

CHAPTER FOUR
PERFORMANCE MEASUREMENT OF JICT USING BALANCED
SCORECARD APPROACH

By using Balances Scorecard approach, JICT performance is measured using 4 (four) perspectives while the analysis of data collection has been explained in Chapter II.

A. Financial Perspective

A.1. Financial Statement of JICT

Company performance from a financial perspective is shown in Financial Statement records to show whether the company's target has been achieved. Table below will show the comparison of Income Statements, and Balance Sheets year 2005, 2006, and 2007:

Table 4-1
Comparison of Statements of Income (expressed in US\$)

Description	2005	2006	2007
NET REVENUES	115,299,145	129,055,495	153,482,454
COST OF REVENUES	(27,534,365)	(28,367,107)	(29,906,358)
GROSS PROFIT	87,764,780	100,688,388	123,576,096
OPERATING EXPENSES			
General and administration	(51,483,304)	(59,096,505)	(68,272,708)
OPERATING INCOME	36,281,476	41,591,883	55,303,388
OTHER INCOME (EXPENSES)			
Interest Income	629,456	765,530	686,070
Gain (loss) on foreign exchange -net	206,534	(418,212)	(137,211)
Taxes	(803,022)	(153,017)	
Miscellaneous	3,981,594	1,795,400	2,303,745
Other Income – Net	4,014,562	1,989,701	2,852,604
PROFIT BEFORE INCOME TAX	40,296,038	43,581,584	58,155,992
EXPENSES			
INCOME TAX EXPENSES	(13,108,773)	(13,702,651)	(18,284,252)
NET INCOME	27,187,265	29,878,933	39,871,740

Sources: PT. JICT Financial Statement

Based on Income Statements above, JICT's gross profit in 2006 slightly increased by 2.5% from 2005, and in 2007, it increased by 3.2% from 2006. (This also reflected that increases of throughput (container volume) year by year from 2005 to 2007 was followed by cost efficiency. Net profit ratio to net revenues was also stable, recorded at 35% in 2005, 34% in 2006 and 38% in 2007. This ratio indicates that JICT is a healthy company. The performance based on net profit ratio of JICT is much better than Samudera Indonesia Tbk (Shipping Line) which recorded only 6% in year 2007. ([Http://www.jsx.co.id](http://www.jsx.co.id))

Table 4-2
COMPARISON OF BALANCE SHEETS YEAR 2005,2006,2007
(expressed in US\$)

Description	2005	2006	2007
CURRENT ASSETS			
Cash and cash equivalents	39,468,520	23,750,372	14,212,582
Trade receivables	5,438,249	7,861,038	10,881,762
Other receivables	2,404,371	487,779	1,450,829
Inventories	4,162,142	3,890,405	4,090,269
Other current assets	1,269,640	1,331,506	724,865
TOTAL CURRENT ASSETS	52,742,922	37,321,100	31,360,307
NON-CURRENT ASSETS			
Fixed Assets	88,368,760	88,420,386	86,893,043
Deffered Tax Assets	-	245,621	923,285
TOTAL NON CURRENT ASSETS	88,368,760	88,666,007	87,816,328
TOTAL ASSETS	141,111,682	125,987,107	119,176,635

Sources: PT. JICT Financial Statement

Table 4-3
COMPARISON OF BALANCE SHEETS YEAR 2005,2006,2007 (continued)
(expressed in US\$)

Description	2005	2006	2007
LIABILITIES AND EQUITY			
CURRENT LIABILITIES			
Trade payables	2,233,582	5,528,638	3,014,027
Other payables	3,345,770	4,641,316	4,724,709
Accruals and provisions	8,547,084	14,244,511	13,696,389
Taxes payable	1,643,605	5,747,491	6,003,058
Total current liabilities	15,770,041	30,161,956	27,438,183
NON-CURRENT LIABILITIES			
Employee benefits obligation	11,436,162	12,040,739	18,082,300
Total liabilities	27,206,203	42,202,695	45,520,483
EQUITY			
Share capital:Authorized-1 preferred share and 442,900,812 ordinary shares with par value of Rp.500 per share issued and fully paid: 442,900,812 ordinary shares	25,430,685	25,430,685	25,430,685
Statutory reserve	5,086,137	5,086,137	5,086,137
Retained earnings	83,388,657	53,267,590	43,139,330
Total Equity	113,905,479	83,784,412	73,656,152
TOTAL LIABILITIES AND EQUITY	141,111,682	125,987,107	119,176,635

Sources: PT. JICT Financial Statement

Based on above Balance Sheets, the author analyzes that there was a substantial decreased on Equity due to dividend payment to the shareholders increased.

A.2. Financial Ratio Analysis

Based on Financial Statement of JICT for year ended 2005, 2006, and 2007 shown previously, the author analyzed the financial performance using 7 (seven) indicators in accordance with standards of a State Owned Company (BUMN), which are ROE, ROI, Cash Ratio, Current Ratio, Collection Periods, Total Assets Turn Over, and Total Equity versus Total Assets.

a. Return on Equity

Table below is shown the ratio of ROE for year 2005, 2006, 2007. Ratio of ROE is calculated by dividing the Net Income after Tax with Equity.

Table 4-4
Ratio of Return on Equity PT. JICT year 2005 – 2007
(Expressed in US\$)

No.	Description	2005	2006	2007
1.	Net Income after Tax	27,187,265	29,878,933	39,871,740
2.	Equity	113,905,479	83,784,412	73,656,152
	ROE	24%	36%	54%

Source: JICT Financial Report, Audited

As shown in above table, the increased of ROE occurred due to the increased of Net Income because of increased throughput, and the decreased of retained earnings.

Equity decreased because of dividend payment to the shareholders increased.

b. Return on Investment

Table below is shown the ratio of ROI for year 2005, 2006, 2007. Ratio of ROI is calculated by dividing the Net Income with total assets.

Table 4-5
Ratio of Return on Investment PT. JICT year 2005 – 2007
(Expressed in US\$)

No.	Description	2005	2006	2007
1.	Net Income	27,187,265	29,878,933	39,871,740
2.	Total Assets	141,111,682	125,987,107	119,176,635
	ROI	19%	24%	33%

Source: JICT Financial Report, Audited

As shown in above table, the increase of ROI due to the increase of Net Income because of the increased throughput and the decreased of total assets value (depreciation of equipment).

c. Cash Ratio

Table below is shown the Cash Ratio for year 2005, 2006, 2007. Cash ratio is calculated by dividing the Cash and Cash Equivalents with Current Liabilities.

Table 4-6
Cash Ratio of PT. JICT year 2005 – 2007
(Expressed in US\$)

No.	Description	2005	2006	2007
1.	Cash & cash equivalents	39,468,520	23,750,372	14,212,582
2.	Current Liabilities	15,770,041	30,161,956	27,438,183
	Cash Ratio	250%	79%	52%

Source: JICT Financial Report, Audited

As shown in above table, the decreased of Cash Ratio due to the increase of current liabilities, For year 2006, JICT made the provision early retirement scheme, accrued post health benefit for employee. For year 2007, JICT made a provision for deferred incentives scheme for employee.

d. Current Ratio

Table below is shown the Current Ratio for year 2005, 2006, 2007. Current ratio is calculated by dividing the Current Assets with Current Liabilities.

Table 4-7
Current Ratio of PT. JICT year 2005 – 2007
(Expressed in US\$)

No.	Description	2005	2006	2007
1.	Current Assets	52,742,922	37,321,100	31,360,307
2.	Current Liabilities	15,770,041	30,161,956	27,438,183
	Current Ratio	334%	124%	114%

Source: JICT Financial Report, Audited

As shown in above table, the decreased of Current Ratio due to the increase of current liabilities, whilst the current assets is decreased. Liabilities increased from year 2005 to 2006, was due to the provision of early retirement and post health. Year 2006-2007, liabilities decreased due to the efficiency of maintenance and repair cost.

e. Collection Period

Table 4-8 is shown the Collection Period for year 2005, 2006, 2007. Collection Period is calculated by dividing Account Receivables with Net Revenues and multiply with 365 days.

Table 4-8
Collection Period of PT. JICT year 2005 – 2007
(days)

No.	Description	2005	2006	2007
1.	Account Receivables	5,438,249	7,861,038	10,881,762
2.	Net Revenues	115,299,145	129,055,495	153,482,454
	Collection period	17	22	26

Source: JICT Financial Report, Audited

As shown in above table, the increased of Collection Period due to the increased of Account Receivables. One of JICT big customer (PT. A) always paid more than the credit period (8 days) stipulated in the general JICT term & condition. Referring to the agreement between JICT and PT.A, the credit period can be extended until 30 days. This agreement is subjected to further review in every 2 (two) years.

JICT also gives incentives of 1% discount of total payment for customer that pays within credit period on 3 (three) consecutive months. Overall, the credit period under 30 days is rated as "Good".

g. Total Assets Turn Over

Table below is shown the data of Total Assets Turn Over for year 2005, 2006, 2007. Total Assets Turn Over is calculated by dividing the Net Income with total assets.

Table 4-9
Total Assets Turn Over PT. JICT year 2005 – 2007
(Expressed in US\$)

No.	Description	2005	2006	2007
1.	Net Revenues	115,299,145	129,055,495	153,482,454
2.	Total Assets	141,111,682	125,987,107	119,176,635
	TATO	82%	102%	129%

Source: JICT Financial Report, Audited

As shown in above table, the increase of TATO due to the increase of Net Revenues as the effect of the increased throughput year on year and the decreased of total assets value.

h. Total Equity versus Total Assets

Table below is shown the data of Total Equity versus Total Assets for year 2005, 2006, 2007. The ratio is calculated by dividing the Total Equity with Total Assets.

Table 4-10
Total Equity versus Total Assets PT. JICT year 2005 – 2007
(Expressed in US\$)

No.	Description	2005	2006	2007
1.	Total Equity	113,905,479	83,784,412	73,656,152
2.	Total Assets	141,111,682	125,987,107	119,176,635
	TE vs TA	81%	67%	62%

Source: JICT Financial Report, Audited

As shown in above table, the decreased of total equity because of dividend payment also there is a decreased of total assets value.

A.3. The Analysis of Company Condition

In this chapter, the author analyzed JICT financial performance by referring to the Decree of Minister of State Owned Enterprise No 100/MBU/2002 dated 4 June 2002 regarding the measurement of State Owned Company financial condition with the defined indicators. This model was used because JICT status as a Joint Venture of PT. Pelindo II (Wholly-owned company by the Government of Indonesia) and Hutchison Port Holding (HPH), and also because the lack of information on financial data from other company that runs the same business.

The analysis and evaluation for this financial measurement is based on the achievement of score indicator and average score for 8 (eight) financial indicators for the year 2005, 2006, 2007, which the ratio had been calculated previously. The analysis of financial report of JICT can be shown in the following:

1. Return on Equity (ROE)

Below is the ROE score indicator:

ROE (%)	SCORE
$15 < \text{ROE}$	15
$13 < \text{ROE} \leq 15$	13.5
$11 < \text{ROE} \leq 13$	12
$9 < \text{ROE} \leq 11$	10.5
$7.9 < \text{ROE} \leq 9$	9
$6.6 < \text{ROE} \leq 7.9$	7.5
$5.3 < \text{ROE} \leq 6.6$	6
$4 < \text{ROE} \leq 5.3$	5
$2.5 < \text{ROE} \leq 4$	4
$1 < \text{ROE} \leq 2.5$	3
$0 < \text{ROE} \leq 1$	1.5
$\text{ROE} < 0$	1

(Source: Decree of Minister of SOE No 100/MBU/2002, 4 June 2002)

The score achievement:

Table 4-11
JICT score achievement of ROE indicator
Year 2005, 2006, 2007

No.	Description	2005	2006	2007
1.	Net Income after Tax	27,187,265	29,878,933	39,871,740
2.	Equity	113,905,479	83,784,412	73,656,152
	ROE=(1:2) x 100%	24%	36%	54%
	Score	15	15	15
	% achievement	100%	100%	100%

Source: JICT Financial Report-Audited, author analysis

2. Return on Investment (ROI)

Table 4-12 shown JICT score achievement for ROI, and below is the ROI score indicator:

ROI (%)	SCORE
18 < ROI	10
15 < ROI ≤ 18	9
13 < ROI ≤ 15	8
12 < ROI ≤ 13	7
10.5 < ROI ≤ 12	6
9 < ROI ≤ 10.5	5
7 < ROI ≤ 9	4
5 < ROI ≤ 7	3.5
3 < ROI ≤ 5	3
1 < ROI ≤ 3	2.5
0 < ROI ≤ 1	2
ROI < 0	0

(Source: Decree of Minister of SOE No 100/MBU/2002, 4 June 2002)

The score achievement:

Table 4-12
JICT score achievement of ROI indicator
Year 2005, 2006, 2007

No.	Description	2005	2006	2007
1.	Net Income	27,187,265	29,878,933	39,871,740
2.	Total Assets	141,111,682	125,987,107	119,176,635
	ROI=(1:2) x 100%	19%	24%	33%
	Score	10	10	10
	% achievement	100%	100%	100%

Source: JICT Financial Report-Audited, author analysis

3. Cash Ratio

Table 4-12 shown JICT score achievement for Cash Ratio, and below is the Cash Ratio score indicator:

Cash Ratio(%)	SCORE
$CR \geq 35$	3
$25 < CR \leq 35$	2.5
$15 < CR \leq 25$	2
$10 < CR \leq 15$	1.5
$5 < CR \leq 10$	1
$0 < CR \leq 5$	0

(Source:Decree of Minister of SOE No 100/MBU/2002, 4 June 2002)

The score achievement:

Table 4-13
JICT score achievement of Cash Ratio indicator
Year 2005, 2006, 2007

No.	Description	2005	2006	2007
1.	Cash & cash equivalents	39,468,520	23,750,372	14,212,582
2.	Current Liabilities	15,770,041	30,161,956	27,438,183
	Cash Ratio=(1:2) x 100%	250%	79%	52%
	Score	3	3	3
	% achievement	100%	100%	100%

Source: JICT Financial Report-Audited, author analysis

4. Current Ratio

Table 4-14 shown JICT score achievement for Current Ratio, and below is the Current Ratio score indicator:

Current Ratio(%)	SCORE
$125 \leq CR$	3
$110 < CR \leq 125$	2.5
$100 < CR \leq 110$	2
$95 < CR \leq 100$	1.5
$90 < CR \leq 95$	1
$CR \leq 90$	0

(Source:Decree of Minister of SOE No 100/MBU/2002, 4 June 2002

The score achievement:

Table 4-14
JICT score achievement of Current Ratio indicator
Year 2005, 2006, 2007

No.	Description	2005	2006	2007
1.	Current Assets	52,742,922	37,321,100	31,360,307
2.	Current Liabilities	15,770,041	30,161,956	27,438,183
	Current Ratio=(1:2) x 100%	334%	124%	114%
	Score	3	2.5	2.5
	% achievement	100%	83%	83%

Source: JICT Financial Report-Audited, author analysis

5. Collection Period

Below is the score indicator for Collection period:

Collection Periods (Days)	SCORE
CP ≤ 60	4
60 < CP ≤ 90	3.5
90 < CP ≤ 120	3
120 < CP ≤ 150	2.5
150 < CP ≤ 180	2
180 < CP ≤ 210	1.6
210 < CP ≤ 240	1.2
240 < CP ≤ 270	0.8
270 < CP ≤ 300	0.4
300 < CP	0

(Source: Decree of Minister of SOE No 100/MBU/2002, 4 June 2002)

The score achievement:

Table 4-15
JICT score achievement of Collection Period indicator
Year 2005, 2006, 2007

No.	Description	2005	2006	2007
1.	Account Receivables	5,438,249	7,861,038	10,881,762
2.	Net Revenues	115,299,145	129,055,495	153,482,454
	Collection period= (1:2) x 365 days	17	22	26
	Score	4	4	4
	% achievement	100%	100%	100%

Source: JICT Financial Report-Audited, author analysis

6. Total Assets Turn-over (TATO)

Table 4-16 shown JICT score achievement for Total Assets Turn-over, and below is the score indicator:

TATO (%)	SCORE
120<TATO	4
105<TATO≤ 120	3.5
90<TATO≤ 105	3
75<TATO≤ 90	2.5
60<TATO≤ 75	2
40<TATO≤ 60	1.5
20<TATO≤ 40	1
TATO≤ 20	0.5

(Source: Decree of Minister of SOE No 100/MBU/2002, 4 June 2002)

The score achievement:

Table 4-16
JICT score achievement of TATO indicator
Year 2005, 2006, 2007

No.	Description	2005	2006	2007
1.	Net Revenues	115,299,145	129,055,495	153,482,454
2.	Total Assets	141,111,682	125,987,107	119,176,635
	TATO=(1:2) x 100%	82%	102%	129%
	Score	2.5	3	4
	% achievement	62.5%	75%	100%

Source: JICT Financial Report-Audited, author analysis

7. Total Equity versus Total Asset

Table 4-17 shown JICT score achievement for Total Equity versus Total Asset, and following is the score indicator:

Total Equity versus Total Asset (%) = X	SCORE
X < 0	0
0 ≤ X < 10	2
10 < X < 20	3
20 < X < 30	4
30 < X < 40	6
40 < X < 50	5.5
50 < X < 60	5
60 < X < 70	4.5
70 < X < 80	4.25
80 < X < 90	4
90 < X < 100	3.5

(Source: Decree of Minister of SOE No 100/MBU/2002, 4 June 2002)

The score achievement:

Table 4-17
JICT score achievement of Total Equity versus Total Asset indicator
Year 2005, 2006, 2007

No.	Description	2005	2006	2007
1.	Total Equity	113,905,479	83,784,412	73,656,152
2.	Total Assets	141,111,682	125,987,107	119,176,635
	TE vs TA = (1:2) x 100%	81%	67%	62%
	Score	4	4.5	4.5
	% achievement	66.7%	75%	75%

Source: JICT Financial Report-Audited, author analysis

In summary, author compiled all the financial indicators, score, and the score achievement in following table:

Table 4-18
The Measurement of Company Condition for Financial Perspective
PT. Jakarta International Container Terminal

No.	Indicator	Weight	Score			Average of Score	Value of Average Score
			2005	2006	2007		
1	Return on Equity	15	15	15	15	15.0	100%
2	Return on Investment	10	10	10	10	10.0	100%
3	Cash Ratio	3	3	3	3	3.0	100%
4	Current Ratio	4	3	2.5	2.5	2.7	67%
5	Collection Periods	4	4	4	4	4.0	100%
6	Total Assets Turn-over	4	2.5	3	4	3.2	79%
7	Total Equity to Total Assets Ratio	6	4	4.5	4.5	4.3	72%
		46	41.5	42	43	42.2	
	Total (%)	100%	90%	91%	93%	92%	

Source: JICT Financial Report-Audited, author analysis

Based on table 4-18, there are 4 (four) indicators that achieve the maximum score which are Return on Equity (ROE), Return on Investment (ROI), Cash Ratio, and Collection Periods. For Total Equity to Total Assets Ratio, the score is quite high (72%) due to the strong capital. JICT financial ratio shows the average score of 42.2, from the total score of 46 or equal to 92% from the maximum score. With this score of 92%, it means the financial aspect of PT. JICT classified into "Healthy" category with "AA" class.

For the measurement of the average score of each financial indicator, author used the scale as follows:

Average score < 20%	= Very Poor
21% < Average score < 40%	= Poor
41% < Average score < 60%	= Fair
61% < Average score < 80%	= Good
Average Score > 81%	= Very Good

From the achievement of 7 (seven) indicator of financial perspective, JICT achieved 4 (four) indicators with criteria “Very Good”; 3 (three) indicator with criteria “Good”.

B. Customer Perspective

In order to measure the customer satisfaction, the author uses the theory of “Service Quality” which is introduced by Zeithaml, et al (1990), by deliver questionnaire that contains 24 (twenty four) questions, whereas every question has 5 (five) category answers, the first choice means very unsatisfied, the second choice is not satisfied, the third choice is quite satisfied, the fourth choice is satisfied, and the fifth choice is very satisfied. The answer has its own rating. The author uses Likert scale to measure the customer satisfaction for each category of answer, in which the lowest rate for the first choice and the highest rate for the fifth choice.

The questions are divided in 5 (five) groups of questions referring to the quality of service, as follows:

- a. Tangibles
Respondent’s opinion on the physical appearance of physical elements of JICT, such as equipment facilities, infrastructures, buildings and also system, in 5 questions.
- b. Reliability
Respondent’s opinion on dependable, accurate performance of JICT, in 6 questions.
- c. Responsiveness
Respondent’s opinion on the promptness and helpfulness of JICT employee in servicing the customers.
- d. Assurance
Respondent’s opinion on competence, courtesy, credibility, and security of JICT.
- e. Empathy
Respondent’s opinion on easy access, good communications, and customer understanding.

The analysis of 5 (five) dimensions of service quality theory, is as follows:

1. The Dimension of Service Quality

a. Tangibility

Tangible dimension of PT. JICT covers the facilities provided to serve the customers, including equipment at the quay side, equipment at the yard, the comfort of Customer care room, including the appearance of JICT employees. The respondent's opinion on the tangible aspect is shown in table 4-19.

Table 4-19
Customer Respond on Perception Value on Tangibility

No.	SCORE	VU	NS	QS	S	VS	Total Respondent	
		1	2	3	4	5	X	Score
QUESTIONS								
1.	Facility of loading unloading equipment at JICT quay side.	0 0%	5 15.2%	21 63.6%	7 21.2%	0 0%	33 100%	101
2.	Facility of yard equipment at JICT container yard.	0 0%	6 18.2%	24 72.7%	3 9.1%	0 0%	33 100%	96
3.	Facility of equipment at the Gate House JICT	0 0%	4 12.1%	20 60.6%	9 27.3%	0 0%	33 100%	104
4.	Customer Care room at JICT	0 0%	3 9.1%	22 66.7%	8 24.2%	0 0%	33 100%	104
5.	Utilization of computer system at JICT	1 3%	4 12.1%	20 60.6%	8 24.2%	0 0%	33 100%	101
6.	JICT employee has a proper appearance	0 0%	0 0%	10 30.3%	23 69.7%	0 0%	33 100%	122
Total		1 0.5%	22 11.1%	117 59.1%	58 29.3%	0 0%	198 100%	628

(Source: Analysis from Questionnaire Result, year 2008)

Based on table 4-19, the response to the tangible aspect of JICT is 59.1% quite satisfied, 11.1% not satisfied, 29.3% satisfied and 0.5% very unsatisfied. In summary, most of the respondents agree that JICT facilities for servicing customer are relatively satisfied.

JICT still need to improve its facilities as there is 11.1% respondent not satisfied and 0.5% very unsatisfied. The improvement will hopefully minimize the gap between the perception and expectation of the customer.

b. Reliability

The dimension of reliability at PT. JICT covers the ability of the company to perform a service to its customers. The ability refers to the performance of loading and unloading activity on the vessel (quay side operation), the performance of receiving and delivery container at the container yard (yard operation), the performance of billing staff in servicing the customer to finalize its payment process, and also the performance related to the gate house operation. This then leads to the total quality of operational service at PT. JICT.

The respondent's opinion on the reliability aspect of JICT, is shown in table 4-20.

Table 4-20
Customer Respond on Perception Value on Reliability

No.	SCORE	VU	NS	QS	S	VS	Total Respondent	
		1	2	3	4	5		X
	QUESTIONS							Score
1.	The performance of loading-unloading activity in the vessel	1 3%	6 18.2%	17 51.5%	9 27.3%	0 0%	33 100%	100
2.	The performance of service activity at container yard	0 0%	5 15.2%	20 60.6%	8 24.2%	0 0%	33 100%	102
3.	The performance of Billing service at JICT	0 0%	3 9.1%	19 57.6%	11 33.3%	0 0%	33 100%	107
4.	The performance related to service at the Gate House JICT	0 0%	4 12.1%	19 57.6%	10 30.3%	0 0%	33 100%	105
5.	Quality of operational service at JICT	1 3%	2 6.1%	23 69.7%	7 21.2%	0 0%	33 100%	102
	Total	2 1.2%	20 12.1%	98 59.4%	45 27.3%	0 0%	165 100%	516

(Source: Analysis from Questionnaire Result, year 2008)

From table 4-21, the response to the reliability aspect of JICT is 59.4% quite satisfied, 12.1% not satisfied, 27.3% satisfied and 1.2% very unsatisfied. In summary, most of the respondents agree that JICT performance for servicing customer relatively satisfied. But, JICT still need to improve its level of performance on this aspect as there is 12.1% respondent not satisfied and 1.2% very unsatisfied. The improvement will hopefully minimize the gap between the perception and expectation of the customer.

c. Responsive

Responsive dimension of PT. JICT covers the level of responsiveness of JICT staff to serve the customers, including information delivery to customer, responding to the claim from customer, and fast reaction in servicing the customer. The respondent's opinion on the responsive aspect is shown in table 4-21.

Table 4-21
Customer Respond on Perception Value on Responsiveness

No.	SCORE	VU	NS	QS	S	VS	Total Respondent	
		1	2	3	4	5		X
QUESTIONS								Score
1.	Level of responsiveness of JICT staff	0 0%	2 6.1%	13 39.4%	18 54.5%	0 0%	33 100%	115
2.	Information of vessel schedule at Website	0 0%	4 12.1%	25 75.8%	4 12.1%	0 0%	33 100%	99
3.	Quality of information service for customer	0 0%	2 6.1%	21 63.6%	10 30.3%	0 0%	33 100%	107
4.	The claim settlement process at JICT	1 3%	5 15.2%	21 63.6%	5 15.2%	1 3%	33 100%	99
5.	JICT staff serve the customer in timely manner	0 0%	2 6.1%	21 63.6%	10 30.3%	0 0%	33 100	107
Total		1	15	101	47	1	165	527
		0.6%	9.1%	61.2%	28.5%	0.6%	100%	

(Source: Analysis from Questionnaire Result, year 2008)

From table 4-21, the response to the responsiveness aspect of JICT is 61.2% quite satisfied, 9.1% not satisfied, 28.5% satisfied, 0.6%

very satisfied and 0.6% very unsatisfied. In summary, most of the respondents agree that JICT staff respond for servicing customer relatively satisfied. But, JICT still needs to improve as there is 9.1% respondent not satisfied and 0.6% very unsatisfied. The improvement will hopefully minimize the gap between the perception and expectation of the customer.

d. Assurance

Assurance dimension of PT. JICT covers the level of assurance from the staff ability, system and procedure applied, including the security aspect in serving the customers. The respondent's opinion on the assurance aspect is shown in table 4-22.

Table 4-22
Customer Respond on Perception Value on Assurance

No.	SCORE	VU	NS	QS	S	VS	Total Respondent		
		1	2	3	4	5	X	Score	
QUESTIONS									Score
1.	JICT staff professionalism and skill	0 0%	1 3%	22 66.7%	10 30.3%	0 0%	33 100%	108	
2.	The ability of staff to convince the customer	0 0%	1 3%	20 60.6%	12 36.4%	0 0%	33 100%	110	
3.	The security aspect at JICT	0 0%	1 3%	15 45.5%	14 42.4%	3 9.1%	33 100%	118	
4.	System and procedure applied at JICT	0 0%	2 6.1%	27 81.8%	4 12.1%	0 0%	33 100%	101	
Total		0 0%	5 3.8%	84 63.65	40 30.3%	3 2.3%	132 100%	437	

(Source: Analysis from Questionnaire Result, year 2008)

From table 4-22, the response to the assurance aspect of JICT is 63.65% quite satisfied, 3.8% not satisfied, 30.3% satisfied, 2.3% very satisfied and 3.8% not satisfied. In summary, most of the respondents agree that the assurance aspect for servicing customer relatively satisfied. But, JICT still needs to improve as there is 3.8% respondent not satisfied. The improvement will hopefully minimize the gap between the perception and expectation of the customer.

e. Empathy

Empathy dimension of PT. JICT covers the level of empathy from JICT staff in servicing the customer. The respondent's opinion on the empathy aspect is shown in table 4-23.

Table 4-23
Customer Respond on Perception Value versus Expectation on Empathy

No.	SCORE	VU	NS	QS	S	VS	Total Respondent	
		1	2	3	4	5		X
	QUESTIONS							Score
1.	Customer Care 24 hours service at JICT	1 3%	5 15.2%	27 81.8%	0 0%	0 0%	33 100%	92
2.	The way of staff to solve your problem or complain	0 0%	7 21.2%	25 75.8%	1 3%	0 0%	33 100%	93
	Total	1 1.5%	12 18.2%	52 78.8%	1 1.5%	0 0%	66 100%	185

(Source: Analysis from Questionnaire Result, year 2008)

From the table 4-23, the response to the empathy aspect of JICT is 78.8% quite satisfied, 18.2% not satisfied, 1.5% satisfied and 1.5% very unsatisfied. In summary, most of the respondents agree that the empathy aspect for servicing customer relatively satisfied.

JICT still needs to improve as there is 18.2% respondent not satisfied and 1.5% not very satisfied. The empathy aspect can be enhanced through a continuous communication with customer, fast respond to queries and also in handling complaint and claims. The improvement will hopefully minimize the gap between the perception and expectation of the customer.

2. Customer Satisfaction Level

The measurement of customer satisfaction level is being conducted by making a comparison between the score of customer perception with the score of customer expectation. So, the quality level of service of PT. JICT is measured as perception score minus expectation score. The difference between the scores are actually the gap that needs to be evaluated.

If the gap is positive, it means the service level is above the expectation or in other words, the customer is very satisfied. If the gap is negative, it means the service level is lower than expected, and if the gap is zero, it means the service level perceived is the same as what is expected.

To understand the customer satisfaction level as a whole, the author sums the score from respondents that response to the score 1 up to 5, then calculate the total score for perception value and expectation value in each dimension of tangibility, reliability, responsiveness, assurance and empathy.

a. Tangibility

Table 4-24 describes the perception and expectation value of tangibility dimension.

Table 4-24
Customer Perception and Expectation
Tangibility dimension

No.	SCORE	VU	NS	QS	S	VS	Total Respondent		
		1	2	3	4	5		X	
QUESTIONS								Score	
1.	Facility of loading unloading equipment at JICT quay side.								
	<i>Perception</i>								
	<i>Expectation</i>	0	5	21	7	0	33	101	
		0	0	0	27	6	33	138	
2.	Facility of yard equipment at JICT container yard.								
	<i>Perception</i>	0	6	24	3	0	33	96	
	<i>Expectation</i>	0	0	0	28	5	33	137	
3.	Facility of equipment at the Gate House JICT								
	<i>Perception</i>	0	4	20	9	0	33	104	
	<i>Expectation</i>	0	0	0	29	4	33	136	
4.	Customer Care room at JICT								
	<i>Perception</i>	0	3	22	8	0	33	104	
	<i>Expectation</i>	0	0	0	23	10	33	142	
5.	Utilization of computer system at JICT								
	<i>Perception</i>	1	4	20	8	0	33	101	
	<i>Expectation</i>	0	0	2	25	6	33	136	
6.	JICT employee has a proper appearance								
	<i>Perception</i>	0	0	10	23	0	33	122	
	<i>Expectation</i>	0	0	5	23	5	33	132	

(Source: Analysis from Questionnaire Result, year 2008)

The average score of perception, expectation, gap and level of customer satisfaction is shown in table 4-25.

Table 4-25
Average Score on Perception, Expectation, Gap and
Level of Customer Satisfaction (LCS) for Tangibility

No.	QUESTIONS	Perception	Expectation	Gap	LCS (%)
1.	Facility of loading unloading equipment at JICT quay side.	1.01	1.38	-0.37	
2.	Facility of yard equipment at JICT container yard.	0.96	1.37	-0.41	
3.	Facility of equipment at the Gate House JICT	1.04	1.36	-0.32	
4.	Customer Care room at JICT	1.04	1.42	-0.32	
5.	Utilization of computer system at JICT	1.01	1.36	-0.35	
6.	JICT employee has a proper appearance	1.22	1.32	-0.1	
	Average Score	1.05	1.37	-0.32	76.64%

(Source: Analysis from Questionnaire Result, year 2008)

In the table, it is shown that for each components of tangibility dimension and also in the total score of all the components, has a relatively lower score of perception compared to the expectation score. The average score of gap = -0.32. This means the tangibility dimension of JICT is not yet satisfactory.

To increase the service level as per customer expectation, JICT needs to improve the quality of JICT facilities covering the equipments, infrastructures, and also the physical appearance of staff and also customer care room. Based on above data, the author calculates the customer satisfaction level by dividing the score of perception with the

expectation score and then multiply with 100%. The result indicates that the tangibility dimension of customer satisfaction level is 76.64%.

b. Reliability

In Table 4-26, the author describes the perception and expectation value of reliability dimension.

Table 4-26
Customer Perception and Expectation
Reliability Dimension

No.	SCORE	VU	NS	QS	S	VS	Total Respondent	
		1	2	3	4	5	X	Score
	QUESTIONS							
1.	The performance of loading unloading activity in the vessel.							
	<i>Perception</i>	1	6	17	9	0	33	100
	<i>Expectation</i>	0	0	2	26	5	33	135
2.	The performance of service activity at container yard.							
	<i>Perception</i>	0	5	20	8	0	33	102
	<i>Expectation</i>	0	0	3	27	3	33	132
3.	The performance of Billing service at JICT							
	<i>Perception</i>	0	3	19	11	0	33	107
	<i>Expectation</i>	0	0	0	29	4	33	136
4.	The performance related to service at the gatehouse JICT							
	<i>Perception</i>	0	4	19	10	0	33	105
	<i>Expectation</i>	0	0	1	29	3	33	134
5.	Quality of operational service at JICT							
	<i>Perception</i>	1	2	23	7	0	33	102
	<i>Expectation</i>	0	0	0	29	4	33	136

(Source: Analysis from Questionnaire Result, year 2008)

The average score of perception, expectation, gap and customer satisfaction level on reliability dimension is shown in the following table.

Table 4-27
Average Score on Perception, Expectation, Gap and
Level of Customer Satisfaction (LCS) for Reliability

No.	QUESTIONS	Perception	Expectation	Gap	LCS (%)
1.	The performance of loading-unloading activity in the vessel	1.00	1.35	-0.35	
2.	The performance of service activity at container yard	1.02	1.32	-0.3	
3.	The performance of Billing service at JICT	1.07	1.36	-0.29	
4.	The performance related to service at the Gate House JICT	1.05	1.34	-0.29	
5.	Quality of operational service at JICT	1.02	1.36	-0.34	
	Average Score	1.03	1.34	-0.31	76.30%

(Source: Analysis from Questionnaire Result, year 2008)

In the table, it is shown, that each of components in reliability dimension and also in the total score of all the components, has a relatively lower score of perception compared to the expectation score. The average score of gap = -0.31. it means the reliability dimension of JICT is not yet satisfactory.

To increase the service level as per customer expectation, JICT needs to improve the quality of performance in each activities, such as the performance in the yard, quay side, Billing, Gate House and also in the overall terminal activities. JICT also needs to motivate the employee to do the utmost effort to perform a better service to the customers.

Based on above data, the author calculate the customer satisfaction level by dividing the score of perception with the expectation score and then multiply with 100%. The result indicates that the reliability dimension of customer satisfaction level is 76.30%.

c. Responsiveness

Table below describes the perception and expectation value of responsiveness dimension.

Table 4-28
Customer Perception and Expectation
Responsiveness Dimension

No.	SCORE	VU	NS	QS	S	VS	Total Respondent		
		1	2	3	4	5		X	
QUESTIONS									Score
1.	Level of responsiveness of JICT staff <i>Perception</i>	0	2	13	18	0	33	115	
	<i>Expectation</i>	0	0	1	28	4	33	135	
2.	Information of vessel schedule at website. <i>Perception</i>	0	4	25	4	0	33	99	
	<i>Expectation</i>	0	0	0	29	4	33	136	
3.	Quality of information service for customer <i>Perception</i>	0	2	21	10	0	33	107	
	<i>Expectation</i>	0	0	1	29	3	33	134	
4.	The claim settlement process at JICT <i>Perception</i>	1	5	21	5	1	33	99	
	<i>Expectation</i>	0	0	0	29	4	33	136	
5.	JICT staff has served the customer in timely manner <i>Perception</i>	0	2	21	10	0	33	107	
	<i>Expectation</i>	0	0	1	29	3	33	134	

(Source: Analysis from Questionnaire Result, year 2008)

The average score of perception, expectation, gap and customer satisfaction level on responsiveness dimension is shown in table 4-29.

Table 4-29
Average Score on Perception, Expectation, Gap and
Level of Customer Satisfaction (LCS) for Responsiveness

No.	QUESTIONS	Perception	Expectation	Gap	LCS (%)
1.	Level of responsiveness of JICT staff	1.15	1.35	-0.2	
2.	Information of vessel schedule at Website	0.99	1.36	-0.37	
3.	Quality of information service for customer	1.07	1.34	-0.27	
4.	The claim settlement process at JICT	0.99	1.36	-0.37	
5.	JICT staff serve the customer in timely manner	1.07	1.34	-0.27	
	Average Score	1.05	1.35	-0.30	78.07%

(Source: Analysis from Questionnaire Result, year 2008)

In the table, it is shown, that each of components in responsiveness dimension and also in the total score of all the components, has a relatively lower score of perception compared to the expectation score. The average score of gap = -0.30. it means the responsiveness dimension of JICT is not yet satisfactory.

To increase the service level as per customer expectation, JICT needs to improve the respond of JICT employee in their interaction with the customers. JICT also needs to improve the quality of information to perform a better service to the customers.

Based on the above data, the author calculates the customer satisfaction level by dividing the score of perception with the expectation

score and then multiply with 100%. The result indicates that the responsiveness dimension of customer satisfaction level is 78.07%.

d. Assurance

Table below describes the perception and expectation value of assurance dimension.

**Table 4-30
Customer Perception & Expectation
Assurance Dimension**

No.	SCORE	VU	NS	QS	S	VS	Total Respondent	
		1	2	3	4	5	X	Score
	QUESTIONS							
1.	JICT staff professionalism and skill							
	<i>Perception</i>	0	1	22	10	0	33	108
	<i>Expectation</i>	0	0	0	29	4	33	136
2.	The ability of staff to convince the customer							
	<i>Perception</i>	0	1	20	12	0	33	110
	<i>Expectation</i>	0	0	0	30	3	33	135
3.	The security aspect at JICT							
	<i>Perception</i>	0	1	15	14	3	33	118
	<i>Expectation</i>	0	0	0	27	6	33	138
4.	System & procedure applied at JICT							
	<i>Perception</i>	0	2	27	4	0	33	101
	<i>Expectation</i>	0	0	0	30	3	33	135

(Source: Analysis from Questionnaire Result, year 2008)

The average score of perception, expectation, gap and customer satisfaction level on assurance dimension is shown in table 4-31.

Table 4-31
Average Score on Perception, Expectation, Gap and
Level of Customer Satisfaction (LCS) for Assurance

No.	QUESTIONS	Perception	Expectation	Gap	LCS (%)
1.	JICT staff professionalism and skill	1.08	1.36	-0.28	
2.	The ability of staff to convince the customer	1.10	1.35	-0.25	
3.	The security aspect at JICT	1.18	1.38	-0.2	
4.	System and procedure applied at JICT	1.01	1.35	-0.34	
	Average Score	1.09	1.36	-0.27	80.33%

(Source: Analysis from Questionnaire Result, year 2008)

In the table, it is shown, that each of components in assurance dimension and also in the total score of all the components, has a relatively lower score of perception compared to the expectation score. The average score of gap = -0.27. it means the assurance dimension of JICT is not yet satisfactory.

To increase the service level as per customer expectation, JICT needs to improve JICT employee professionalism and skill by involving them in training, seminar, and comparative study. JICT also needs to improve its employee performance by conducting a coaching session and discussion between superior and staff.

Based on the above data, the author calculates the customer satisfaction level by dividing the score of perception with the expectation score and then multiply with 100%. The result indicates that the assurance dimension of customer satisfaction level is 80.33%.

e. Empathy

Table below describes the perception and expectation value of tangibility dimension

Table 4-32
Customer Perception & Expectation
Empathy Dimension

No.	SCORE	VU	NS	QS	S	VS	Total Respondent	
		1	2	3	4	5	X	Score
	QUESTIONS							
1.	Customer care 24 hours service at JICT							
	<i>Perception</i>	1	5	27	0	0	33	108
	<i>Expectation</i>	0	0	1	29	3	33	136
2.	The way of staff to solve problem							
	<i>Perception</i>	0	7	25	1	0	33	93
	<i>Expectation</i>	0	0	0	30	3	33	135

(Source: Analysis from Questionnaire Result, year 2008)

The average score of perception, expectation, gap and customer satisfaction level on empathy dimension is shown in table 4-33.

Table 4-33
Average Score on Perception, Expectation, Gap and
Level of Customer Satisfaction (LCS) for Empathy

No.	QUESTIONS	Perception	Expectation	Gap	LCS (%)
1.	Customer Care 24 hours service at JICT	0.92	1.34	-0.42	
2.	The way of staff to solve your problem or complain	0.93	1.35	-0.42	
	Average Score	0.93	1.35	-0.42	68.77

(Source: Analysis from Questionnaire Result, year 2008)

In the table, it is shown, that each of components in empathy dimension and also in the total score of all the components, has a relatively lower score of perception compared to the expectation score. The average score of gap = -0.42. it means the empathy dimension of JICT is not yet satisfactory.

To increase empathy in the working environment of JICT staff, JICT needs to motivate its employee to customize the culture of serving to the customers. Hence, this can lead to a code of conduct for JICT employee in daily activities to put an empathy in their interaction with customers.

Based on the previous data, the author calculates the customer satisfaction level by dividing the score of perception with the expectation score and then multiply with 100%. The result indicates that the empathy dimension of customer satisfaction level is 68.77%.

From the 5 (five) dimension of tangibility, reliability, responsiveness, assurance and empathy, which have been analyzed previously, it can be summarized that the gap are all negatives. It can be shown in table 4-34:

Table 4-34

The Gap on 5 Dimensions

No.	Items	Perception	Expectation	Gap	LCS (%)
1.	Tangibility	1.05	1.37	-0.32	76.64%
2.	Reliability	1.03	1.34	-0.31	76.87%
3.	Responsiveness	1.05	1.35	-0.3	77.78%
4.	Assurance	1.09	1.36	-0.27	80.15%
5.	Empathy	0.93	1.35	-0.42	68.89%
	Average Score	1.03	1.354	-0.32	76.07%

(Source: Analysis from Questionnaire Result, year 2008)

From the above table, the average score of 5 (five) dimension on the perception is 1.03, lower than the expectation, 4.19. The gap is 0.32 or in other words, the level of customer satisfaction achieved 76.07% in average.

C. Internal Business Process Perspective

The other perspective that is used to measure JICT performance using Balance Scorecard is based on the internal business process. The traditional approach in improving internal business is usually by controlling the process and improving the existing process, but the Balance Scorecard approach tries to identify the business process required to be in place to succeed the company strategy even if the process has not yet been materialized.

There are 3 (three) components in Balanced Scorecard in measuring the internal business process, which is innovation, operation, and after sales service. For JICT performance measurement, the author will only measure the innovation and operation performance, as the after sales service is quite difficult to be defined.

1. Innovation

In order to sustain its competitive advantage, a company should always innovate. The ability of a company to innovate can be technically measured by 2 (two) approaches, namely, the ability of the company to identify the market demand and the ability of the company to create demand in the market. (Kaplan & Norton,1992)

Particularly for a service company, the innovation can lead to optimal efficiency and effectiveness in service delivery. At JICT, customer demands more on the efficiency and accuracy of data information transfer and communication than ever before. Previously, communication between JICT and customer relied on paper or written documentation. Looking at the growing demand from customers to

enable data exchange using electronic transfer, JICT Marketing works closely with ICT (Information & Communication Technology) unit at JICT to establish an effective communication system that address the customer requirements.

ICT is a unit within JICT that develops, maintains and reviews the software, hardware of JICT internal system and electronic communication with customers. ICT works with Marketing unit to supply the required system or data enhancement for the customers. Some of products that have been used by customers are as follows:

1. Electronic Data Interchange (EDI) at JICT, which has some types of documents, as follows:
 - a. CODECO (gate in/out report),
 - b. COARRI (Load/Discharge realization),
 - c. COPRAR (Load/Discharge Instruction),
 - d. COPARN (Booking reference).

The Data Exchange mode can be used by using e-mail transfer or using FTP (file transfer protocol) which is sent to customer on a daily, half daily (every six hours), hourly basis or every 20 minutes depending on the shipping line request. The EDI data format that JICT used is the UN/EDIFACT standard with version that is suitable with what Shipping Lines already have. Currently, the data exchange is not only employed for use with Shipping lines but also with particular exporter/Importers.

2. Short Message (SMS) Tracking

This feature is already available but not yet utilized intensively by the customers, because the data quality is not 100% accurate.

3. JICT Website

Features that are available, as follows:

1. Online transaction, this feature allows the customer to do Container tracking for JICT Terminal 1 & Terminal 2 in real time basis.
2. Invoice tracking, this feature allows the customer to calculate the estimation costs that need to be paid before the release of container.
3. Document Billing tracking, this feature gives the customer the possibility to track the last status of transaction in Billing,
4. Report maker at gate in/out
5. Vessel schedule, this feature allows the customer to know the vessel schedule in a certain period.
6. Rate tariff calculation, this feature enable the customer to make a simulation on the table tariff- for transaction in US\$ or in Rupiah.
7. The weather information.
8. Procurement info, this feature is beneficial for supplier or vendor to view tender winner, view open tender, partner registration form.

In regard to the company's effort to innovate its services for the benefit of customer, the author has conducted a survey to the customer (shipping lines), in order to measure whether this innovation has met with customer's expectation.

The respondent's opinion on the innovation made by JICT, is shown in the table 4-35.

Table 4-35

Customer Respond on Perception Value of Innovation Product

No.		VU	NS	QS	S	VS	Total Respondent (TR)	
	SCORE	1	2	3	4	5		X
	QUESTIONS							Score
1.	Data exchange using EDI	0 0%	2 6.1%	25 75.8%	6 18.2%	0 0%	33 100%	103
2.	Vessel information using Website	0 0%	4 12.1%	25 75.8%	4 12.1%	0 0%	33 100%	99
3.	SMS tracking for container checking	3 9.1%	18 54.5%	12 36.4%	0 0%	0 0%	33 100%	75
	Total	3 3.0%	24 24.2%	62 62.6%	10 10.1%	0 0%	99 100%	178

(Source: Analysis from Questionnaire Result, year 2008)

On the application of SMS tracking for container checking, 54.5% respondents not satisfied. After interviewing ICT team on this issue, the author found out that the lack of data accuracy produced from SMS application was contributed by the lack of discipline from the staff and also some technical problems.

As the activity in the operational requires the link of different units, ICT team has recommended to management to build a system and procedure that enable the management to recognize where the failure occurred. Though, the issue of discipline always correlates to HR policy in implementing a proper reward and punishment scheme, in order to ensure all the parties involved conducting their job in efficient and effective ways.

Based on table 4-35, the respondent's opinion on Innovation product of JICT still needs an improvement. There was a 62.6% of the people surveyed is quite satisfied with the product, 24.2% is not satisfied and 3% is very unsatisfied.

Table 4-36
Respondent Opinion on Innovation Product of JICT
Average Score on Perception, Expectation, Gap and LCS

No.	QUESTIONS	Perception	Expectation	Gap	LCS (%)
1.	Data exchange using EDI	1.03	1.36	-0.33	75.74%
2.	Vessel information using Website	0.99	1.36	-0.37	72.79%
3.	SMS tracking for container checking	0.75	1.35	-0.60	55.56%
	Average Score	0.92	1.36	-0.43	68.06%

(Source: Analysis from Questionnaire Result, year 2008)

Based on the table 4-36, there was a 0.43 gap between respondent's perception and expectation. To minimize the gap, the improvement can be done by reviewing the existing system output and conducting a redesign to the system if required and implementing a reward and penalty scheme for the disciplinary actions. It is also recommended to arrange more training for users to create a user friendly environment.

2. Operations

Operational is the key unit at a service company. This process focuses on the efficiency and effectiveness of the service delivery to the customers. Traditionally, operational process can be controlled by using financial indicator, such as budget, costing, and the variance.

In recent years, the performance measurement for internal business process uses quality standards, operational budgets, and cycle times. In this research, the author utilizes the measurement for operational indicator using the proxies of operational budget and quality standard.

a. Quality Dimension or Level of Service

The quality dimension or known as level of service in the port operational activity is very crucial in order to ensure the smoothness of operation, thus rendering an effective and efficient service to the customer. In this case, there is a need to define a performance standard in port operation as guideline for quality service management.

PT. JICT quality dimension (level of service) is measured by referring to the Decree of Director General of Sea Transportation No PP 72/2/20-99 regarding the standard of performance of the operational service at the Sea Port. The standard performance that is defined in the port operation cover the performance standard for waiting time, berth occupancy ratio, box crane per hour, yard occupancy ratio, and vessel operating rate.

Following is the data of JICT level of service for year 2005 – 2007:

Table 4-37

PT. JICT Level of Service, 2005 - 2007

No	Description		2005	2006	2007
	Traffic				
1.	Vessel call	Call	1,701	1,900	1,874
2.	Throughput	Teus	1,470,468	1,619,495	1,820,000
	Performance				
1.	Box Crane Hour (BCH)	Move	27.94	28.11	27.60
2.	Berth Productivity	Move	35.59	35.32	33.20
3.	Vessel Operating Rate	Move	45.53	45.70	44.30
4.	Yard Occupancy Ratio	%	52.24	56.19	50.76%
5.	Berth Occupancy Ratio	%	45.26	49.63	59.6%
6.	Waiting Time (WT)	Hour	0.62	0.33	0.59

(Source: JICT MIS Report, 2005,2006,2007)

Referring to table 4-37, the author analyzed the level of service JICT compared to the performance standard from the Decree of Director General of Sea Transportation No PP 72/2/20-99 regarding the Standard of Performance of the Operational Service at the Sea Port.

The performance which is used as a comparison such as:

1. Box Crane per Hour (BCH) = total moves by quay cranes divided by all quay cranes operating time.
2. Yard Occupancy Ratio (YOR) = container yard inventory divided by available storage capacity of the container yard.
3. Waiting Time (WT) = the total delay berthing time of vessels due to the terminal divided by number of vessels departed in the defined period:
4. Coefficient Index = the minimum standard of service that is performed by the terminal.

The result of calculation is shown in table 4-38:

Table 4-38
The Result of Calculation for JICT Level of Service

No	Description	Performance	Formula	Index Result	Comparison Ratio	Coef. Index
	Service Value					
A	Performance Standard loading unloading (BCH)		$Ls=(2):(1)$			
	(1) PP 72/2/20-99	25.00				
	(2) JICT, 2007	27.6		1.1	>1	1
B	Performance Standard YOR (%)		$Ls=(2):(1)$			
	(1) PP 72/2/20-99	50.00				
	(2) JICT, 2007	59.19		1.18	>1	1
C	Performance Standard WT (Hour)		$Ls=(2):(1)$			
	(1) PP 72/2/20-99	1		0.53	<1	<1
	(2) JICT, 2007	0.53				

(Source: Laporan Program Pengembangan dan Percepatan Pemulihan Pendapatan dan Investasi di Terminal Petikemas, PT.Pelindo II, 2007)

Referring to the above table, JICT level of Service has met the defined standard stipulated by the government by the Decree of Director General of Sea Transportation No PP 72/2/20-99 regarding the Standard of Performance of the Operational Service at the Sea Port. Hence, the author concluded that the JICT level of Service can be rated as a "Good" company from the perspective of Internal Business Process.

D. Learning and Growth Perspective

The learning and growth perspective consisted of 4 (four) indicators, as follows:

- a. Job satisfaction level for employee
- b. Motivation and empowerment
- c. Revenue per employee
- d. Information system Reliability

1. Job Satisfaction Level for Employee

In measuring the employee satisfaction level, the author used Minnesota Satisfaction Questionnaire (Wexley & Yuki, 1984:54) for the respondent of JICT employee.

Table 4-39

Employee Respond (Staff level) on Job Satisfaction Level

No.	QUESTIONS	VU	NS	QS	S	VS	TR
1.	The understanding of your main job	0 0%	0 0%	21 25.00%	46 56.25%	15 18.75%	82 100%
2.	The understanding of doing job right	0 0%	0 0%	30 36.50%	30 36.50%	22 27.00%	82 100%
3.	Always busy all the time	0 0%	5 6.25%	57 69.00%	15 18.75%	5 6.25%	82 100%
4.	The opportunity to do something new from time to time	0 0%	10 12.50%	51 62.50%	21 25.00%	0 0%	81 100%
5.	The opportunity to acknowledge your colleagues what suppose to do	0 0%	10 12.50%	41 50.00%	31 37.50%	0 0%	82 100%
6.	Doing work not suitable with your own intention	6 7%	35 43%	21 25%	21 25%	0 0%	82 100%
7.	Feel satisfied after finalizing your work	0 0%	5 6.25%	26 31.25%	41 50%	10 12.50%	82 100%
17.	The way your superior coach the staff	0 0%	10 12.50%	41 50%	31 37.50%	0 0%	82 100%
18.	Your superior ability in making decision	0 0%	10 12.50%	36 43.75%	31 37.50%	5 6.25%	82 100%
19.	The wisdom, open mind and caring of your superior to the staff	0 0%	10 12.50%	36 43.75%	36 43.75%	0 0%	82 100%
20.	The application of your unit policy in the daily activities	0 0%	0 0%	26 31.25%	51 62.50%	5 6.25%	82 100%
25.	The comfort of your current work station	0 0%	0 0%	10 12.50%	31 37.50%	41 50%	82 100%
26.	Your work utilities already sufficient	5 6%	26 31%	41 50%	10 13%	0 0%	82 100%
27.	The harmony of current work relationship with your colleagues	0 0%	0 0%	31 37.50%	46 56.25%	5 6.25%	82 100%
	Total	11 1%	122 11%	465 40%	440 38%	109 9.50%	1,148 100%

(Source: Analysis from Questionnaire Result, year 2008)

Based on above table, the employees' response on staff level regarding job satisfaction level indicated that 40.54% of the respondents were quite satisfied with their job, 38.36% satisfied and 10.66% not satisfied, and small percentage of 0.95% were very unsatisfied. Though, there was 9.50% very satisfied with their job, the overall rates on this respondent indicated a satisfied condition on their current job.

Table 4-40
Employee Respond (Managerial level) on Job Satisfaction Level

No	QUESTIONS	VU	NS	QS	S	VS	TR
1	The understanding of your main job	0 0%	0 0%	0 0%	5 87.5%	1 12.5%	6
2	The understanding of doing job right	0 0%	0 0%	0 0%	6 93.75%	0 6.25%	6
3	Always busy all the time	0 0%	0 0%	2 31.25%	4 68.75%	0 0%	6
4	The opportunity to do something new from time to time	0 0%	1 12.5%	4 68.75%	1 18.75%	0 0%	6
5	The opportunity to acknowledge your colleagues what suppose to do	0 0%	0 0%	1 18.75%	5 75%	0 6.25%	6
6	Doing work not suitable with your own intention	1 12.5%	4 62.5%	2 25%	0 0%	0 0%	6
7	Feel satisfy after finalizing your work	0 0%	0 0%	1 12.5%	4 68.75%	1 18.75%	6
17	The way your superior coach the staff	0 0%	1 12.5%	2 31.25%	3 56.25%	0 0%	6
18	Your superior ability in making decision	0 0%	1 12.5%	2 25%	4 62.5%	0 0%	6
19	The wisdom, open mind and caring of your superior to the staff	0 0%	1 18.75%	2 25%	3 56.25%	0 0%	6
20	The application of your unit policy in the daily activities	0 0%	1 12.5%	2 37.5%	3 50%	0 0%	6
25	The comfort of your current work station	0 0%	0 6.25%	2 37.5%	3 56.25%	0 0%	6
26	Your work utilities already sufficient	0 0%	0 6.25%	2 25%	4 68.75%	0 0%	6
27	The harmony of current work relationship with your colleagues	0 0%	0 0%	2 31.25%	3 56.25%	1 12.5%	6
	Total	1	9	22	49	3	84
		0.89%	10.27%	26.34%	58.48%	4.02%	100 %

(Source: Analysis from Questionnaire Result, year 2008)

Based on table 4-40, the employees' response on manager level regarding job satisfaction level indicated that 26.34% of the respondents were quite satisfied with their job, 58.48% satisfied and 10.27% not satisfied and a small percentage of 0.89% were very unsatisfied. Though, there was 4.02% very satisfied with their job, the overall rates on these respondents indicated a satisfied condition on their current job.

1. Motivation and Empowerment

The motivation and empowerment of JICT employees were measured through a survey a permanent employees that were divided into 2 (two) groups; managerial level and staff, in order to get a better understanding on the response of each group.

The employees' response on the motivation and empowerment can be seen in table 4-41 and table 4-42.

Table 4-41
Employee Respond (Staff level) on Motivation and Empowerment

No	QUESTIONS	VU	NS	QS	S	VS	TR
8	The chance to work individually in finalizing your work	0 0%	0 0%	46 56.25%	31 37.50%	5 6.25%	82
9	The opportunity to be an important part in work group	0 0%	0 0%	36 43.75%	36 43.75%	10 12.5%	82
10	The opportunity to assist your colleagues in finalizing their work	0 0%	0 0%	31 37.50%	51 62.50%	0 0%	82
11	The chance to do work with your skill	0 0%	0 0%	26 31.25%	51 62.50%	5 6.25%	82
12	The opportunity to develop yourself in your current job	0 0%	10 12.50%	31 37.50%	41 50%	0 0%	82
13	The chance to enhance your knowledge through training	5 6.25%	10 12.5%	41 50%	26 31.25%	0 0%	82
14	The opportunity to get promotion	0 0%	0 0%	56 69%	26 31%	0 0%	82
15	The freedom to use your own judgment	0 0%	5 6.25%	51 62.5%	26 31.25%	0 0%	82
16	The opportunity to try your own method in finalizing your work	0 0%	0 0%	72 87.5%	10 12.5%	0 0%	82
21	Your current job can guarantee your future life	0 0%	0 0%	67 81%	15 19%	0 0%	82
22	Your remuneration compare to your workload	0 0%	0 0%	26 31%	56 69%	0 0%	82
23	Reward or penalty that you get if doing job right or bad.	0 0%	5 6.25%	62 75%	15 18.75%	0 0%	82
24	The job delegation from superior is already fit with the job description	0 0%	10 12.5%	36 43.75%	36 43.75%	0 0%	82
	TOTAL	5	41	579	420	21	1066
		0.48%	3.85%	54.33%	39.42%	1.92%	100%

(Source: Analysis from Questionnaire Result, year 2008)

Referring to the above table, the employee respond from Staff level indicated that the motivation and empowerment condition at JICT in the range of quite good, 54.3% and 39.42% respondent already satisfied with the condition. Only small number, 0.48% that was not satisfied with the condition.

Table 4-42

Employee Respond (Managerial level) on Motivation and Empowerment

No.	QUESTIONS	VU	NS	QS	S	VS	Ttl
8	The chance to work individually in finalizing your work	0 0%	0 6.25%	3 50%	2 25%	1 18.75%	6
9	The opportunity to be an important part in work group	0 0%	0 0%	1 12.5%	5 81.25%	0 6.25%	6
10	The opportunity to assist your colleagues in finalizing their work	0 0%	0 6.25%	1 12.5%	5 75%	0 6.25%	6
11	The chance to do work with your skill	0 0%	0 0%	0 0%	5 75%	2 25%	6
12	The opportunity to develop yourself in your current job	0 0%	1 12.5%	1 12.5%	4 68.75%	0 6.25%	6
13	The chance to enhance your knowledge through training	0 0%	0 6.25%	1 12.5%	4 68.75%	1 12.5%	6
14	The opportunity to get promotion	0 0%	1 12.5%	3 56.25%	2 31.25%	0 0%	6
15	The freedom to use your own judgment	0 0%	0 0%	2 31.25%	4 68.75%	0 0%	6
16	The opportunity to try your own method in finalizing your work	0 0%	0 0%	1 18.75%	4 68.75%	1 12.5%	6
21	Your current job can guarantee your future life	0 0%	0 6.25%	2 25%	4 68.75%	0 0%	6
22	Your remuneration compare to your workload	0 0%	0 0%	1 18.75%	5 75%	0 6.25%	6
23	Reward or penalty that you get if doing job right or bad.	0 0%	2 31.25%	3 56.25%	1 12.5%	0 0%	6
24	The job delegation from superior is already fit with the job description	0 0%	1 12.5%	1 12.5%	5 75%	0 0%	6
TOTAL		0	6	19	48	6	78
		0.00%	7.21%	24.52%	61.06%	7.21%	100%

(Source: Analysis from Questionnaire Result, year 2008)

Referring to the above table, the employees' response from the managerial level indicated that the motivation and empowerment condition at JICT was in the range of quite good, 24.52% and 61.06% respondents were satisfied with the condition. 7.21% of respondents were very satisfied with the condition.

3. Revenue per Employee

Revenue per employee can be used as an indicator to measure the performance of employee. In other words, it is an employee productivity per year as the result of the whole business activities. The aim to measure the employee productivity is to compare the Net Income with the total number of permanent employee. Below table is shown the level of productivity per employee for year 2005, 2006, 2007.

Table 4-43
Level of JICT Employee Productivity
Year 2005, 2006, 2007

Year	Level of Employee Productivity (US\$)
2005	24,942
2006	28,456
2007	39,792

(Source: Result of Author Research, year 2008)

From table 4-43, the employees' productivity of PT. JICT increased on a yearly basis. For year 2006, the employee productivity level increased 14% from year 2005, while on the year 2007, the employee productivity was further increased 40% from the year 2006. The incremental increase was due to the decrease number of employee and the rise in net income on that particular year.

This level of productivity is supposed to be compared with others' company productivities in the same field of business. Due to limitation of data, the author cannot find the data comparison for this productivity level.

4. Information System Reliability

The information system reliability is measured using 3 (three) indicators, the level of information availability, the level of accuracy for the

available information, and time required to receive the information. Different units and structural levels require different information and the timing needed to receive the information. The survey is distributed to managerial level population and staff level population to provide the author a necessary update on their feedback regarding the information system reliability.

The result of survey describes in table 4-44 up to table 4-49, as the following:

a. Level of the Availability Information System

Table 4-44
Employee Respond (Staff level) on the Level of
the Information Availability System

No.	Description	Total	Percentage (%)
1.	Very Bad	0	0%
2.	Bad	5	6.25%
3.	Quite Good	56	68.75%
4.	Good	21	25.00%
5.	Very Good	0	0%
	Total	82	100%

(Source: Analysis from Questionnaire Result, year 2008)

Based on table 4-44, the employees' respond at a staff level regarding the availability information at JICT, indicated a relatively good perception. About 68.75% of the respondents agreed that the information availability was quite good, 25% agreed that it was good, and 6.25% thought it was bad.

Table 4-45
Employee Respond (Managerial level) on the Level of the Information Availability System

No.	Description	Total	Percentage (%)
1.	Very Bad	0	0%
2.	Bad	0	0%
3.	Quite Good	3	52%
4.	Good	3	48%
5.	Very Good	0	0
	Total	6	100%

(Source: Analysis from Questionnaire Result, year 2008)

Based on table 4-45, the employees' response at the managerial level with regard to the information availability at JICT, was indicated a relatively good perception. About 52% of the respondents agreed that the information availability was quite good, 48% agreed that it was good.

b. Level of Accuracy for the Available Information

Table 4-46
Employee Respond (Staff) on the Level of Accuracy for the Available Information

No.	Description	Total	Percentage (%)
1.	Very Inaccurate	0	0%
2.	Inaccurate	5	6.25%
3.	Quite Accurate	77	93.75%
4.	Accurate	0	0%
5.	Very Accurate	0	0%
	Total	82	100%

(Source: Analysis from Questionnaire Result, year 2008)

Based on table 4-41, the employees' response at staff level regarding the level of accuracy for the information available at JICT, indicated a relatively good perception. About 93.75% of the respondents agreed that the level of accuracy information was quite accurate, only 6.25% thought that it was an inaccurate information.

Table 4-47
Employee Respond (Managerial level) on
the Level of Accuracy for the Available Information

No.	Description	Total	Percentage (%)
1.	Very Inaccurate	0	0%
2.	Inaccurate	1	13%
3.	Quite Accurate	5	88%
4.	Accurate	0	0%
5.	Very Accurate	0	0%
	Total	6	100%

(Source: Analysis from Questionnaire Result, year 2008)

Based on table 4-47, the employees' response at managerial level regarding the level of accuracy for the information available at JICT, indicated a relatively good perception. About 88% of the respondents agreed that the level of accuracy information was quite accurate, only 13% thought that it was inaccurate information. Based on previous tables, both respondents from managerial level and staff level agreed that the level of information as quite accurate. But, there was still some respondents that were not yet satisfactory with the information. In order to improve the information quality, management should consider the method to provide information to employees, whether in a circular letter or memorandum, to enable the employees aware of company's update and progress relating to each unit role and staff level.

c. Time Required to Receive Needed Information

Table 4-48
Employee Respond (Staff level) on the Level Time Required
to Receive Needed Information

No.	Description	Total	Percentage (%)
1.	Very Long	0	0%
2.	Long	10	12.50%
3.	Quite Fast	62	75.00%
4.	Fast	10	12.50%
5.	Very Fast	0	0%
	Total	82	100%

(Source: Analysis from Questionnaire Result, year 2008)

Based on table 4-48, the employees' response at a staff level regarding the level of time required to receive necessary information at JICT, indicated a relatively good perception. About 75% of the respondents agreed that information was quite fast, and 12.50% thought that it was a fast information.

Table 4-49
Employee Respond (Manager) on the Level Time Required
to Receive Needed Information

No.	Description	Total	Percentage (%)
1.	Very Long	0	0%
2.	Long	0	0%
3.	Quite Fast	4	69%
4.	Fast	2	31%
5.	Very Fast	0	0%
	Total	6	100%

(Source: Analysis from Questionnaire Result, year 2008)

Based on table 4-49, the employees' response at a managerial level regarding the level of time required to receive the information at JICT, indicated a relatively good perception. About 69% respondent agreed that information was quite fast, and 31% thought that it was a fast information.

5. The Result of Analysis Performance Measurement for all Perspective

After analyzed JICT performance measurement using 4 (four) dimension of Balanced Scorecard, the author compiles all the perspectives and calculates the total score for measuring JICT performance.

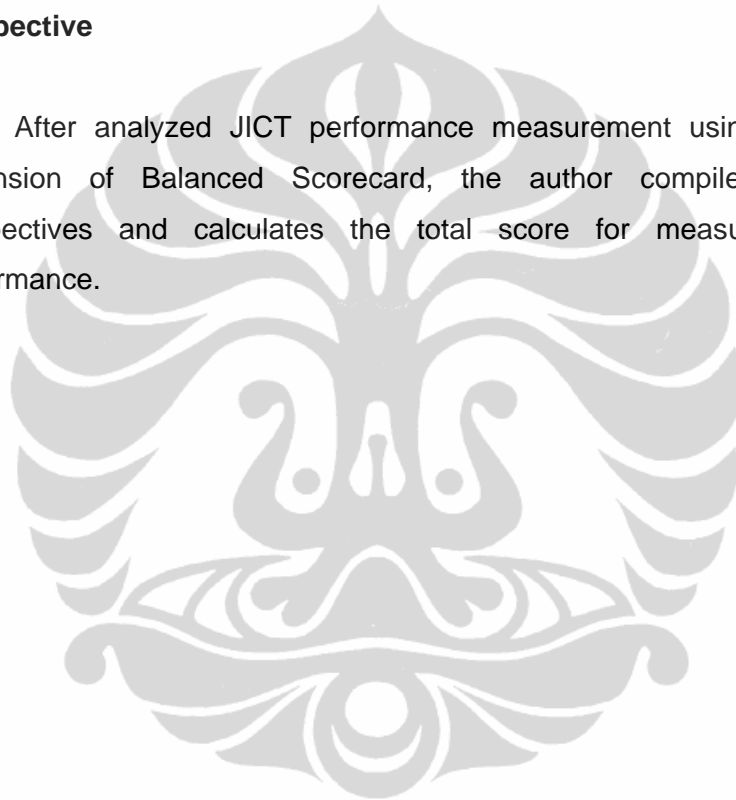


Table 4-50

The result of Analysis Performance Measurement for all Perspective

No.	Perspective	Result of Measurement	Score (1-5)
I.	Financial Perspective		
	1. ROE	Very Good	5
	2. ROI	Very Good	5
	3. Current Ratio	Very Good	5
	4. Cash Ratio	Good	4
	5. Collection Period	Very Good	5
	6. Inventory Turn Over	N/A	N/A
	7. Total Asset Turn Over	Good	4
	8. Total Equity versus total Assets	Good	<u>4+</u>
	Total Score for Perspective I	Very Good	32
II.	Customer Perspective		
	1. Level of Service Quality	Good	4
	2. Level of Customer Satisfaction	Good	<u>4+</u>
	Total Score for Perspective II	Good	8
III.	Internal Business Process Perspective		
	A. Innovation	Quite Good	3
	B. Operation - Quality Dimension	Very Good	<u>5+</u>
	Total Score for Perspective III	Good	8
IV.	Learning & Growth Perspective		
	A. Employee Performance		
	1. Employee satisfaction level	Good	4
	2. Motivation & Empowerment	Good	4
	3. Employee productivity	Good	4
	B. Level of Information		
	1. level of available Information	Quite Good	3
	2. Level of accuracy information	Quite Accurate	3
	3. Level of speed of information being received	Quite Fast	<u>3+</u>
	Total Score for Perspective IV	Good	21
	Grand Total for Score of Perspectives I, II, III, and IV		<u>68</u>

(Source: Result of Research, author analysis:2008)

For the financial perspective in the Table, it consisted of 7 (seven) indicators and each indicators has score. The highest score is 5, and the lowest is 1. Hence, the total minimum score for this aspect is 7 and the highest is 35. The range of score is as follows:

Total Score 7- 12.6 = Very Poor

Total Score 12.6 – 18.2 = Poor

Total Score 18.2 – 23.8 = Fair

Total Score 23.8 - 29.4 = Good

Total Score 29.4 – 35 = Very Good

So, the total score of PT. JICT Financial perspective is 32 with criteria Very Good.

For the customer perspective in the Table, it consisted of 2 (two) components. Every component has score. The highest score is 5 and the lowest is 1. Hence, the total minimum score for this aspect is 2 and the highest is 10. The range of score is as follows:

Total Score 2- 3.6 = Very Poor

Total Score 3.7 – 5.3 = Poor

Total Score 5.4 – 7.0 = Fair

Total Score 7.1 – 8.7 = Good

Total Score 8.8 – 10 = Very Good

So, the total score of PT. JICT Customer perspective is 8 with criteria “Good”.

For the perspective of Internal Business Process in the table, it consisted of 2 (two) components and every component has score. The highest score is 5 and the lowest is 1. Hence, the total minimum score for this aspect is 2 and the highest is 10. The range of score is as follows:

Total Score 2 – 3.6 = Very Poor

Total Score 3.6 – 5.2 = Poor

Total Score 5.2 – 6.8 = Fair

Total Score 6.8 – 8.4 = Good

Total Score 8.4 - 10 = Very Good

So, the total score of PT. JICT Internal Business Process is 8 with criteria Good.

For the perspective of Learning and Growth in the table, there are 6 (six) components and every component has score. The highest score is 5 and the lowest is 1. Hence, the total minimum score for this aspect is 6 and the highest is 30. The range of score is as follows:

Total Score 6 – 10.8 = Very Poor

Total Score 10.8 – 15.6 = Poor

Total Score 15.6 – 20.4 = Fair

Total Score 20.4 – 25.2 = Good

Total Score 25.2 - 30 = Very Good

So, the total score of PT. JICT Learning and growth is 21 with criteria “Good”.

The final step of measuring JICT performance using Balanced Scorecard approach is to sum the score of all perspectives, which finally consisted of 17 (seventeen) components, and every component has score. The highest score is 5 and the lowest is 1. Hence, the total minimum score for this aspect is 17 and the highest is 85. The range of score is as follows:

Total Score 17.00 – 30.60 = Very Poor

Total Score 30.60 – 44.20 = Poor

Total Score 44.20 – 57.80 = Fair

Total Score 57.80 – 71.40 = Good

Total Score 71.40 – 85.00 = Very Good

So, the total score of PT. JICT measurement using Balanced Scorecard approach is 68, with criteria Good with the range from 17 to 85. This reflected to the overall performance from 4 (four) dimensions of Balance Scorecard at JICT already indicated a “Good” criteria. In fact, there are some indicators that shows the requirement for JICT to improve in certain areas, such as in the Internal Business Process and also from the Customer perspective.