next is measure how far sample of data priods spread arround regression line.

This measure called with standard wror of estimate. Like wise benefit of this measurement is for measure how big aberration value Y actually with value X estimation, that is YR.

Equality which use is :

$$S_{y.x} = \sqrt{\frac{\Sigma Y^2 - b_0 \Sigma Y - b \Sigma XY}{n - 2}}$$

From equality above, get value standard error of estimated ($S_{y.x}$) I :

$$\begin{aligned}
 &= \sqrt{\frac{11469,01 - (165,37)(208,35) - (-0,94)(24503,34)}{4-2}} \\
 &= \sqrt{\frac{34502,15 - 34454,84}{2}} \\
 &= \sqrt{23,66} \\
 &= 4,86
 \end{aligned}$$

On calculation standard error of estimated above, signed value $S_{y.x}$ in the amount of 4,8, from regression analysis which have value standard error of estimated which little show that periods disperse at disperse diagrams very near with reresion line of that sampel. This condition show that value $S_{y.x}$ above have harmonizing. Suppose that value $S_{y.x}$ have value which very big, it means value of periods disperse data at disperse diagrams far with sample regression line, this care means that the harmonizing is not good yet.

Fourth steps, be held estimate value Y for value X definite. For example at year of 2013. CR have value in the amount of 130. So value Y which guess is :

$$\begin{aligned}
 YR &= 165,37 - 0,94X \\
 &= 165,37 - 0,94 (130) \\
 &= 165,37 - 122,20 \\
 &= 43,17
 \end{aligned}$$

Fifth steps, be held estimate or calculation value Y that guess approximatelly value Y actually and on definite value. With measure this variability use standard error of the forecast

Equality which use is :

$$Sf = S_{y.x} \sqrt{1 + \frac{1}{n} + \frac{(x - \bar{x})^2}{\Sigma(x - \bar{x})^2}}$$

for calculate value Sf , so before search value $(x-x')$ with Table 8 under:

Table 8
Calculation Value (x-x')

X	(X-X')	(X-X') ²
104,48	-16,03	256,96
113,43	-7,08	50,13
138,01	14,50	306,25
126,16	5,65	31,92
Σ		645,26

$$\begin{aligned}\bar{x} &= \frac{\Sigma X}{n} \\ &= \frac{482,04}{4} \\ &= 120,51\end{aligned}$$

For search calculation standard error of the forecast for value $x = 120,51$ calculate like this :

$$\begin{aligned}&= 4,86 \sqrt{1 + \frac{1}{4} + \frac{(43,17 - 120,51)^2}{(645,26)}} \\ &= 4,86 \sqrt{\frac{5}{4} + \frac{(-77,34)^2}{(645,26)}} \\ &= 4,86 \sqrt{\frac{5}{4} + \frac{5981,48}{645,26}} \\ &= 4,86 \sqrt{\frac{5}{4} + 9,27} \\ &= 4,86 \sqrt{42,08} \\ &= 31,54\end{aligned}$$

From calculation S_f above, get standard error of the forecast in the amount of 31,54.

Sixth steps, after calculation value S_f get steps like this, that will be held is search determination coefficient value (r^2). Therefore benefit of r^2 is to show variability percentage Y which able clearly by variability X or 100% less with variability percentage Y that can't explain by variability X,

In regression analysis, this determination coefficient picture how far variability Y able to influence by variability X, with formula like this :

$$\begin{aligned}\bar{Y} &= \frac{\Sigma Y}{n} \\ &= \frac{208,35}{4} \\ &= 52,09\end{aligned}$$

From average Y above and equality determination coefficient above, to search value r^2 like this :

$$\begin{aligned}r^2 &= \frac{bO\Sigma Y + b\Sigma XY - n\bar{X}^2}{\Sigma Y^2 - n\bar{Y}^2} \\ &= \frac{(165,37)(208,35) + (-0,94)(245033,334) - 4(52,09)^2}{11469,01 - 4(52,09)^2} \\ &= \frac{34454,84 - 23033,14 - 10853,48}{11469,01 - 10835,48} \\ &= \frac{568,22}{615,53} \\ &= 0,92\end{aligned}$$

From equality above get value r^2 in the amount of 0,92 or 92% it means from value determination coefficient above are :

Variability cost recovery (x) able to explain variability equity to be split in the amount of 92%.

Variability which can't explain by CR is 8% (1-0,92). This variability which can't explain probably cause by another factors which not enter in regression equality.

Sevent steps, is be held hypthesis examinatin. Because in scuentific is there or not correlation between X and Y must examine before base on empiric data research sample result. Whenever alread proof that $p \neq 0$, regression equality $YR = bO + bX$ only permitted then for predict Y, however if apparently $p = 0$, so regression equality $YR = bO = bX$ impossible to predict Y. therefore to know whether $p = 0$ or $p \neq 0$ must be held hypothesis exam before.

There are steps that able be held for doing that hypothesis examination is like this :

Ho: $p = 0$ (x not correlated with y)

Ha: $p \neq 0$ (x correlated with y)

$$T_o: \frac{r\sqrt{n-2}}{1-r}$$

Definite value X , and search $t_{\alpha/2}$ from table t with $df = n-2$

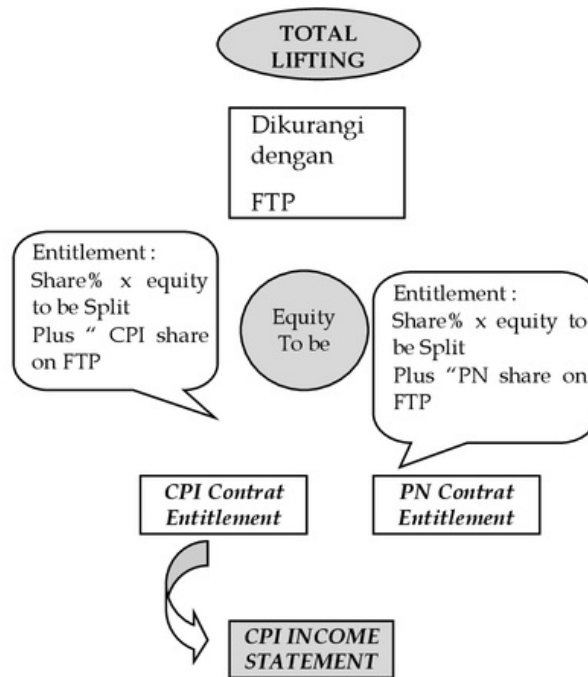
Whenever this conclusion use to make decision so α (The big error which understand) is 1%, 5% and 10%

5. CORRELATION COST RECOVERY, REVENUE AND PROFIT BEFORE TAX (NET INCOME BEFORE TAX)

After correlation between cost recovery with equity to be split, know through calculation equity share (% distribution oil between contractor with SKK MIGAS) and through calculation between cost recovery with equity to be split with use simple regression, the next steps is to see correlation between cost recovery revenue and NITB.

To see correlation from revenue, cost recovery and profit before tax, must look up before is how distribution process between contractor and government, which can picture like this :

Figure 4. Process of Distribution Oil between CPI and Government



From picture 4 above, o we can see that income (revenue) PT CPI come from distribution of equity to be split (share % x equity to be split), where equity to be split constitute distribution results of neat oil after less with FTP, operation cost during production (cost recovery) and investment credit which expense before by contractor.

Equity to be split mentioned afterwards distribute according to the big of percentage (%) distribution between PT CPI and GOVERNMENT which afterwards be retention for each side or which is called with entitlement.

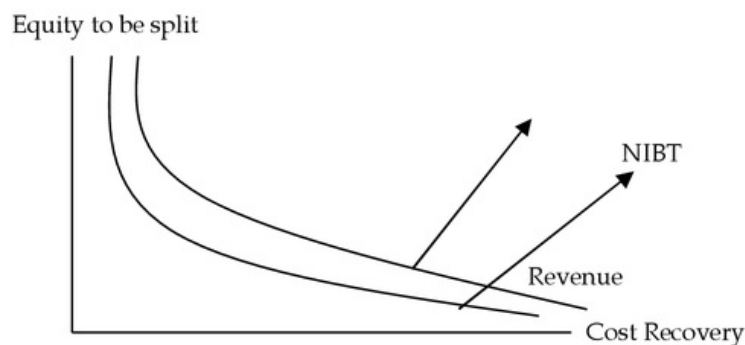
CPI contract entitlement, consist of distribution percentage from equity to be split add with percentage from FTP less with DMO. After that entitlement returned add with replacement of operational cost and replacement of investment credit oil.

After that then report to PT CPI income statement, to clarify how big the income, details of operational cost which later total contractor revenue returned less with cost recovery which results profit before cut by tax (net income after tax).

From pisture 4 above visible that advantage (profit) very depend on the big og equity to be split which get, and sch likewise condition with equity to be split will related with changing which appear by total operating cost (cost recovery). Whenever we assumpt total lifting constant from year to year, so will seen that more big changing cost recovery (ascend) so equity to be split which will distribute will more litle the quantity, like wise income receive for PT CPI will more descend. That also with descend cost recovery with assumption total lifting constant so equity to be split which will distribute will more big so that distribution quantity will more big.

So that correlation between cost recovery, total income (revenue) and profit achievement before tax can picture like this.

Figure 5 Correlation between cost recovery, revenue and NITB



From calculation equity to be split, and results of regression analysis between cost recovery with equity to be split together with hypothesis examination, proven that cost recovery very influence towards profit achievement before tax at PT Chevron Pacific Indonesia.

6. CONCLUSION

If $t_o < -t_{\alpha/2}$ or $t_o > t_{\alpha/2}$: H_o dividen

If $-t_{\alpha/2} \leq t_o \leq t_{\alpha/2}$: H_a receive

So regression equality:

$$YT = 165,37 - 0,94x$$

With use $\alpha = 5\%$ 50:

(a) $H_o : \rho = 0$ (x not correlated with y)

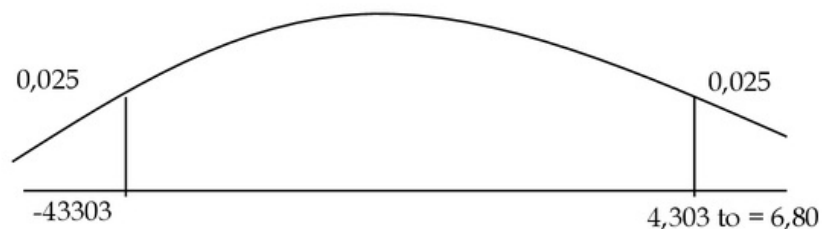
$H_a : \rho \neq 0$ (x correlated with y)

(b) Value to is :

$$\begin{aligned} &= \frac{0,94\sqrt{4-2}}{\sqrt{1-(0,96)^2}} \\ &= \frac{1,36}{0,2} \\ &= 6,80 \end{aligned}$$

(c) The big of $\alpha = 0,050$, $df = n-2 = 4-2 = 2$

$\alpha/2 = 0,02$. From table t, $t_{0.025}(2) = 4,303$

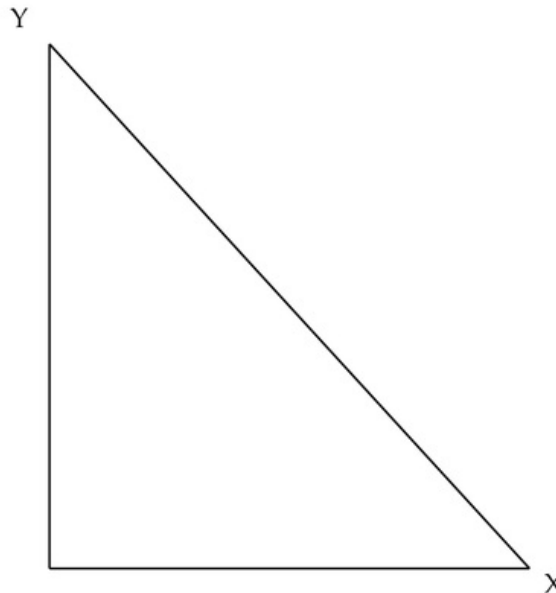


Therefore $t_o = 6,80 > t_{\alpha/2}(2) = 4,303$, so H_o dividen.

The conclusion is correlation equality $YR = 165,37 - 0,94 X$ can use forecast Y. such there is strong correlation between X and Y

Strong correlation between X and Y able to picture with graph below.

Figure 3 Graph Correlation Between Cost Recovery (X) and Equity to be split



From graph above we can see that increase value X will cause decline value Y, like wise a case when value X more small so value Y will more and more big.

From explanation and discussion above, can conclude like this :

PT. Chevron Pacific indonesia Constitute foreign enterprise that move in exploration sector and oil exploitation, at area work contract rokan Blok

In apply operating activity, PT Chevron Pacific Indonesia based on portion product contract or production sharing contract (PSC) where this agreement contract made between PT Cheron Pacific Indonesia with Government of Republic idnonesia (SKK MIGAS)

Definition of operating cost at oil and natural gas industry is different with definition of operating cost at general manufacture industry, trade enterprise although service enterprise. Definition of operating cost (cost recovery) at PT CPI is returning which create and duty which appear during search until produce oil

Concordant with procedure PSC, cost recovery at first cost by contractor (PT CPI) and will changing by government (SKK MIGAS) after production successful to create oil that is through lack of with equity share

Cost recovery will changing in form oil by SKK MIGAS concordant with procedure of PSC, cost recovery which will changing divided with WAP (Weight Average Price) this distribution results called with cost oil

In application, cost recovery very influence towards profit achievement before tax. This cas can be seen from regression analysis between cost oil with equity to be split, where the big influence is 96%

More big change cost recovery so will more big the influence towards change value equity share, where equity share constitute income (revenue) for PT CPI.

7. SUGGESTIONS

From the conclusion above, suggestions which able to give are :

Expense component constitute element that very influence towards profit achievement before tax at PT CPI enterprise for the future must consider expense concept and cost allocate

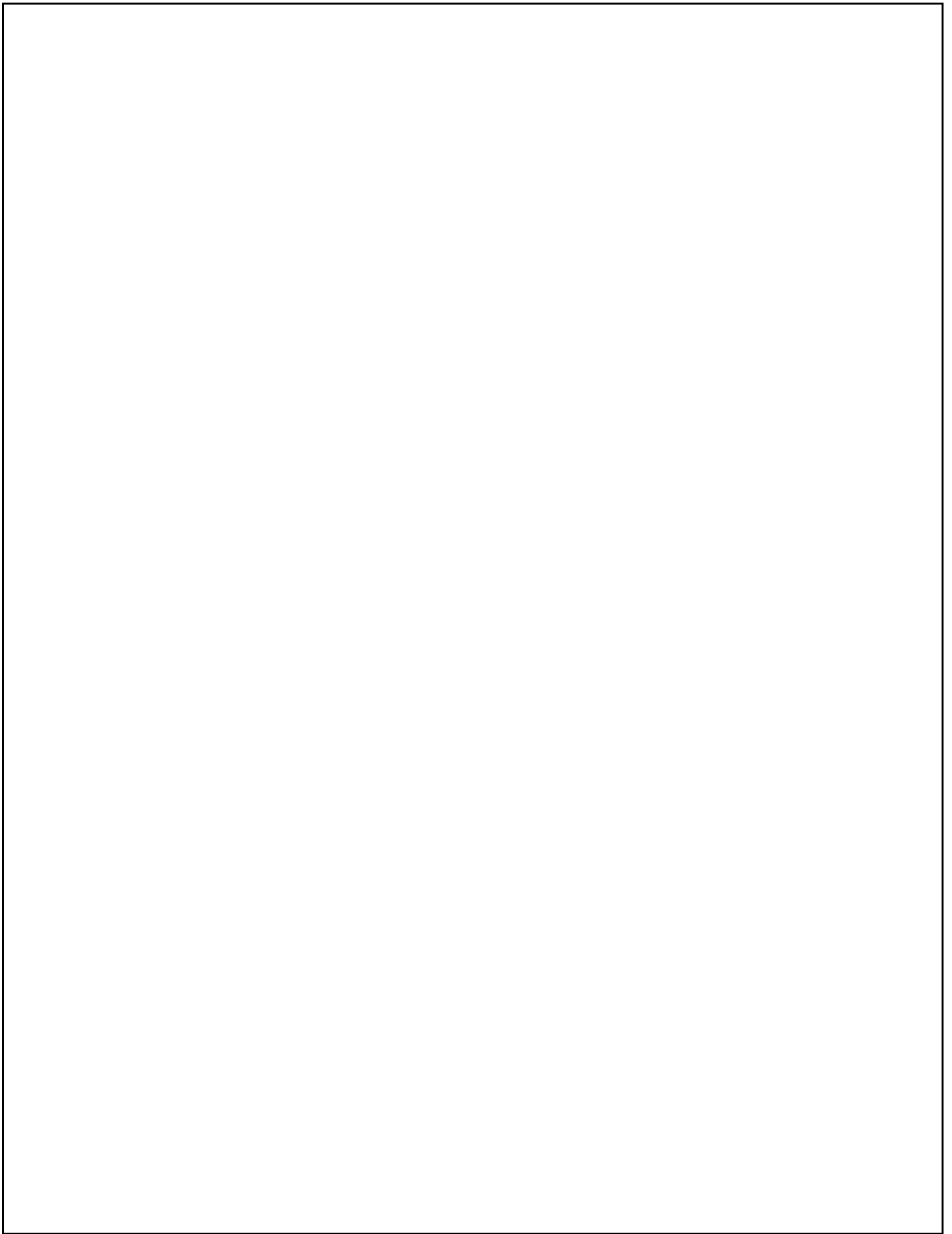
For implement cost eddectiveness, enterprise wish to look out again expense eomponents in cost recovery, because there are still confused in cost allocate, like component OEB that it between tangible and intangible, this allovate mistake influence time and value cost recovery

Enterprise must consider value concept of money tie which same at moment cost recovery will change by government.

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