

## CHAPTER 4 DATA AND ANALYSIS

PT. Coca-Cola Distribution Indonesia use efficient supply chain design because product life cycle is long, the demands are relatively highly predictable, and new products introduction are infrequent, production is make-to-stock production and finished good in the inventory. This efficient supply chain needs to evaluate using SCOR 9.0

### 4.1. Supply Chain Configuration Analysis

Supply chain configuration of this business includes of process from all of suppliers, internal supply chain in the company itself and the customer. Suppliers network consist of all suppliers that provide material and services to PT. CCDI directly and indirectly. These products and services is used by internal supply chain in this company to create product and then distribute it to the customer. So even though this study is focus on outbound supply chain in the PT. CCDI, inbound supply chain will affect whole supply chain performance. Figure 4.1 shows that the change of distribution to Matahari is a part of whole supply chain process.

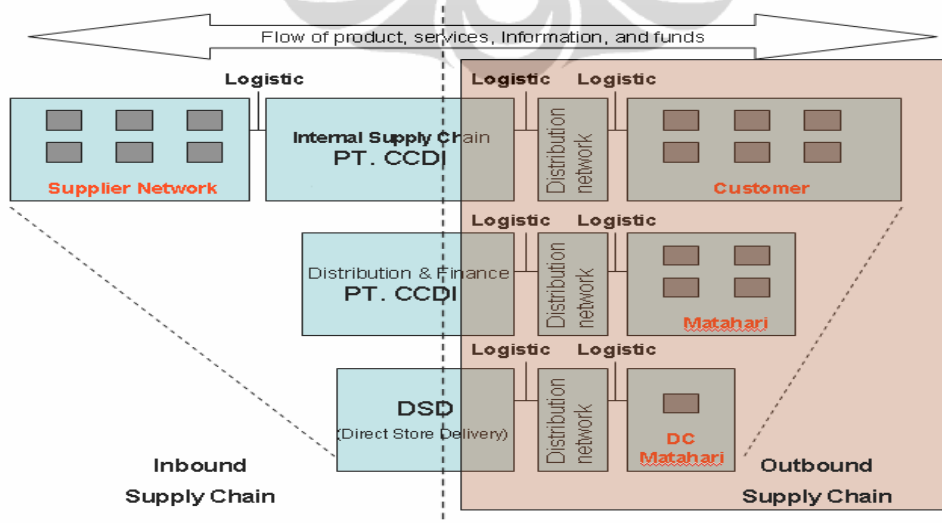


Figure 4-1 Matahari DC as Part of Supply Chain of PT CCDI

Beside inbound and outbound performance, internal supply chain in PT. CCDI take a major part to get a competitive advantage from right supply chain configuration. Some internal supply chain elements that can be examined in this company are production, sourcing, ERP, sales and marketing, and finance. Change of distribution from Direct Selling to Matahari DC has major impact in distribution of product, sales and marketing, and also finance. Sales revenue is expected to grow and cost of distribution will be lower than before implementation. This will improve sales performance, and at the same time will reduce cost of distribution.

Improving sales performance and doing a distribution cost reduction probably can trade off with customer-facing performance such as service level and perfect order fulfillment. This means if PT. CCDI plan to improve their sales performance and distribution cost to Matahari, service level to PT. Matahari will be decreased. In the other side, Matahari will ask distribution fee from PT. CCDI and secure their supply of product in the agreement. The agreement will cover the service level that PT. CCDI should give and also penalty. Therefore PT. CCDI should evaluate and compare this cost reduction and distribution fee that is given.

Because there is an agreement and penalty of service level, PT. CCDI needs to be aware about capacity planning. Material from supplier, production, logistic, warehousing and transportation capacity are need to be calculated before agreement. If PT. CCDI often can not fulfill the demand from PT. Matahari, cost penalty will decrease the financial performance.

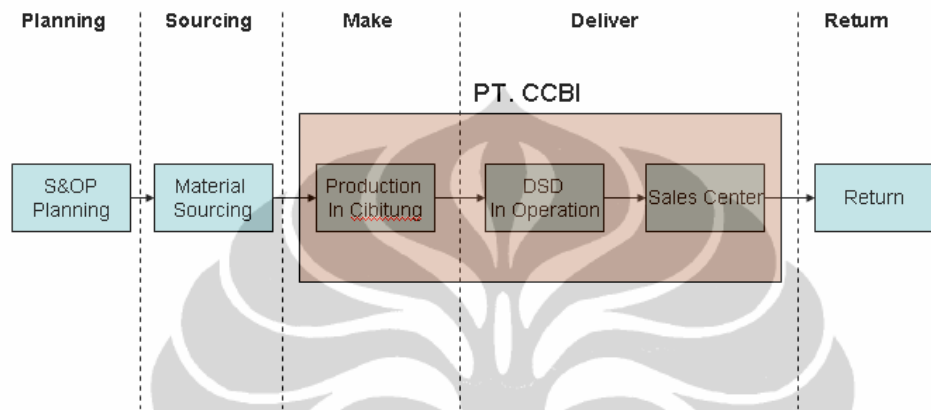
## **4.2. SCOR Level 9.0 Process Analysis**

### **4.2.1. Before Implementation – Direct Distribution Configuration**

We measure before implementation period as year 2007 and after implementation period as year 2008. Distribution of product before implementation of Matahari DC can be reviewed using SCOR level 9 mapping as follow:

#### 4.2.1.1. Level 1 Mapping

Figure 4.2 below show level 1 mapping that show depict whole supply chain mapping of PT. CCBI from supplier to customer so we can analyze who is involved in each supply chain process.



**Figure 4-2 Level 1 Mapping of Distribution to Matahari Store – Before Implementation**

##### 1. Planning

- S&OP Planning meeting is conducted for full year, monthly and weekly planning. Sales and Marketing team will conduct meeting with production team to discuss demand requirement for the following period.
- Sales Forecast of Matahari demand is spread in every Operation and depends on number of Matahari Store in that Operation.

##### 2. Sourcing

- Procurement in department Technical and Operation (Production) will find the resource from the selected and registered vendor.

##### 3. Make

- The production is conducted in Cibitung Plant for One-Way-Product and conducted in every Plant in each Operation for Returnable Glass Bottle Product. But One-Way-Product produced Cibitung Plant is used to fulfill demand from all Operation.

4. Deliver

- Product produced in Cibitung Plant and also Plant in Operation will be sent to all Operation DSD which is located near to Operation Plant. Then DSD Operation will send the product to sales center.
- Sales center will deliver the product to Matahari store

5. Return

- Product return will be sent to sales center from which the product delivered. But usually product return is an exceptional process for sales center.

4.2.1.2. Level 2 Mapping

In level 2 mapping, the process of supply chain is described more detail by category of each process. This process category shown in figure 4.2 will show the configuration and supply chain strategy used by PT. CCBI. It uses S1 (Source to Stock), M1 (Make to Stock) and D1 (Deliver Stocked Product) to cater demand from Matahari.

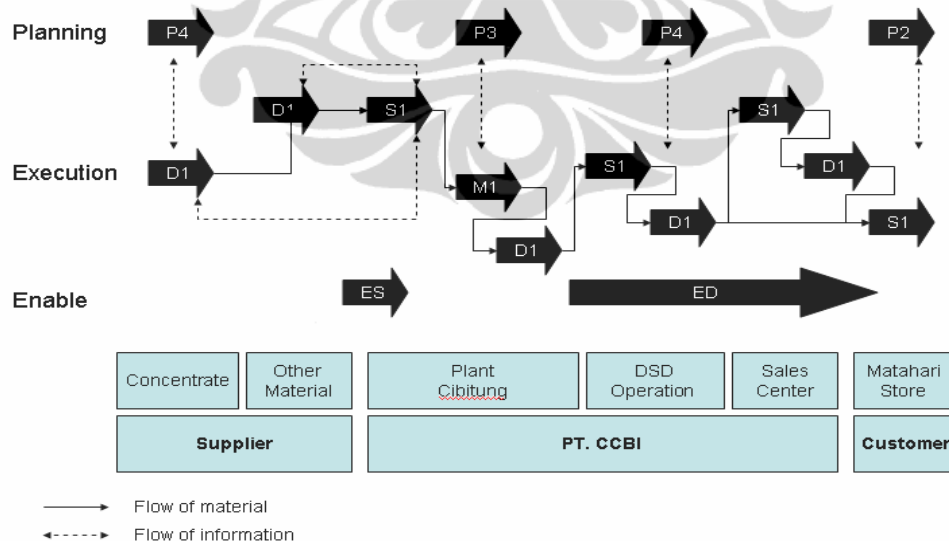


Figure 4-3 Level 2 Mapping of Distribution to Matahari Store – Before Implementation

We divide the supplier to be concentrate supplier and other material supplier. Concentrate supplier is PT. Coca-Cola Indonesia (CCI) who have a

trademark of Coca-Cola products. They know the requirement of concentrate based on sales budget shared by PT. CCDI so there is delivery planning to ensure the production material requirement.

Product from Cibitung Plant will be distributed to DSD in each operation based on the request from each Operation and then delivered to sales center. This cost will be defined as Bulk Delivery Cost. Product will be delivered by deliveryman of the nearest sales center from Matahari Store. This cost will be defined as Delivery Cost. Table 4.1 show the bulk delivery cost and delivery cost of each Operation and also compared to delivery from plant to Matahari DC (Balaraja Cibitung DC and Surabaya DC).

**Table 4-1 Distribution Cost by Operation**

OPERATION	VOL YTD DEC07	BULK DELIVERY COST (IDR)	DELIVERY COST (IDR)	TOTAL COST/CS	PLANT TO DC	MAX FEE
<b>DC BALARAJA</b>						
OPR-CENTRAL SUMATERA	13,647	(128,429,986)	(40,950,666)	(12,412)	5.7 %	1.6 %
OPR-NORTHERN SUMATERA	40,989	(206,850,518)	(157,681,979)	(8,893)		
OPR-SOUTHERN SUMATERA	14,385	(77,203,648)	(22,333,151)	(6,919)		
OPR-WEST JAVA	15,788	(30,548,116)	(30,794,931)	(3,686)		
OPRGRP-JAKARTA REGION	215,709	(190,890,969)	(300,608,688)	(2,278)		
	<b>300,518</b>	<b>(633,723,237)</b>	<b>(552,369,406)</b>	<b>(3,947)</b>		4.1 %

Source: Internal PT. CCDI

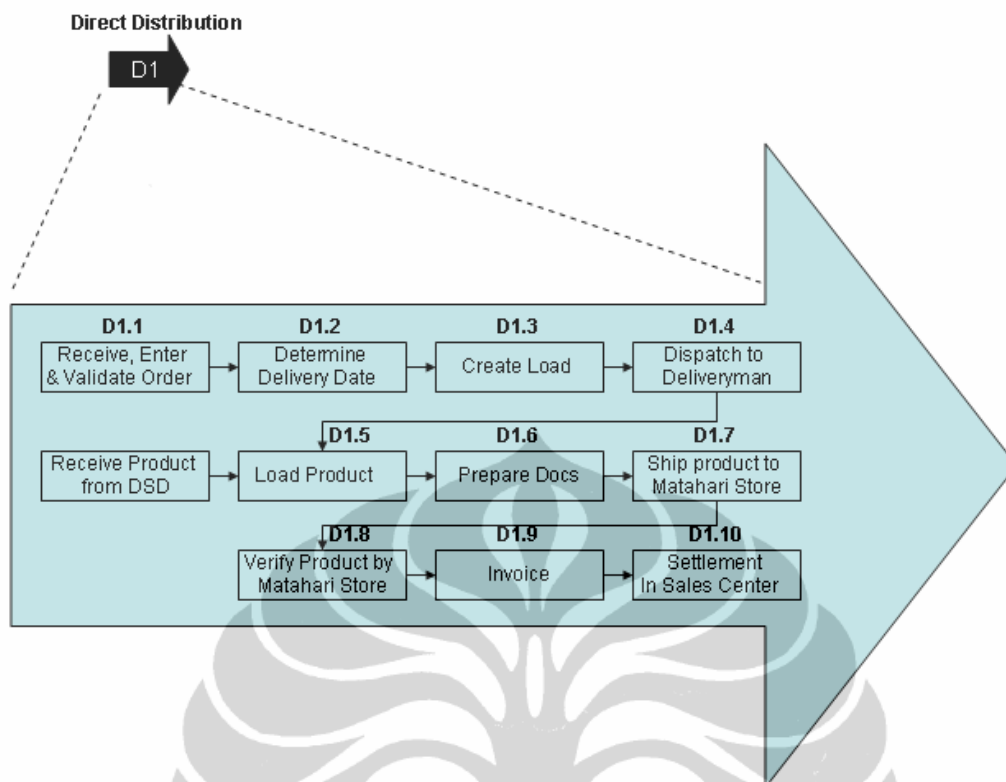
NSR = Rp. 68,500/cs in Year 2007.

Delivery Cost of DSD Cibitung – DC Balaraja Rp 1,283/cs

Using Net Sales Revenue (NSR) = 68,500/cs, total distribution cost of Operations covered by Balaraja is Rp. 3947/cs or 5.7% of NSR. Delivery cost to DC Balaraja is Rp. 1283/cs or 1.6% of NSR so maximal fee if we changes distribution configuration to DC is 4.1%.

#### 4.2.1.3. Level 3 Mapping

Level 3 mapping show the detail of distribution element of stocked product. Figure 4.4 show product distribution to Matahari Store before implementation of Matahari DC. Product is delivered by deliveryman from the nearest sales center from Matahari Store.



**Figure 4-4 Level 3 Mapping of Distribution to Matahari Store – Before Implementation**

Order is received from Matahari Store via fax then key-in to the system after doing a price checking, credit limit and other administrative requirement. Order from Matahari store will be aggregated with order from another customer and then dispatched and delivered by deliveryman (PT. CCDI's Employee). After product verified by Matahari Store then deliveryman back to sales center and invoice will be settled.

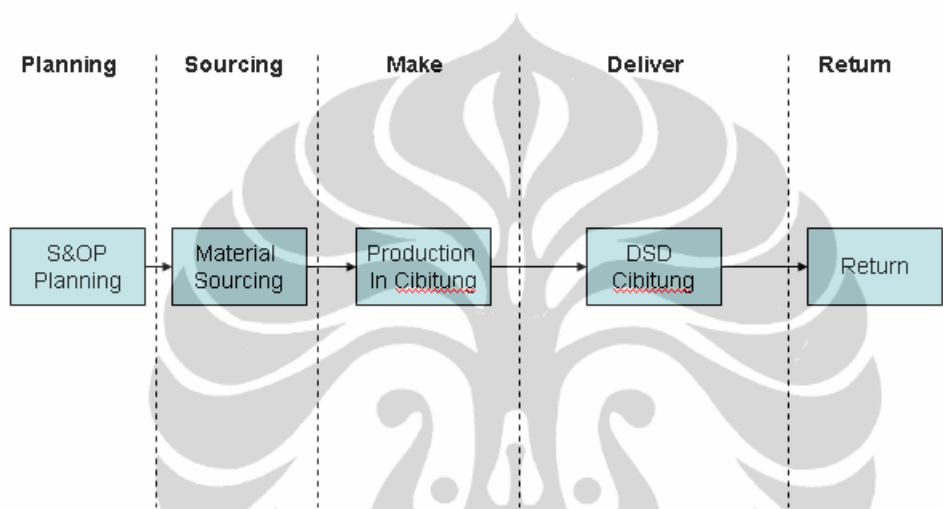
There are some potential improvement in this area, they are :

1. Product received from DSD is not cater all demand from Matahari. 24 hour delivery sometime can not handle all product need from store, especially for new product.
2. If there are not-delivered product, Key Account Officer in Head Office PT. CCDI will not know and will not create an correction action plan.

## 4.2.2. After Implementation – Distribution Center Configuration

### 4.2.2.1. Level 1 Mapping

In level 1 Mapping, distribution process of Operation DSD and sales center are removed. So all of Matahari Stores are supplied by Matahari DC and Matahari is supplied from DSD Cibitung. Figure 4.5 below shows the level 1 mapping after introducing Matahari DC.



**Figure 4-5 Level 1 Mapping of Distribution to Matahari Store – After Implementation**

DSD Cibitung will serve Matahari DC Balaraja that serves all Matahari stores in Jakarta, West Java, and all Sumatera. This will contribute 63% of sales volume, based on year to date sales 2007. SCOR Model Supply chain review is explained below:

#### 1. Planning

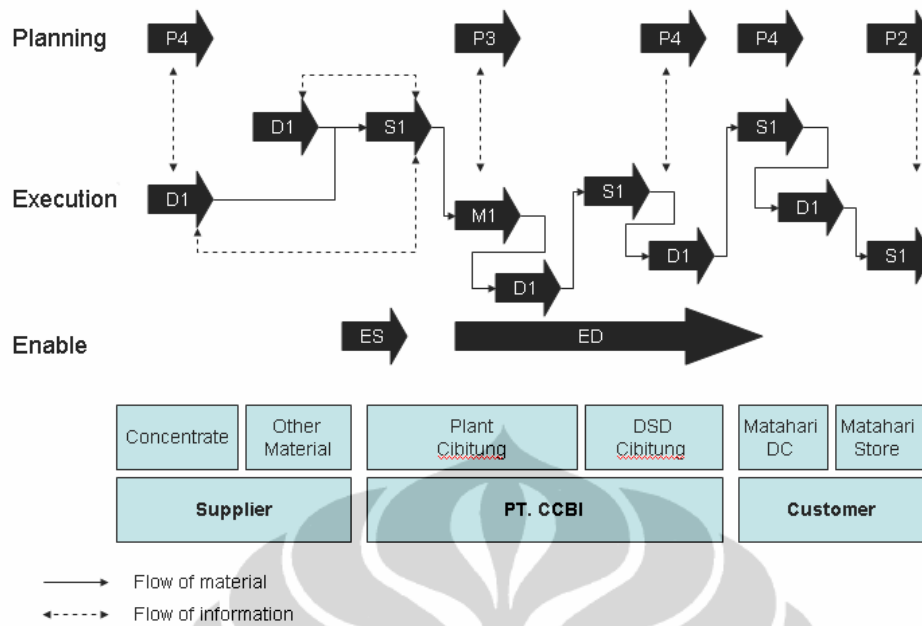
- Sales Forecast of Matahari is used to be spread in every Operation, But currently it is managed nationally and better monitoring from Key Account National. Referring to sales volume year to date 2007 in Table 4.2, additional 84,708 cs will be also delivered from Plant Cibitung. It is equivalent to additional 39% of last year delivery from Plant Cibitung to Matahari in Jakarta, which is currently delivered to Cibitung DC instead of to Matahari Store.

2. Sourcing
  - Aggregate forecast from Matahari DC need more sourcing capacity of materials and other supplies. Additional supplier network is needed to fulfill material requirement.
3. Make
  - The production is in Cibitung Plant. Aggregate demand from DC Matahari in Balaraja is supplied only from this Plant. Production capacity also needs to be improved to fulfill this aggregate demand.
4. Deliver
  - This new delivery configuration has benefit not only because of shorter distance of delivery, but also impact of economic of scale, economic order quantity, better communication and monitoring through information system. Some benefit in this new delivery configuration will be explains later in the level 2 process category mapping.
5. Return
  - Matahari DC has a tighter and better product verification before they receive the product. So this new configuration can minimize return product back to PT. CCDI.
  - The process become more rigid compared to Non-DC Configuration. In Non-DC Configuration customer can return the product back to PT. CCDI without getting known from responsible people in PT. CCDI. It because they have good relationship with Sales Workforce. But after Matahari DC, all process is relatively transparent to all stakeholders.

#### **4.2.2.2. Level 2 Mapping**

Figure 4.6 shows DSD Operation and Distribution is removed from the supply chain (delivery to Matahari Store only). Through reducing this element, there should be a reducing in delivery cost because the product will be bulky delivered from Plant Cibitung to Matahari DC instead of delivered to all Operation, all sales center and all Matahari store.





**Figure 4-6 Level 2 Mapping of Distribution to Matahari Store – After Implementation**

Process category of each process doesn't change and it is explained as follow:

1. Planning

- In plant Cibitung, there is a process category P3, Plan Make that aggregates all supply and demand and develops course of action which best meets sourcing, production and delivery requirement.

2. Execution

- There are some differences in execution of delivery process of this new configuration, they are:
  - a. Order is splitted based on truck capacity. One invoice for one truck delivery.
  - b. They use palletized delivery so the product can be loaded using forklift. This is faster than loading without pallet.
  - c. Night delivery to Balaraja DC to reduce time windows error arrives in destination.

### 3. Enable

- There are some enabler process that is implemented in this supply chain configuration: Vendor Manage Inventory between PT. CCDI and Matahari DC, and new communication and execution flow in PT. CCDI.

#### 4.2.2.3. Level 3 Mapping

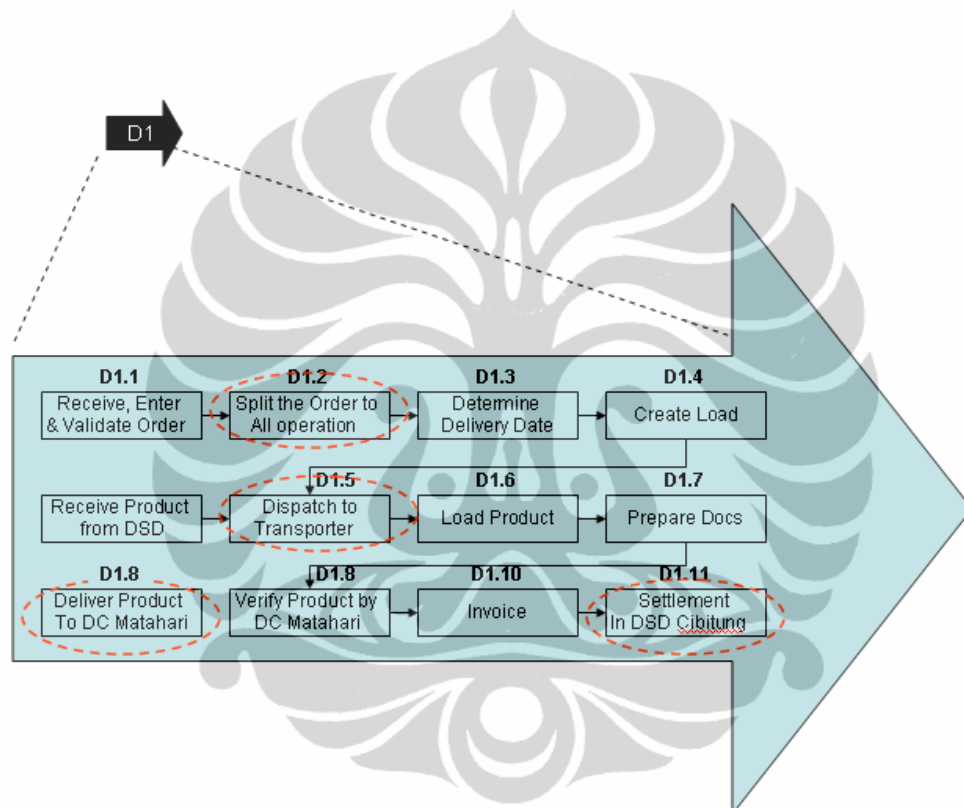


Figure 4-7 Level 3 Mapping of Distribution to Matahari Store – After Implementation

In level 3, there are some differences between before and after process, they are:

1. Use a centralized order management. Before this implementation, order was inputted from Operation and delivered from Operation. After implementation, order is inputted centralized and tightly monitored by National Key Account Manager because this original order will be splitted by Operation.

2. Product is delivered by third party transporter, instead of internal deliveryman.

### 4.3. SCOR Level 9.0 Metrics Analysis

#### 4.3.1. Financial Performance Before Implementation

Figure 4-8 shows that in 2007, Net Sales Revenue (NSR) is 92.75% of Gross Sales Revenue (GSR), 27 billion rupiahs. Another cost is discount and allowance is 7.25% of GSR. Cost of Good Sold (COGS) and Delivery Cost contribute 57.43% and 2.01% respectively. It result Net Contribution Margin (NCM) 33.31% of total GSR. Delivery cost still exist because PT. CCDI still deliver the product directly to customer. After implementing Matahari DC this cost will be reduced and trade off to DC distribution fee (recorded in Discount and Allowance Account).

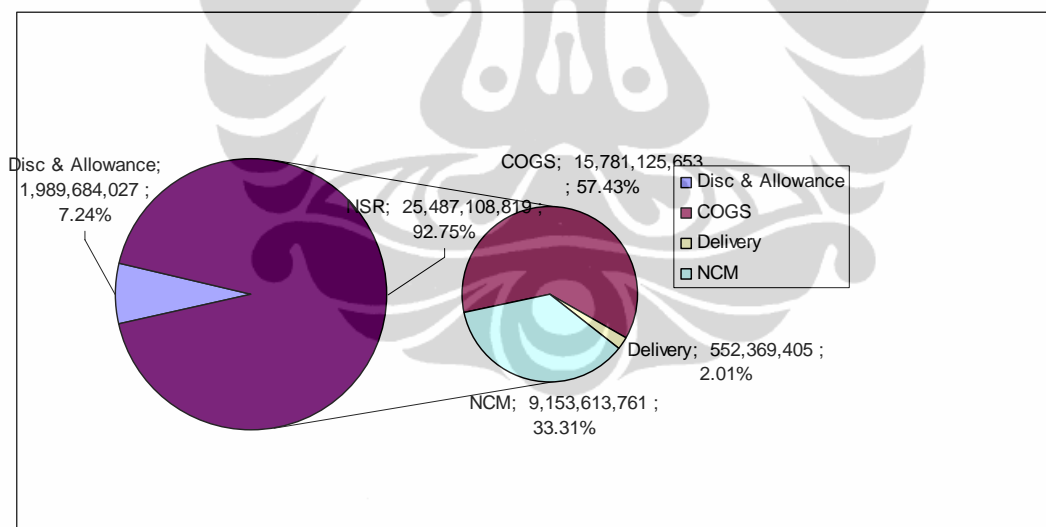


Figure 4-8 Contribution of Financial Element Against GSR in 2007

Table 4-2 shows detail NSR by Operation in 2007. There is 1.989 billion discount and allowance given in 2007. 77% of total discount is come from Jakarta. It because of number of customer in Jakarta is much higher than other location.

**Table 4-2 Table Net Sales Revenue from Matahari in Year 2007**

	Sales (cs)	GSR (IDR)	Disc & Allowance	NSR (IDR)	NSR/cs (IDR)
OPR-JAKARTA REG.	215,709	20,866,600,639	(1,540,923,045)	19,325,677,594	89,591
OPR-WEST JAVA	15,787	1,252,664,603	(54,451,170)	1,198,213,433	75,899
OPR-NORTHERN SUMATERA	40,889	3,071,879,335	(264,109,937)	2,807,769,398	68,668
OPR-CENTRAL SUMATERA	13,647	1,195,224,123	(63,014,451)	1,132,209,672	82,964
OPR-SOUTHERN SUMATERA	14,385	1,092,930,400	(67,185,424)	1,025,744,976	71,307
<b>TOTAL</b>	<b>300,417</b>	<b>27,479,299,100</b>	<b>(1,989,684,027)</b>	<b>25,489,615,073</b>	<b>84,847</b>

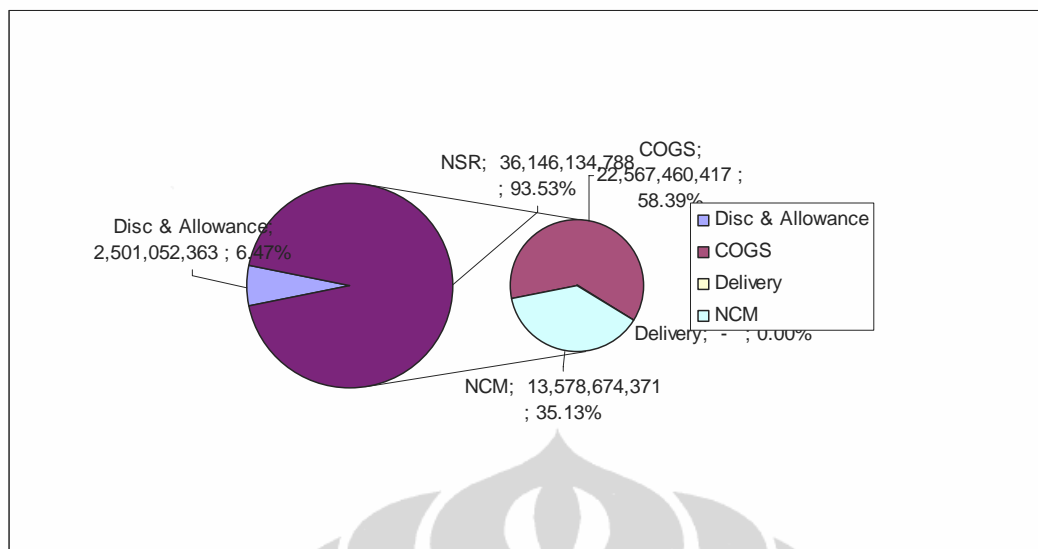
Table 4-3 shows detail by Operation NCM of each Operation and it has been subtracted by COSGS and Delivery Cost. In 2007, total NCM is 9.15 billion or 33.4% to NSR. From 9.15 billion, Jakarta Region contribute more than 7.4 billion or approximately 80%. This contribution is come from much higher sales volume and lower distribution cost in Jakarta Region because the products are produced in Cibitung, Jakarta.

**Table 4-3 Table Net Contribution Margin Matahari by Operation in Year 2007**

	NSR (IDR)	COGS	Delivery	NCM	NCM/ cs (IDR)
OPR-JAKARTA REG.	19,322,472,192	(11,586,685,851)	(300,608,688)	7,435,177,652	34,469
OPR-WEST JAVA	1,198,800,025	(797,007,300)	(30,794,931)	370,997,794	23,500
OPR-NORTHERN SUMATERA	2,807,697,712	(1,895,941,986)	(157,681,979)	754,073,747	18,442
OPR-CENTRAL SUMATERA	1,131,877,244	(822,300,546)	(40,950,656)	268,626,043	19,684
OPR-SOUTHERN SUMATERA	1,026,261,645	(679,189,970)	(22,333,151)	324,738,524	22,575
<b>TOTAL</b>	<b>25,487,108,819</b>	<b>(15,781,125,653)</b>	<b>(552,369,405)</b>	<b>9,153,613,761</b>	<b>30,470</b>

#### 4.3.2. Financial Performance After Implementation

Figure 4-9 shows that in 2008, NSR is 93.53% of GSR, 36.1 billion rupiahs. Another cost is discount and allowance is 6.47% of GSR. COGS contribute 58.39% and Delivery 0% because no delivery to Matahari Store. It results NCM 35.13% of total GSR.



**Figure 4-9 Contribution of Financial Element Againsts GSR in 2008**

Table 4-4 below shows NSR each Operation in year 2008. Sales 393,058 cs gives NSR 36.1 billion or 91,961 Rupiahs/case sold. The biggest contribution is from Jakarta, 75% of Total NSR because 64% of Matahari Store is in Jakarta. NSR is 93.5 % of GSR and 6.5% is discount and allowance.

**Table 4-4 Table Net Sales Revenue from Matahari in Year 2008**

	Sales (cs)	GSR (IDR)	Disc & Allowance	NSR (IDR)	NSR/cs (IDR)
OPR-JAKARTA REG.	291,278	28,913,609,649	(1,890,242,107)	27,023,367,542	92,775
OPR-WEST JAVA	15,997	1,531,152,069	(93,073,102)	1,438,078,967	89,897
OPR-NORTHERN SUMATERA	50,343	4,813,261,763	(303,999,707)	4,509,262,056	89,571
OPR-CENTRAL SUMATERA	18,353	1,755,366,003	(110,891,685)	1,644,474,318	89,602
OPR-SOUTHERN SUMATERA	17,087	1,633,797,667	(102,845,762)	1,530,951,905	89,597
<b>TOTAL</b>	<b>393,058</b>	<b>38,647,187,151</b>	<b>(2,501,052,363)</b>	<b>36,146,134,788</b>	<b>91,961</b>

Table 4-5 shows that increasing 42% of NSR is driven from increasing of sales volume 31% and increasing of NSR/cs 8.4%. These bring additional 1% of NSR to GSR. Additional 8% of NSR/cs can be interpreted as better discount and allowance management or price increase from the year before. If we take a look to detail gross sales revenue, it will be clear that there is price increase about 7.3% from Rp. 85,704 to Rp. 91,961. Variance of 1.1% between increasing NSR/case and price tell that there is a decreasing in discount and allowance per case sold.

Table 4-5 Table Net Contribution Margin Matahari in Year 2008

	NSR (IDR)	COGS	Delivery	NCM	NCM/ cs (IDR)
OPR-JAKARTA REG.	27,023,367,542	(16,605,504,771)	-	10,417,862,771	35,766
OPR-WEST JAVA	1,438,078,967	(936,870,998)	-	501,207,969	31,331
OPR-NORTHERN SUMATER	4,509,262,056	(3,021,272,448)	-	1,487,989,608	29,557
OPR-CENTRAL SUMATERA	1,644,474,318	(1,037,704,100)	-	606,770,218	33,061
OPR-SOUTHERN SUMATER	1,530,951,905	(966,108,100)	-	564,843,805	33,057
<b>TOTAL</b>	<b>36,146,134,788</b>	<b>(22,567,460,417)</b>	<b>-</b>	<b>13,578,674,371</b>	<b>34,546</b>

Table 4-6 Net Sales Revenue Comparison 2008 vs 2007

	Sales (cs)	NSR (IDR)	NSR/cs (IDR)	Price/cs	% NSR to GSR
<b>Year 2007</b>	300,417	25,487,108,819	84,839	85,704	92.8%
<b>Year 2008</b>	393,058	36,146,134,788	91,961	91,961	93.5%
<b>% Growth</b>	31%	42%	8.4%	7.3%	1%

The fact above and also increasing 1% NSR to GSR show that there is a better discount management and allowance. It because delivery to Matahari DC is managed nationally, so price and discount are also monitored nationally instead of managed by Operations.

#### 4.3.3. Cost of Good Sold

The graph below shows comparison of NSR/case in year 2007 and year 2008 compared to COGS/case in 2007 and 2008. In 2007, the gap between NSR and COGS is Rp. 32,308 and in 2008 the gap is Rp. 34,546 or increase 2,238 per case sold.

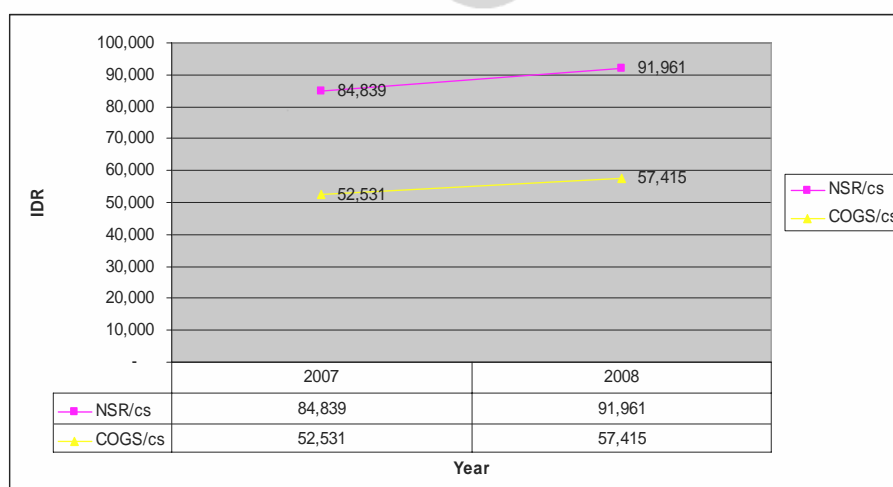


Figure 4-10 Comparison NSR/cs and COGS/cs 2007 and 2008

Usually the growth of NSR is lower than growth of COGS. In this analysis growth of NSR is higher than growth of COGS and it affect to increase in gross profit. Increase in NSR is because of decrease in discount and allowance per case sold. Changing the distribution from direct selling to Matahari DC shifts direct selling distribution cost into discount and allowance. Fortunately, with this additional in discount and allowance, total discount and allowance per case is lower that last year. This is also because better discount management as explained above.

#### **4.3.4. Supply Chain Management Cost**

We review supply chain cost in term of Outbound Transportation Cost. Outbound Transportation Cost in 2007 will be trade off distribution fee that will be given in Allowance and Discount to Matahari DC. Increasing Allowance and Discount in 2008 is assumed as discount given for distribution fee of new supply chain configuration. So we can compare between estimated delivery costs and distribution fee of 2008 sales.

Table 4-7 shows Net Contribution Margin of each Operation. Total in 2008 Net Contribution Margin is 13.3 billion Rupiahs, and Jakarta contributes 77% of total NCM. Comparing to year 2007, NCM growth is 44% from 9.27 billion to 13.3 billion. This because of reducing in delivery cost and also increasing in NSR as explain above.

Increasing 10% of NCM/case is obtained from 8% NSR increasing, and others 2% are delivery cost reduction. Delivery cost, which consists of delivery product from warehouse to customer, is removed because Matahari Stores has been served by Matahari DC. This changes increase 0.5% of NCM contribution to NSR (from 36.4 % to 36.9%) or 1% growth from last year.

**Table 4-7 Table Net Contribution Margin from Matahari in Year 2008**

	Sales (cs)	NCM	NCM/ cs (IDR)	% NCM to NSR
OPR-JAKARTA REG.	291,278	10,240,452,876	35,157	37.9%
OPR-WEST JAVA	15,997	436,960,732	27,315	30.4%
OPR-NORTHERN SUMATERA	50,343	1,487,989,608	29,557	33.0%
OPR-CENTRAL SUMATERA	18,353	606,770,218	33,061	36.9%
OPR-SOUTHERN SUMATERA	17,087	564,843,805	33,057	36.9%
<b>TOTAL</b>	<b>393,058</b>	<b>13,337,017,240</b>	<b>33,931</b>	<b>36.9%</b>

**Table 4- 8 Net Contribution Margin Comparison 2008 to 2007**

	Sales (cs)	NCM	NCM/ cs (IDR)	% NCM to NSR
<b>Year 2007</b>	300,417	9,153,613,761	30,858	36.4%
<b>Year 2008</b>	393,058	13,578,674,371	33,931	36.9%
<b>% Growth</b>	31%	48%	10%	1%

Table 4-9 shows that in 2008, there is increasing of discount 508.9 million rupiahs as a distribution fee of Matahari DC. In 2007, actual sales are 300,417 cases and distribution cost is 552.46 million rupiahs. In 2008, actual sales are 393,058 case and estimated distribution cost (excluded bulk transport) is 712.8 million rupiahs. Since we have replaced distribution cost with DC distribution fee, which is as discount allowance, there is cost saving approximately 204 million.

**Table 4-9 Discount and Delivery Cost Trade Off Analysis**

	Total Discount & Allowance			Total Delivery Cost				Saving
	2007	2008	Variance	2007	Est 2008	Actual 2008	Variance	
OPR-JAKARTA REG.	(1,544,128,447)	(1,890,242,107)	(346,113,659)	300,608,688	405,920,464.25	0	405,920,464	59,806,805
OPR-WEST JAVA	(53,864,578)	(93,073,102)	(39,208,524)	30,794,931	31,204,567.76	0	31,204,568	(8,003,956)
OPR-NORTHERN SUMATERA	(264,181,623)	(303,999,707)	(39,818,084)	157,681,979	194,139,838.80	0	194,139,839	154,321,755
OPR-CENTRAL SUMATERA	(63,346,879)	(110,891,685)	(47,544,806)	40,950,656	55,071,985.75	0	55,071,986	7,527,179
OPR-SOUTHERN SUMATERA	(66,668,754)	(102,845,762)	(36,177,008)	22,333,151	26,528,088.37	0	26,528,088	(9,648,919)
<b>TOTAL</b>	<b>(1,992,190,281)</b>	<b>(2,501,052,363)</b>	<b>(508,862,082)</b>	<b>552,369,405</b>	<b>712,864,945</b>	<b>-</b>	<b>712,864,945</b>	<b>204,002,863</b>

Changes of this supply chain contribution has been reduced Supply Chain Management in term of Outbound Transportation Cost.

#### 4.3.5. Cash-to-Cash Cycle Time

Table below shows Account Receivable Matahari Food Store. It shows that Day Sales Outstanding in 2007 is 53.15 days and increase 48 % to be 78.41 days in 2008. It because there is increasing ending balance account receivable about 166 % from 4.2 billion to 11. 3 billion. But NSR grow 42 % from 25.5



billion to 36.1 billion. This fact can mean that increasing sales to Matahari also double PT. CCDI average account receivable and this increase cash to cash cycle time and impact operation cash flow of company.

**Table 4-10 Total Days Sales Outstanding Comparison**

		Beginning	Ending	Average	NSR	DSO
TOTAL Account Receivable	2007	3,177,316,143	4,245,250,274	3,711,283,209	25,487,108,819	53.15
	2008	4,245,250,274	11,285,138,296	7,765,194,285	36,146,134,788	78.41
	%	34%	166%	109%	42%	48%

Table 4.11 explain detail that Jakarta has the biggest account receivable ending balance and this made DSO in 2008 become 103 days. DSO other operation is relatively lower between 2 days to 10 days in 2008. So Jakarta have the most contribution that makes DSO increase significantly.

**Table 4-11 Days Sales Outstanding Comparison by Operation**

		Beginning	Ending	Average	NSR	DSO
OPRGRP-JAKARTA REGION	2008	4,109,625,581	11,175,796,680	7,642,711,131	27,023,367,542	103.23
	2007	3,053,304,256	4,109,625,581	3,581,464,919	19,322,472,192	67.65
OPR-WEST JAVA	2008	13,731,700	40,997,100	27,364,400	1,438,078,967	6.95
	2007	25,348,200	13,731,700	19,539,950	1,198,800,025	5.95
OPR-NORTHERN SUMATERA	2008	-	51,127,901	25,563,951	4,509,262,056	2.07
	2007	-	-	-	2,807,697,712	-
OPR-CENTRAL SUMATERA	2008	73,832,333	17,216,615	45,524,474	1,644,474,318	10.10
	2007	36,248,587	73,832,333	55,040,460	1,131,877,244	17.75
OPR-SOUTHERN SUMATERA	2008	48,060,660	-	24,030,330	1,530,951,905	5.73
	2007	62,415,100	48,060,660	55,237,880	1,026,261,645	19.65
TOTAL	2008	4,245,250,274	11,285,138,296	7,765,194,285	36,146,134,788	78.41
	2007	3,177,316,143	4,245,250,274	3,711,283,209	25,487,108,819	53.15

#### 4.3.6. Perfect Order Fulfillment and Service Level Agreement (SLA)

##### 4.3.6.1. Perfect Order Fulfillment Implementation in PT. CCDI

Below is the analogy of implementation perfect order fulfillment in PT. CCDI:

- Delivered on time  
Compare scheduled delivery date with actual delivered date for each order.
- Shipped complete  
Compare quantity order with actual quantity delivered.
- Shipped damage free

Customers don't want to receive damage product so number of shipped damage free order is equal to number of shipped complete order.

- Correct documentation

Correct documentation analysis has just been started from January 2009. In this implementation, sales forces mark the invoice that is incorrect documentation. Incorrect documentation will be inputted to the system based on these invoice and remark. Before period January 2009, we assume all invoice are 100% correct document. The assumption taken based on condition of current business process:

- In PT. CCDI, invoice is settled on the same day with delivery day to the customer. But in the customer, invoice is paid 1 week after the product received. If any document discrepancy (usually related to price different) found, PT CCDI can not re-settled the invoice.

Based on this fact, PT. CCDI uses Delivery In Full On Time (DIFOT) to measure perfect order fulfillment.

#### **4.3.6.2. SLA analysis**

Figure 4-11 shows comparison between Service Level Agreement (SLA) in 2007 and 2008. SLA in 2008 trend is lower than SLA in 2007, but quantity order in 2008 is much greater than 2007. From period January to December SLA 2008 which higher than SLA 2007 are in April and May. In this period, monthly order is relatively low or about 20,000 cs per month. In other period SLA 2008 is lower than SLA 2007. In August, quantity order increased from 32,000 cs to be 90,000 cs and SLA decreased from 94% to 40%. In September, quantity order decreased from 82,000 to 50,626 but the service level also decreased from 93% to 43%. Based on interview with some people that is in charge with this project, the main issue is out of stock for some product especially Frutcy Apple 500 ml, Coca-Cola PET 1.5 Liter, Fanta Strawberry 1.5 Liter, and Coca-Cola PET 500 ml. There is also material CO<sub>2</sub> shortage problem that make the service level is below the last year.

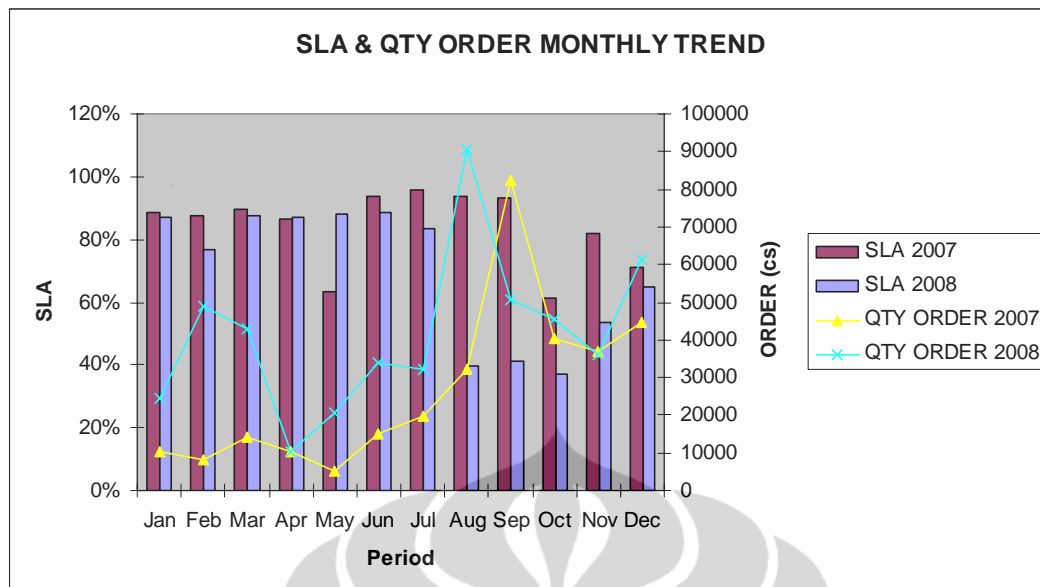


Figure 4-11 SLA and QTY Order Monthly Trend

#### 4.3.6.3. DIFOT Analysis

Figure 4-12 shows that DIFOT in 2008 trend is lower than DIFOT in 2007 for January, February, August to December. The biggest gap is in September that is in peak season. The other factor that make DIFOT September 2008 drop 50% from last year is that number of order in 2008 is much bigger than 2007 and also because of out of stock issue. DIFOT percentage is lower than SLA value in both 2007 and 2008 because service level calculates only the delivered quantity but DIFOT also include completeness of the product. If 1 cs is not available in an order which contain 500 cs ordered by customer than the service level will be 99.8% for that order and but DIFOT will be 0%.

PT. CCDI expects that changing distribution configuration from direct selling to Matahari DC can improve both cost management and customer service. But usually there is a trade off between efficient and responsive supply chain. In this case, customer service level is decrease from 2007 but in the other side delivery cost is reduced and make more profit to PT. CCDI. This customer service can be improved by improving supply chain and production process so it will reduce out of stock. Forecasting accuracy and material supply are key area that should be improved since the issue come from out of stock product and also because of production material shortage. If PT. CCDI can manage these issue,

then service level and DIFOT will also increase and it also impact to sales volume increasing.

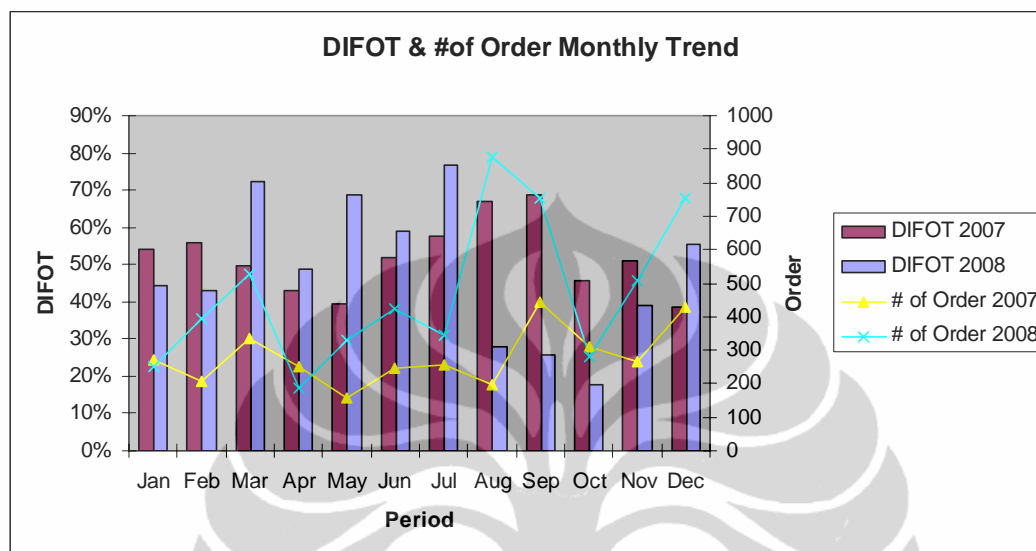


Figure 4-12 DIFOT and Number of Order Monthly Trend

#### 4.3.6.4. Product Availability Based on Right Execution Daily (RED) Survey

Table 4-10 below shows the Product Availability based on RED Survey 2008. In the RED Survey, third party auditor goes to Matahari Food Store in every location and check availability of the product. Not all products should be available in Matahari Food Store, only products which have been listed as a mandatory product that should be available in Foodstore.

Result shown in the table below is average availability by month by product of all Matahari Store in this Operation. Product availability in these operations is not achieved target 100% and the result is much lower than expected target. Average product availability in Matahari Store in 2008 is 48.4%. If supply to Matahari DC is good but the product availability in store low then the problem could be in Matahari DC's distribution. But the data show that average service level PT. CCDI to Matahari DC is 63%. So there still a problem in supplying product to Matahari DC. Supply from PT. CCDI should be improved to increase product availability in Matahari Store. Even though it is not the only problem but

PT. CCDI should be this as potential sales and source of growth in next year because demand is still exist but supply is scare.

**Table 4-12 Product Availability Based on RED Survey**

	<b>Availability 2008</b>
<b>OPRGRP-JAKARTA REGION</b>	62.7%
<b>OPR-WEST JAVA</b>	54.4%
<b>OPR-NORTHERN SUMATERA</b>	47.1%
<b>OPR-CENTRAL SUMATERA</b>	36.9%
<b>OPR-SOUTHERN SUMATERA</b>	40.7%
<b>TOTAL</b>	48.4%

Operation Jakarta region is the highest product availability in 2008 compared to other operations. It because Jakarta the nearest location from Matahari DC so when Matahari store request product from Matahari DC, product delivered faster than stores in other Operation. Distance is not only the problem of this availability. Increase safety stock level might improve product availability, but stock level is depends on warehouse capacity in Matahari Store.

Moving distribution channel from direct distribution to indirect distribution can bring to some potential drawbacks, such as :

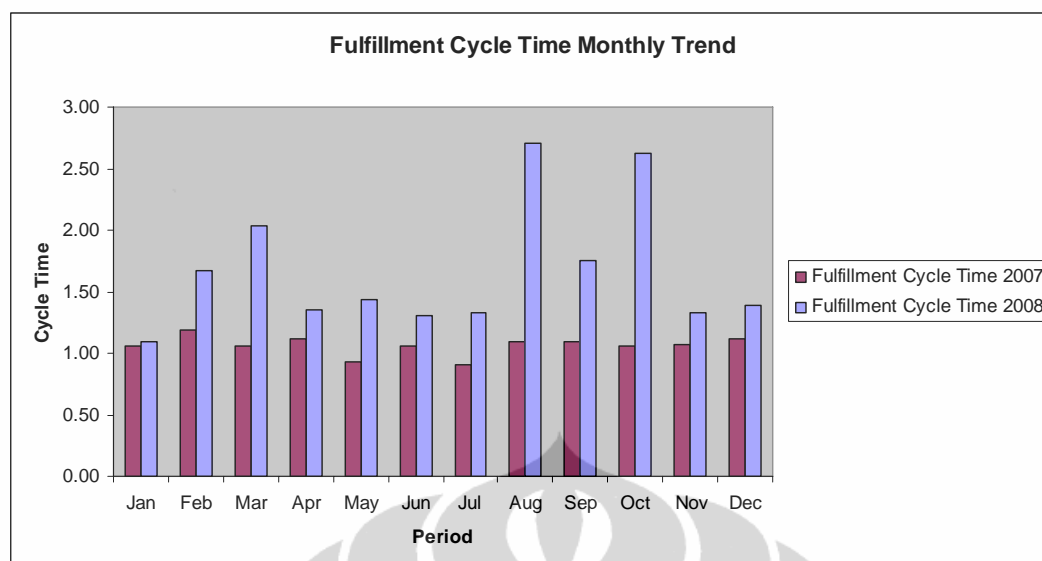
1. When PT. CCDI moves the customer to indirect distribution, there should be a reduction in a fleet or deliveryman who served these customer and area. This reduction will bring more efficient distribution. But not all customer in that area is fully-converted to indirect because there are some customers that is not Matahari Foodstore. If this conversion is implemented in larger scale, indirect partner (in this case Matahari DC) will be difficult to serve all the customer because of distance and the capacity. It impacts to loss of sales in some customer and this makes Coca-Cola difficult to implement the Motto "Anytime, Anywhere, Always Coca-Cola".
2. PT. CCDI has been passed the learning curve how to create, develop, and maintain the customer. Indirect partner might not have these skills as excellent as PT. CCDI do. Moving the customer to indirect distribution

can remove account development activities that has been created and maintained. It might bring a negative effect to customer preferences, behavior and also consumer consumption.

#### **4.3.7. Order Fulfillment Cycle Time**

To measure order fulfillment cycle time in PT. CCDI, we compared between calling (order) date and actual received date of product. Calling date is date of presell taking order and input the order in the same day. Actual received date is date of product is delivered to customer. The data below show that fulfillment cycle time after DC implementation, year 2008, is consistently higher than cycle time before DC implementation. The major cause of this increasing are as follow:

1. In year 2007, default delivery schedule is 1 x 24 hour for all customers. It means that order receives today will directly delivered tomorrow. One day delivery is aim to increase sales opportunity by increasing frequency of order by increasing frequency of delivery.
2. Different with Matahari Outlet, Matahari DC write down at the purchase order when they expected to receive the product and this depends on the availability of their warehouse space. It can be tomorrow, next two days even till next six days.



**Figure 4-13 Fulfillment Cycle Time Monthly Trend**

Average annually, Order Fulfillment Cycle Time increase from 1.07 days in 2007 to 1.78 in 2008. In 2007, Matahari store are served as the same channel with other customer, but in 2008 is different. In a company, there are some channels which serve different type of customer. There is a different type of channel between Matahari Food Store and Matahari DC. So there are also some differences for this treatment. In the point of view PT. CCDI, increasing fulfillment cycle time which driven from Matahari DC, is a advantage because there is a longer time to ensure all product requested is fulfilled.

#### **4.4. SCOR Metrics Mapping - Before and After implementation**

Table below shows the comparison between 2007 and 2008 performance mapped to SCOR metrics. This table shows the trade off between internal-facing metrics and customer-facing metrics. Benefit in reducing cost in internal facing metrics also brings reducing in reliability in customer-facing metrics. Acceptance of this performance depends on how much the company tolerates this trade off.

Table 4-13 Summary Metric Comparison Before and After Implementation

No	SCOR Metrics	Measured Metrics	Before	After
<b>Internal-Facing</b>				
<b>A Cost</b>				
	Supply Chain Management Cost	Outbound Transportation Cost/cs	1838	0
		% to GSR	2.01%	0%
		NCM/cs (in IDR)	30858	33931
		% NCM to GSR	33.31%	35.13%
	Cost of Good Sold	COGS/cs (in IDR)	52,531	57,415
		% COGS to GSR	57.43%	58.39%
		NSR/cs (in IDR)	84,839	91,961
		% NSR to GSR	92.75%	93.53%
		Discount & Allowance/cs (in IDR)	6631	6363
		% to GSR	7.25%	6.47%
<b>B Asset</b>				
Cash-to-Cash Cycle Time	Day Sales Outstanding	53.15 Days	78.41 Days	
<b>Customer-Facing</b>				
<b>C Reliability</b>				
	Perfect Order Fulfillment	DIFOT	53%	51%
		Service Level	86%	69%
<b>D Responsiveness</b>				
	Order Fulfillment Cycle Time	Order fulfillment Cycle Time	1.07 Days	1.78 Days