

COMPETITIVE STRATEGY THROUGH SUPPLY CHAIN MANAGEMENT ON PHARMACY INSTALLATION: COMPARISON STUDY IN TWO HOSPITALS

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ABSTRACT

Service-based business competition in hospitals can be achieved through cost leadership strategies without putting aside patient safety, differentiation strategies aims to differentiate themselves uniquely from competitors and focus strategies by targeting specific markets. The strategy series are 50% more influenced by the performance of Supply Chain Management at Pharmacy Installation. The purpose of this study is to evaluate the implementation of strategy and performance with the research subjects of the Hospital Type D Pharmacy Installation. The method of weighting the Analytical Hierarchy Process (AHP) was used to analyse the priority of strategy and performance assessment processed using the Objective Matrix (OMAX) method. The Supply Chain Operation Reference (SCOR) model is applied as a Key Performance indicator (KPI) with financial ratio data as a support for internal performance. The position of subject in competition and performance improvement benchmarks is seen through benchmarking with competitor of type C Hospital. Results of analysis show that the priority cost leadership strategy is supported by the AHP weighting cost of good sold 34.4% but the best performance is obtained from the order fulfillment cycle time 26.51%. Performance evaluation should be used by targets approaching competitor levels. The conclusion of this study, Hospital competing strategies can be obtained through synchronization of Supply Chain Management strategies and actual performance of Pharmacy Installation

Keywords: Supply Chain Management, Pharmacy Installation, Hospital, Analitical Hierarchy Process, Strategy

1. Introduction

The health industry is an important sector in providing public welfare, especially improving health status. The healthcare industry has a unique process in which it operates, where the focus is on maintaining a high level of quality health care while keeping costs at a level that is affordable for the community (UU verse 44). The business prospects of the health industry, especially hospitals, make competition in this sector a phenomenon that deserves to be studied. As management thinking goes, a

competitive strategy is needed that can balance the business needs of the hospital while ensuring patient safety, providing high, effective and efficient service standards (Gultom:2016).

Health care costs in hospitals are mostly absorbed by pharmaceutical logistics costs (drugs, consumables, operational support medical devices) through Pharmacy Installations, followed by medical service costs. In other studies concluded medical logistics such as medicine, consumables disposables, medical devices, reagents, and medical devices have a role of more than 90% in provision of health services in hospitals. In fact, pharmaceutical supplies such as, medicine and consumables contribute 50% of total hospital revenue (Suciati and Adisasmito:2006). Logistics management which is a supply chain process has a function in planning, implementing, and controlling in order to achieve efficiency and effectiveness in the storage and flow of goods, services and related information from the starting point to the point of consumption in order to meet the needs of customers (CLM:1998). Logistics in Hospitals is very important to ensure the safety, availability and affordability of supplies efficiently and effectively, AHP or ANP methodologies are used to simplify complex multi-criteria decision problems (K.Moons et al:2018)

This study prioritizing plays a role Supply Chain Management in integrating logistics activities in Pharmaceutical Installations from the supplier (PBF) to the final consumer as one of the efforts to improve the quality of hospital services internally. This research takes cases from two pharmacy installations in a private hospital in Ponorogo, Indonesia. Through this research, the author wants to benchmark the Hospital "A" to the Hospital "B" in the implementation of supply chain management in Hospital Pharmacy Installations, analyze competitive strategies through the implementation of Supply Chain Management in Pharmacy Installations and evaluate in order to have a competitive advantage.

This research is taken because most of supply chain research in Indonesia that used SCOR, AHP and OMAX method are taken in manufacture industry like research of Immawan (2020), Bidarti et al (2019), and Poernomo and Ciptomulyono (2014). Just a few research taken in Pharmaceutical industry, the closest is taken by Nugraha 2022 that research supply chain in medical device distribution's company in Bandung. So that focus on Supply chain management in Pharmaceutical Installations in East Java, this research will focus on "How can a competitive strategy be applied through Supply Chain Management of Pharmaceutical Installations?" and "How can the implementation of Pharmacy Installation Supply Chain Management be improved so that it has a competitive advantage?".

2. Literature Review

Competitive Strategy

Companies that want to increase their business in tight competition must choose a business principle called a competitive strategy or generic strategy. Differentiation strategy which is characterized by building a market perception for products/services that are superior, unique or look different from similar products/services. Cost leadership strategy that more attention to price competitors, the products/services offered are cheaper. Focus strategy is to concentrate on a small market share to avoid competitors by using a comprehensive cost leadership strategy and differentiation (Heizer:2004).

Supply Chain Management

Increasing competitive advantage that synergizes between strategy and performance requires a good and targeted management system. One of them is Supply Chain Management which includes inventory management from upstream to end user (Mentzerr:2001). Supply Chain Management aims to build trust, exchange information about market needs, develop new products, and manage resources

for the long term (Berry et al:1994). There are four types of supply chain strategies : Supply Chain Management Efficiency which aims to create the highest cost efficiency, Risk Management by dividing supply sources so the risks in supply disruptions can be managed, Responsive and flexible supply chain management to needs changing and diverse customers, and Agile Supply Chain Management uses agile and flexible strategies to unpredictable customer needs through inventory (Lee:1997). Referring to previous research, “Linking Hospital Supply Chain Processes and performance to identify Key Performance Indicator’ Supply chain efficiency supports the procurement management process, providing efficiency effects in clinical services to patients (Supeekit:2015).

Supply Chain Operations Reference (SCOR)

The Supply Chain Operations Reference (SCOR) was released by the Supply Chain Council (SCC) in 1996. This model can configure the strategy of business activities through the supply chain through the concepts of business process reengineering (best practice analysis), benchmarking and measurement processes into a framework. cross-functional work. The level 1 SCOR model matrix is a core competency that must be possessed to face competition and characterizes performance based on two perspectives, namely the customer perspective and the internal perspective. Performance attributes include: Reliability (accuracy), Responsiveness (Speed), Agility (ability to respond to external changes), Cost, Assets (asset processing) (Supply chain council:2007). The Level 1 matrix can be used as a performance evaluation parameter / Key Performance Indicator (KPI). The research entitled “A SCOR based approach for measuring a benchmarkable supply chain performance” conclude SCOR is used to measure supply chain performance using the Analytical Hierarchy Process (AHP) method and the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method (Kocaoglu:2013).

Table 1 Attribute Matrix level 1 SCOR

Level 1 Metrics	Performance Attributes				
	Customer-Facing			Internal-Facing	
	Reliability	Responsiveness	Flexibility	Cost	Assets
Perfect Order Fulfillment	✓				
Order Fulfillment Cycle Time		✓			
Upside Supply Chain Flexibility			✓		
Upside Supply Chain Adaptability			✓		
Downside Supply Chain Adaptability			✓		
Supply Chain Management Cost				✓	
Cost of Goods Sold				✓	
Cash-to-Cash Cycle Time					✓
Return on Supply Chain Fixed Assets					✓
Return on Working Capital					✓

Source: Supply Chain Council (2007)

3. Method

The research concept is a qualitative case study approach within where the subjectivity is very largunit of analysis is used the performance of Supply Chain Management in Pharmacy Installations in two hospitalsand then compared. Sources were obtained through interviews and questionnaires on key persons, documents/archives of pharmaceutical installations and supporting data. Measurement uses indicators on the Supply Chain Operation Reference (SCOR) matrix. Processing weighting data used Analytical Hierarchy Process (AHP) and performance assessment used Objective Matrix (OMAX) method. The comparison results are used as a measure of performance improvement.

The AHP method was developed by Prof. Thomas Lorie Saaty. The weighting using AHP is obtained from the results of a questionnaire on the importance of pairwise comparisons of key performance indicators arranged in a hierarchy. The relative importance of the two elements is assessed using a pairwise comparison scale. Priority is determined by the criteria that have the highest weight. The weight sought is expressed in terms of the vector $W = (W_1, W_2, \dots, W_n)$. The value of W_n states the relative weight of A_n 's criteria to the entire set of criteria in the sub-system (Saaty:1990).

Supply chain efficiency supports the management of the procurement process, having an effect on efficiency in clinical services to patients, the performance can be identify with Key Performance Indicators (Supeekit:2015). The performance measurement stage is obtained by collecting performance data for the measurement year in the form of realization data and targets determined by the company. To combine KPI into a single matrix, it is necessary to use a scoring system using an objective matrix (OMAX).

Table 2 Pairwise Comparison Rating Scale (Saaty, 1990)

Level	Definition	Description
1 (Same)	Both elements are equally important	Both elements contribute equally to trait
3 (Weak)	One element is slightly more important than the other	Experience states a little in favor of one element
5 (Strong)	One element is actually more important than the other	Experience shows strongly favoring one element
7 (Very Strong)	One element is clearly more important than the other	Experience shows that strongly dominated by one element is clearly more important
9 (Absolutely Strong)	One element is absolutely more important than the other	Experience shows that one element is absolutely dominated
2, 4, 6, 8	The middle value between two adjoining ratings	This value is given if a compromise is required
The opposite of the level of importance above		If the $-ij$ element in the factor gets the value x , than the $-ji$ element gets the value $1/x$

Tabel 3 Pairwise Comparison Matrix

C	A_1	A_2	A_3	A_n
A_1	a_{11}	a_{12}	a_{13}	a_{1n}
A_2	a_{21}	a_{22}	a_{23}	a_{2n}
.....
A_n	a_{n1}	a_{n2}	a_{n3}	a_{nn}

Tabel 4. OMAX Matrix Arrangement (Hamdani:2017)

Baris A	Kriteria 1	Kriteria 2	Kriteria 3	Kriteria 4	Kriteria n	KRITERIA PRODUKTIVITAS
						PERFORMANCE
Baris B						10
						9
						8
						7
						6
						5
						4
						3
						2
						1
					0	
Baris C						SKOR BOBOT NILAI

INDIKATOR PENCAPAIAN

Table 4 Description

- Criteria : KPI which is a measure of productivity
- Performance : The value of the observed performance
- Row B (3) : Average performance over several periods
- Line B(0) : Worst performance target
- Row B (10) : Best performance target
- Row B (1-2) : $level\ up\ 1 - 2 = \frac{level\ 3 - level\ 0}{3 - 0}$
- Row B (4-19) : $level\ up\ 4 - 9 = \frac{level\ 10 - level\ 3}{10 - 3}$
- Score : Performance level calculation result
- Weight : AHP calculation result weight
- Value : The level of performance achievement that is in line with the strategy, calculated by the formula : Score x Weight

4. Result and Discussion

Time series data analysis begins with testing the stationarity of the data through the Unit Roots Test - Augmented Dickey Fuller (ADF), which aims to determine the structure of the research data on all variables that have been stationary. The test is carried out so that the data to be used has low fluctuations, thus making the model estimation results have a low variance as well. Data is said to be stationary if the average value and variance of hospitality and financial mechanisms (Ilić & Nikolić, 2018). The findings of this study are in line with research conducted by Al-Mulali et al. (2020) which shows that Information Technology has an effect on Tourist Visits.

The result of research begins with SCOR assessment in pharmaceutical installation in two hospitals. The first step is to identify the problems that occur in the company, by measuring the company's supply chain performance, it is hoped that it can evaluate the supply chain network and can identify which indicators need improvement (Nugraha: 2022)

Performance Attributes and Matrix

The matrix in the SCOR is used as a key performance indicator with the results of performance validation in accordance with the needs of the Hospital “A” described in Table 5. Validation of KPI Hospital “B” is described in Table 6. In its implementation, the Internal Facing KPI for Hospital “B” is not allowed to take raw data, Financial Ratio data is used as substitute.

Tabel 5. Validation KPI Hospital “A”

Perspective	Attribute	KPI Level 1
Customer facing (CF)	Reliability (RL.1)	Perfect Order fulfillment (RL.1.1)
	Responsiveness (RS.1)	Order fulfillment cycle time (RS.1.1)
	Agility (AG.1)	Upside supply chain flexibility (AG.1.1) Upside supply chain adaptability (AG.1.2)
Internal facing (IF)	Cost (CO.1)	Total supply chain management cost (CO.1.1)
		Cost of good sold (CO.1.2)
	Assets (AM.1)	Cash to cash cycle time (AM.1.1)
		Return on supply chain fixed assets (AM.1.2) Return on working capital (AM.1.3)

Tabel 6. Validation KPI Hospital “B”

Perspective	Attribute	KPI Level 1
Customer facing (CF)	Reliability (RL.1)	Perfect Order fulfillment (RL.1.1)
	Responsiveness (RS.1)	Order fulfillment cycle time (RS.1.1)
Internal facing (IF)	Cost (CO.1)	Total supply chain management cost (CO.1.1)
		Cost of good sold (CO.1.2)
	Assets (AM.1)	Cash to cash cycle time (AM.1.1)
		Return on supply chain fixed assets (AM.1.2) Return on working capital (AM.1.3)

Key Performance Indicator Weighting Using AHP

After finding the KPI, next step is to calculate the weighting using the AHP method. KPI weighting to determine the level of importance of each perspective. Determination of weights based on a questionnaire to the management who has a depth of information in accordance with their responsibilities. The hierarchical structure of determining the weights of the Hospital “A” and Hospital “B” can be seen in Figure 1 and Figure 2.

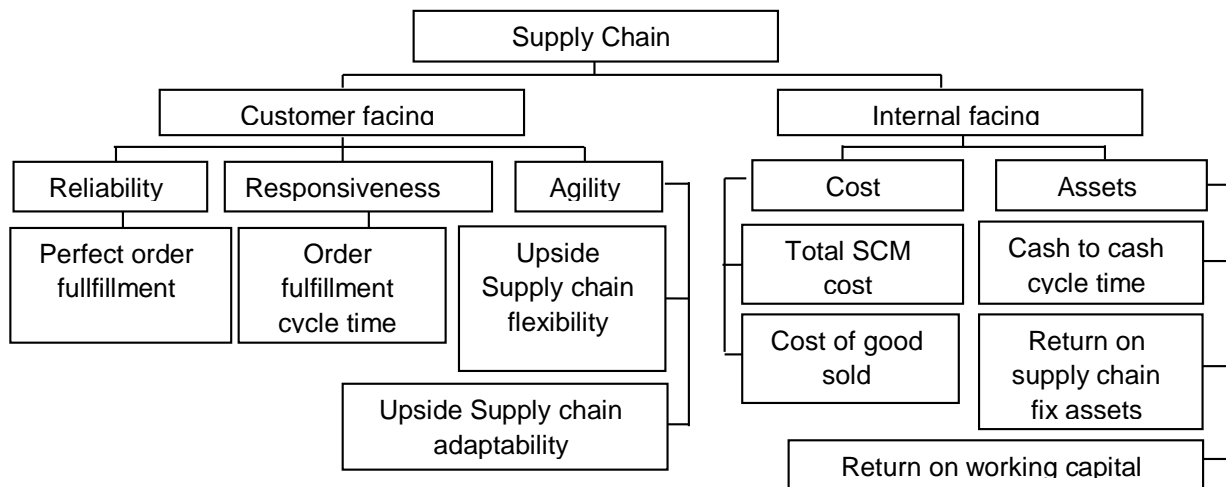


Figure 1. AHP Hierarchical Structure Hospital “A”

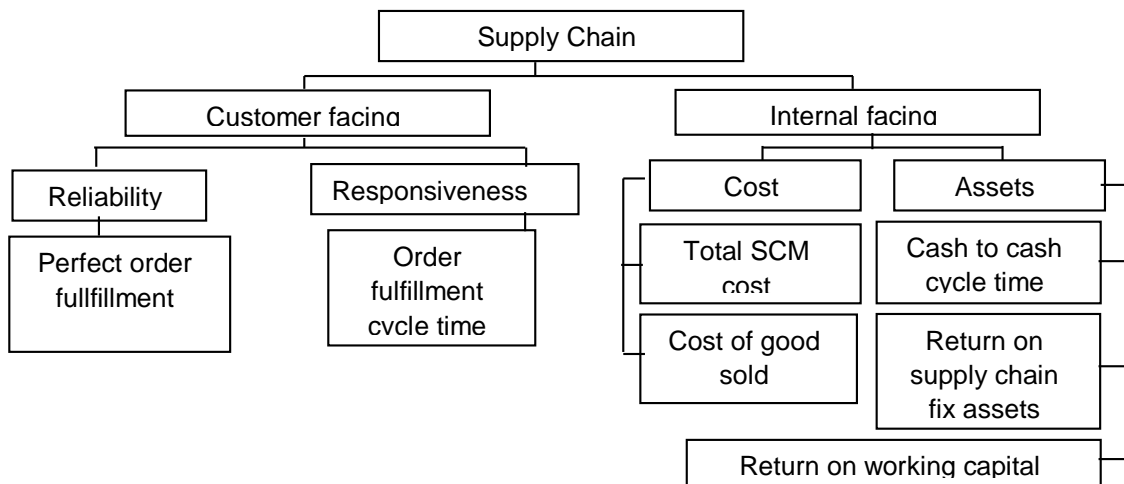


Figure 2. AHP Hierarchical Structure Hospital “B”

Weights for Perspective Indicators

The weight calculation is obtained from the results of the pairwise comparison questionnaire between the indicators according to the hierarchical structure. Questionnaire values were processed using the Analytical Hierarchy Process (AHP) presented in Table 8-13.

Table 8. Weights For Perspective Indicators

Indicator	Hospital “A”		Hospital “B”	
	Local	Global	Local	Global
Goal : Supply Chain Performance				
Customer Facing	0.5	0.5	0.5	0.5
Internal Facing	0.5	0.5	0.5	0.5
Sum	1	1	1	1
Consistency Ratio	0		0	

Table 9. Weights For *Customer Facing* Indicators

Indicator	Hospital "A"		Hospital "B"	
	Local	Global	Local	Global
Goal : Supply Chain Performance				
Reliability	0.17	0.085	0.83	0.415
Responsiveness	0.44	0.220	0.17	0.085
Agility	0.39	0.195	-	-
Sum	1	0.5	1	0.5
Consistency Ratio	0.025		0	

Table 10. Weights For *Agility* Indicators

Indicator	Hospital "A"		Hospital "B"	
	Local	Global	Local	Global
Goal : Supply Chain Performance				
Upside supply chain flexibility	0.83	0.162	-	-
Upside supply chain adaptability	0.17	0.033	-	-
Sum	1	0.195	-	-
Consistency Ratio	0		-	

Table 11 Weights For *Internal Facing* Indicators

Indicator	Hospital "A"		Hospital "B"	
	Local	Global	Local	Global
Goal : Supply Chain Performance				
<i>Cost</i>	0.83	0.415	0.5	0.25
<i>Assets</i>	0.17	0.085	0.5	0.25
Sum	1	0.5	1	0.5
Consistency Ratio	0		0	

Table 12. Weights For *Cost* Indicators

Indicator	Hospital "A"		Hospital "B"	
	Local	Global	Local	Global
Goal : Supply Chain Performance				
Total supply chain management cost	0.17	0.071	0.75	0.188
Cost of good sold	0.83	0.344	0.25	0.062
Sum	1	0.415	1	0.25
Consistency Ratio	0		0	

Table 13 Weights For *Assets* Indicators

Indicator	Hospital "A"		Hospital "B"	
	Local	Global	Local	Global
Goal : Supply Chain Performance				
Cash to cash cycle time	0.75	0.064	0.44	0.11
Return on supply chain fixed assets	0.12	0.010	0.17	0.0425
Return on working capital	0.13	0.011	0.39	0.0975
Sum	1	0.085	1	0.25
Consistency Ratio	0.009		0.017	

The weight of each hospital shows the priority performance as a competitive strategy. Hospital "A" uses a Cost of good sold strategy with a weight of 0.344; Order fulfillment cycle time 0.22; and Upside supply chain flexibility 0.162. Hospital "B" uses the Perfect order fulfillment strategy with a weight 0.415; Total supply chain management cost 0.188; and Cash to cash cycle time 0.11. The value used as a reference is a global indicator where the weight of the indicator has been drawn as a whole, while the local value is the weight of each indicator

**Calculation of Achievement of Hospital "A" Supply Chain Performance Indicators
Perfect Order Fulfillment**

Perfect order fulfillment is the percentage of delivery of the right order in full (right quality of goods, right quantity of goods, on time, complete with documents) .The results of performance perfect order fulfillment indicator for two years can be seen in Table 14.

Table 14. Order Number Data and Performance Achievement

Period	Hospital "A"		Hospital "B"	
	Number of Order	Imperfect Order Quantity	Number of Order	Imperfect Order Quantity
January	274	4	401	0
February	372	11	386	0
March	345	6	386	0
April	340	7	416	0
Mei	361	11	526	3
June	346	8	466	2
July	297	2	300	1
August	280	9	381	0
September	314	13	383	1
October	312	5	385	0
November	354	8	380	1
December	356	4	370	0
Sum	3951	88	4780	8
%	97,77%		99,83%	

Order Fulfillment Cycle Time

Order fulfillment cycle time is the average time required to consistently fulfill customer orders. This indicator is not calculated, but from the results of interviews with informants obtained for Hospital "A" the performance of order fulfillment cycle time for 3 days. While Hospital "B" for 2 days.

Upside Supply Chain Flexibility

Upside Supply Chain Flexibility is the number of days required to provide a 20% increase in demand outside the procurement plan. The results of the Upside Supply Chain flexibility of Hospital "A" were obtained for 3 days. Hospital "B" does not use this indicator because there has never been a request outside of procurement, all based on hospital formulations and similar supply substitution systems.

Upside Supply Chain Adaptability

Upside Supply Chain adaptability is the maximum percentage of additional orders outside the plan within 30 days. The results of the Hospital “A” provide an increase in order of 23.8% in one period (1 week). Hospital “B” does not use this indicator.

Total Supply Chain Management Cost

Supply Chain Management Cost is the overall cost involved in the supply chain process. Raw Material costs are generally recorded in COGS (cost of goods sold) so they do not include supply chain management costs. The calculation is obtained by the formula:

$$CO\ 1.1 = \text{Procurement cost} + \text{servis fee}$$

The results of the Total Supply Chain Management Cost of Hospital “A” is Rp 182,574,241 or 1.614% of sales. Financial report Hospital “A” can be seen in Table 15.

Table 15. Financial report Hospital “A”

NO	DATA	NOMINAL (Rp)
1	Sales	11.309.781.600
2	Cost of goods sold	8.617.828.710
3	Inventory	1.610.264.249
4	Administration fee	584.870.600
5	Profit	1.973.652.300
6	Receivables	1.444.448.497
7	Debt	1.702.034.290
8	Fix assets	20.236.390.115
9	Procurement cost	64.237.591
10	Servis fee	118.336.650

Cost of Good Sold

The cost of gold sold is the cost associated with the purchase of raw materials. Obtained from financial report Hospital “A” data Rp 8,617,828,710 or 76.20% of sales.

Cash To Cash Cycle Time

Cash to cash cycle time is the period of time required for investment of funds embedded in working capital starting from cash disbursements to pay for resources (raw materials) until the funds are returned to the company (into cash/cash back) after distribution to customers. The result of the Cash to cash cycle time Hospita “A” is 42.7 days, it can be seen in Table 16. The formula for this indicator is :

$$AM.1.1 = \text{Day sales outstanding} + \text{Inventory days of supply} - \text{day payable outstanding}$$

Table 16. Result of the Cash to Cash Cycle Time Hospital “A”

Indicator	Formula	Results
Inventory days of supply (A)	$\frac{\text{inventory}}{\text{COGS}/365}$	68.2 days
Day sales outstanding (B)	$\frac{\text{receivables}}{\text{sales}/365}$	46.6 days

Day payable outstanding (C)	$\frac{debt}{COGS/365}$	72.1 days
AM.1.1 = A + B - C		42.7 days

Return on Supply Chain Fixed Assets

Return on supply chain fixed assets used to measure the return received by the organization on its investment in supply chain fixed asset capital. The calculation formula used is

$$AM\ 1.2 = \frac{sales - COGS - supply\ management\ cost}{fix\ assets}$$

The results of the Return on supply chain fixed assets of Hospital “A” is 0.12 times.

Return on Working Capital

Return on working capital is the ability to return net working capital and shows the position of working capital (net). The formula used is

$$AM\ 1.3 = \frac{sales - COGS - supply\ management\ cost}{inventory + receivable - debt}$$

The results of Return on working capital of Hospital “A” are 1.86 times.

After the yearly performance data is obtained for each metric, the data is then processed with OMAX method (Poernomo : 2014)

Scoring Using Objective Matrix (OMAX)

Performance assessment using OMAX is intended to compare the performance of all key performance indicators that have different matrix units. The assessment is divided into customer facing and internal facing assessments. With the results of OMAX Hospital “A” scoring can be seen in Table 17-19. While the results of Hospital “B” can be seen in Table 20.

Tabel 17 Scoring of Customer Facing Indicator Hospital “A”

Indicator Code		RL.1.1	RS.1.1	AG.1.1	AG.1.2
Achievement of Research Result		97.77	3	3	23.8
Score	10	95	2	2	25
	9	94.96	2.24	2.24	24.92
	8	94.91	2.45	2.45	24.83
	7	94.87	2.66	2.66	24.74
	6	94.83	2.87	2.87	24.66
	5	94.78	3.08	3.08	24.57
	4	94.74	3.29	3.29	24.49
	3	94.7	3.5	3.5	24.4
	2	93.14	3.66	3.66	19.6
	1	91.57	3.83	3.83	14.8
0	90	4	4	10	
Performance Achivement Score		10	5	5	3
Performance Measure Weight		0.085	0.220	0.162	0.033
Performance Measure index		0.85	1.1	0.81	0.099
<i>Customer Facing indexs</i>		2.859			
<i>Previus</i>		1.5			
<i>Indexs (%)</i>		90.6%			

Tabel 18 Scoring of Internal Facing Indicator Hospital “A”

Indicator Code		CO.1.1	CO.1.2	AM.1.1	AM.1.2	AM.1.3
Achievement of Research Result		1.614	76.20	43	0.12	1.86
Score	10	1.25	70	10	0.3	4
	9	1.276	70.914	14	0.274	3.71
	8	1.305	71.83	18	0.25	3.45
	7	1.334	72.746	22	0.226	3.19
	6	1.363	73.662	26	0.202	2.93
	5	1.392	74.578	30	0.178	2.67
	4	1.421	75.494	34	0.154	2.41
	3	1.45	76.41	38	0.13	2.15
	2	1.634	77.61	40.34	0.08	1.93
	1	1.817	78.80	42.67	0.09	1.72
0	2	80	45	0.1	1.5	
Performance Achivement Score		2	3	1	3	2
Performance Measure Weight		0.071	0.344	0.064	0.010	0.011
Performance Measure index		0.142	1.032	0.064	0.03	0.022
<i>Internal Facing Indexs</i>		1.29				
<i>Previus</i>		1.5				
<i>Indexs (%)</i>		86%				

Tabel 19 Performance Index The Effect of Performance on Strategy Hospital “A”

Indicator	Performance Achievement Index	Performance Effect (%)
<i>Customer facing</i>	2,859	68,90
<i>Internal facing</i>	1,29	31,10
SUM	4,149	
<i>Perfect Order Fulfillment (RL.1.1)</i>	0,85	20,49
<i>Order Fulfillment Cycle Time (RS.1.1)</i>	1,1	26,51
<i>Upside supply chain flexibility (AG.1.1)</i>	0,81	19,52
<i>Upside supply chain adaptability (AG.1.2)</i>	0,099	2,39
<i>Total supply chain management cost (CO.1.1)</i>	0,142	3,42
<i>Cost of good sold (CO.1.2)</i>	1,032	24,87
<i>Cash to cash cycle time (AM.1.1)</i>	0,064	1,54
<i>Return on supply chain fixed assets (AM.1.2)</i>	0,03	0,72
<i>Return on working capital (AM.1.3)</i>	0,022	0,53

Tabel 20. *Scoring of Customer Facing Indicator Hospital “B”*

Indicator Code		RL.1.1	RS.1.1
Achievement of Research Result		99,83	2
Score	10	99,5	2
	9	99,42	2,07
	8	99,38	2,14
	7	99,33	2,21
	6	99,28	2,28
	5	99,23	2,35
	4	99,19	2,42
	3	99,17	2,5
	2	96,12	3,33
	1	93,06	4,16
0	90	5	
Performance Achivement Score		10	10
Performance Measure Weight		0,415	0,085
Performance Measure index		4,15	0,85
<i>Customer Facing index</i>		5	
<i>Previus</i>		1,5	
<i>Indexs (%)</i>		233%	

The highest performance achievement Hospital “A” in between customer facing and internal facing is the customer facing indicator 90,6%, The customer facing indicator plays a role of 68.9% in the strategy. With Order Fulfillment Cycle Time as the main indicator supporting strategy 26.51%, followed by Cost of good sold at 24.87% and Perfect Order Fulfillment 20.49%. While the weakest achievement is the performance of Upside Supply Chain adaptability which provides standard performance 2,39% supporting strategy.

Order Fulfillment Cycle Time, the main indicator supporting strategy at Hospital “A”, still lags behind (score 5) from competitors. If the target of Hospital “B” is used, the performance of Hospital “A” only achieves below average performance (score between 2-3). Internal facing indicator of Hospital “B” are not allowed to be accessed, so it is necessary to add financial ratio analysis indicators as a substitute for internal facing

Financial Ratio Analysis

Financial ratios are useful for seeing the company's position in a period and also the company's operations for several periods. The data is used as a complement to the internal facing performance. The source of the data comes from the hospital's audited financial statements can be seen in Table 21.

Tabel 21. Hospital Financial Ratios

	Ratio	Hospital "A"	Hospital "B"
Liquidity Ratio	Current Ratio	749% (7.49 times)	178% (1.78 times)
	Cash ratio	565% (5.65 times)	69,8% (0.698 times)
	Quick ratio	6 times	1.958 times
Activa Mangement Ratio	Ratio Inventory Turnover	7 times	10.4 times
	Total Asset Turnover	121% (1.21 times)	110,47 % (1.11 times)
Debt Management Ratio	Debt Ratio	16%	25.7%
Profitability Ratio	Return of Invesment	15%	23.83%

Hospital "A" has a more liquid from liquidity ratio in terms of management, it can be due to high income through sales or lack of cash utilization for investment. The lower debt ratio of Hospital "A" managerially means that the utilization of funding sources has not been maximized, but from the investor's perspective this is considered more secure. The ratio of inventory turnover and return on investment of Hospital "A" is lower, indicating low sales of pharmaceutical supplies, which affects cash returns and increases the risk of expiration and increases storage costs. From financial ratio it can be seen the ups and down of financial performance like research conducted by Nuriasari:2018 which states that the cash ratio that was above the industry average i.e above 50%, or in liquid condition there is an indication idle cash.

5. Conclusion

The hospital industry's competitive strategy can be implemented through supply chain management in pharmaceutical installations. Hospital "A" adopted a low-cost competitive strategy which, according to Potter, was a cost leadership strategy. The three best performances that support the "A" Hospital strategy are Order Fulfillment Cycle Time performance of 26.51%, Cost of good sold of 24.87% and Perfect Order Fulfillment of 20.49%. Performance that requires evaluation and improvement is Cash to cash cycle time, total supply chain management cost and return on working capital with the results of the performance evaluation getting a score of 1-2 (poor). Inventory turnover ratio and low return on investment, caused by the lack of commitment to the use of the hospital formulary, resulting in a buildup of inventory and procurement outside the formulary. Hospital "A" needs improved performance targets to match competitors' levels by maximizing existing capacity as a future strategy and evaluating on an ongoing basis. This research can be applied to evaluate which performance needs improvement, especially to pharmaceutical installation. This research also bring any insight to future research about supply chain competitive measurements on practical pharmaceutical business. Further research can be done to compare performance against the average value of several hospitals in order to improve competitive strategies.

6. Reference

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