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Development Strategies Analysis Using the SCOR Method: A Case Study from a Medical Device Company

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Abstract

Objective: This study aims to measure the performance of supply chain management at PT. Multi Anugrah Satu identifies supply chain management activities that require improvement and provides recommendations for improving performance strategies in supply chain management activities
Design/Methods/Approach: The initial stage of this study is to determine KPI and scores for the weighting of the COR and AHP methods, which respondents fill in, then the data are processed and identified using OMAX and the Light System in measuring the improvement of SCM performance management at PT. Anugrah Satu.
Findings: Using the SCOR method the firm obtains 83.48 out of 100. The value suggests a need for strategy that focuses more on decision-making at the management level and in the long term.
Originality: This study develops strategic operation management science and help improve public health levels during the COVID-19 pandemic.
Practical/Policy implication (optional): The implications of supply chain management strategies for management and business practices are developing advanced logistics management as a strategy to increase competitive advantage for the company.
Keywords: Supply Chain Management, SCOR, AHP, Traffic Light System

JEL Classification: L84, L40

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1. Introduction

Competition in the business world is getting tighter and is a challenge for manufacturing and service companies, especially when the whole world has been affected by the COVID-19 pandemic. To be able to continue to compete, the company must continue to improve quality, satisfying service, on time, and in accordance with customer wishes. Companies must be able to continue to improve their performance in order to survive in the tight global competition. In a company engaged in the logistics business, it is necessary to have a strategy for developing its business. In carrying out the business processes of a company, it is necessary to involve parties who support the company's business continuity (Adiguzel, 2019); (Adom et al., 2016); (Velocityglobal, 2020); (Feliz & Maggi, 2019); (Hosseini et al., 2018).

For all business processes to run well, good coordination is required among all parties, from suppliers to companies to shipments from companies to end consumers. The product is intended to reach consumers' hands quickly, followed by good product quality. In this business process, the main factor that needs to be considered in the performance of a company is the role of a company's supply chain (Maghsoudi et al., 2018); (Kotzab et al., 2019); (Anggraini et al., 2018); (Mukhtar & Azhar, 2020); (De Almeida et al., 2017).

In running a company, not all of these processes run smoothly. There are times when things happen that you do not want to happen. For example, it is not well established in terms of communication and information between company partners. This will cause operational errors for each company.

Coordination between all relevant parts of the supply chain network is the key to implementing effective supply chain management. Therefore, a new concept is needed that is motivated by an awareness of the importance of the role of all parties in creating cheap products that have good quality and, of course, fast. Knowing the condition of the company by looking at the capabilities of its business processes is by looking at the performance of the company's Supply Chain Management itself (Wankmüller & Reiner, 2019); (E.R. & Nurmadewi, 2021); (Maciel et al., 2018); (Ridwandono & Subriadi, 2019); (Gohar & Indulska, 2020).

PT. Multi Anugrah Satu is a company engaged in distributing medical devices located in Bandung and was founded in 2012. The company distributes various kinds of medical devices according to demand to meet consumer needs. The business process collaborates with several importing companies in Jakarta, Surabaya, and several cities. The company sells and distributes goods from its partners to several areas in West Java, both government and private consumers. Apart from being in Bandung, consumers from the company PT. Multi Anugrah Satu exists in several cities such as Sumedang, Garut, Tasikmalaya, and several cities in the East Priangan region.

In carrying out its supply chain activities, this company often experiences problems from the procurement to delivery processes. In the procurement process, this company often experiences delays in goods which affects time delays in the delivery process and fulfillment of consumer orders, which results in not achieving on-time delivery. Some examples of delays include empty stock of goods from importers because they are still being processed at customs and some goods have run out of company partners, so our company has to look for other companies. In addition, there are no supply chain performance assessment indicators that are presented in Key Performance Indicators to evaluate company performance (Augustine, 2019); (Tiwari et al., 2019); (de Araújo et al., 2017); (Buzzetto et al., 2020); (Dagba & Dagba, 2019).

Therefore, the company needs to identify and evaluate the supply chain performance suitable for PT. Multi Anugrah Satu in planning, procurement, delivery, and fulfillment of consumer orders to improve company performance and minimize problems in the company's business activities. From these problems, this study aims to measure the performance of supply chain management at PT. Multi Anugrah Satu identifies supply chain management activities that require improvement and provides recommendations for improving performance strategies in supply chain management activities at PT. Multi Anugrah Satu

2. Literature Review and Hypotheses Development

2.1. Supply Chain Operation Reference (SCOR)

The supply chain is a system in which an organization distributes its production goods and services to its customers. The supply chain is also a network of various organizations that are interconnected and have the same goal. The supply chain is a new concept in a broader and longer logistics problem, from basic materials to finished goods used by end consumers. Therefore, it can be said that supply chain management is a logistics network. Companies as the main players have the same interests, starting from suppliers, manufacturers, distribution, retail outlets, and customers connecting from upstream to downstream and producing the materialized value in goods and services in the hands of the last customer. The Supply-Chain Operations Reference (SCOR) model is a model developed by the Supply Chain Council (SCC) used to measure and improve a company's total supply chain performance (Henry & Nusraningrum, 2020); (Ehie & Ferreira, 2019); (S. Handayani et al., 2019); (Bidarti et al., 2019); (Ramadhan et al., 2019).

This model includes an assessment of delivery and demand fulfillment performance, inventory and asset management, production flexibility, warranties, process costs, and other factors that affect the overall performance assessment of a supply chain (Hasibuan et al., 2018); (Juzer & Sri Darma, 2019); (A. Handayani & Setyatama, 2020).

(Ramadheena et al., 2020); (Palomino, 2017). As a reference model, the SCOR model is basically based on three main pillars, namely process modeling: Reference to identify a model of a supply chain process to make it easier to translate and analyze, performance measurement: Reference to measure the performance of a company's supply chain as a measurement standard and implementation of best practices: Reference to determine the best practices required by the company.

The SCOR model contains five main management: Plan, Source, Make, Deliver, and Return. The model can be used to describe very simple or complex supply chains and has been able to describe and provide a basis for supply chain improvement for global and site-specific projects. The definition of SCOR can be seen in Table 1 below:

Table 1. Definition SCOR Levels 1

SCOR Process	
Levels 1	**Definition**
Plan	Processes that balance demand and supplier as a whole that aim to develop the needs of delivery, production, and supply optimally.
Source	The processes of purchasing goods and services that aim to meet actual or planned demand.
Make	The process of transforming materials into final products to meet actual or planned demand.
Deliver	The processes of providing finished products/services to meet actual or planned demand, including marketing management, transportation management, and distribution.
Return	The processes associated with returning and receiving a product are categorized as taking the product for various reasons. This process extends to post-delivery service to consumers.

This model also provides performance channels and supply chain measurement metrics, as shown in Table 2. The performance attribute is a supply chain criterion that allows it to analyze and evaluate a supply chain against other supply chains with competitive strategies.

Table 2. Performance Attributes and Metrics in SCOR

Number	Performance Attributes	Definition of Performance Attributes	Level 1 metrics
1	Supply Chain Reliability	The company's supply chain performance in fulfilling buyer's orders with the right product, quantity, time, packaging, conditions, and documentation gives buyers confidence that their orders can be fulfilled properly.	Perfect Order Fulfillment
2	Supply Chain Responsiveness	The speed of the company's supply chain time to meet customer orders	Order Fulfillment Cycle Time
3	Supply Chain Agility	Supply chain agility in response to changes in the market for gain or maintain a competitive advantage	• Upside Supply Chain Flexibility • Upside Supply Chain Adaptability
4	Supply Chain Costs	The cost associated with implementing the supply chain process	• Total supply chain management costs • Cost

2.2. Normalization

According to Sumiati (Mncedisi & Willie, 2019); (Prasetyaningsih et al., 2020); (Yuniaristanto et al., 2020); (Jiangsu, 2020); (Moreira et al., 2021), the level of performance fulfillment is defined by the normalization of these performance indicators. Each indicator has a different weight with different scale sizes. Therefore, it is necessary to process the parameter equalization by means of this normalization. Here, normalization plays an important role in achieving the final value of performance measurement. The normalization process is calculated using the Snorm De Boer normalization formula as follows.

$$S_{norm}\ (\text{skor}) = \frac{(S_i - S_{min})}{(S_{max} - S_{min})}\ x\ 100$$

Where:

Si = Actual indicator value achieved

Smin = The value of achieving the worst performance from the performance indicators

Smax = The value of achieving the best performance from the performance indicators

Each indicator weight is converted into a certain value interval in this measurement, namely 0 to 100. Zero (0) is the worst and one hundred (100) is the best. Thus the parameters of each indicator are the same, after which a result can be analyzed. Table 3 shows the performance indicator monitoring system.

Table 3. Performance Indicator Monitoring Performance

Monitoring System	Performance Indicators
< 40	Poor
40 - 50	Marginal
50 - 70	Average
70 - 90	Good
> 90	Excellent

2.3. Analytical Hierarchy Process (AHP)

The Analytical Hierarchy Process is a decision support model developed by Saaty, T.L. (2008). This decision support model will describe a complex multi-factor or multi-criteria problem to be structured into several components in a hierarchical arrangement by giving subjective values about the relative importance of each variable and determining which variables have the highest priority in order to influence the results in that situation, (Ramadhani & Handayati, 2020); (Chaiyaphan & Ransikarbum, 2020); (Jayant, 2018); (Ozdemir & Nalbant, 2020).

The main tool of AHP is to have a functional hierarchy, with the main input being human perception. A complex and unstructured problem is solved into groups and arranged into a hierarchical form. AHP has the advantage of combining objective and subjective elements of a problem. The advantages of AHP compared to others are a hierarchical structure, as a consequence of the selected criteria, to the deepest sub-criteria, taking into account the validity up to the tolerance limit for the inconsistency of various criteria and alternatives chosen by decision-makers and taking into account the durability or resistance of the output sensitivity analysis of decision making.

In addition, AHP can solve multi-objective and multi-criteria problems based on the comparison of preferences of each element in the hierarchy. After forming a preference matrix, a mathematical process begins to normalize and find the priority weight for each matrix. So, this model is a comprehensive decision-making model.

2.4. Objective Matrix (OMAX)

The measurements on the OMAX model were developed by Riggs (1987) from the Department of Industrial Engineering at Oregon State University in the 80s in the United States. OMAX combines productivity criteria into an integrated form and relates to one another. OMAX functions to equalize the value scale of each KPI indicator with the calculation of the interval value between the highest level, middle level, and lowest level, namely level 0 - level 10. The advantages of the OMAX model in measuring company productivity include: it is relatively simple and easy to understand, easy to implement, and does not require special skills; the data is easy to get; more flexible, depending on the problem at hand (Yosan et al., 2018); (Sukendar et al., 2018); (Komang Ayu Intan Ginanti1, Rachmawati Wangsaputra2, 2021); (Wahyuni & Alya, 2020); (Nurwantara, 2018).

2.5. Traffic Light System

The Traffic Light System is a method used to make it easier to understand the company's performance achievement with the help of 3 color categories, namely red, yellow, and green. The boundaries of each color category are determined through discussions with the company. This color category can make it easier for the company to evaluate the company's performance that is in accordance with the target or not achieving the target (de Souza et al., 2017); (Pulansari & Putri, 2020); (Wibowo et al., 2019); (. et al., 2017); (Zachariah et al., 2017).

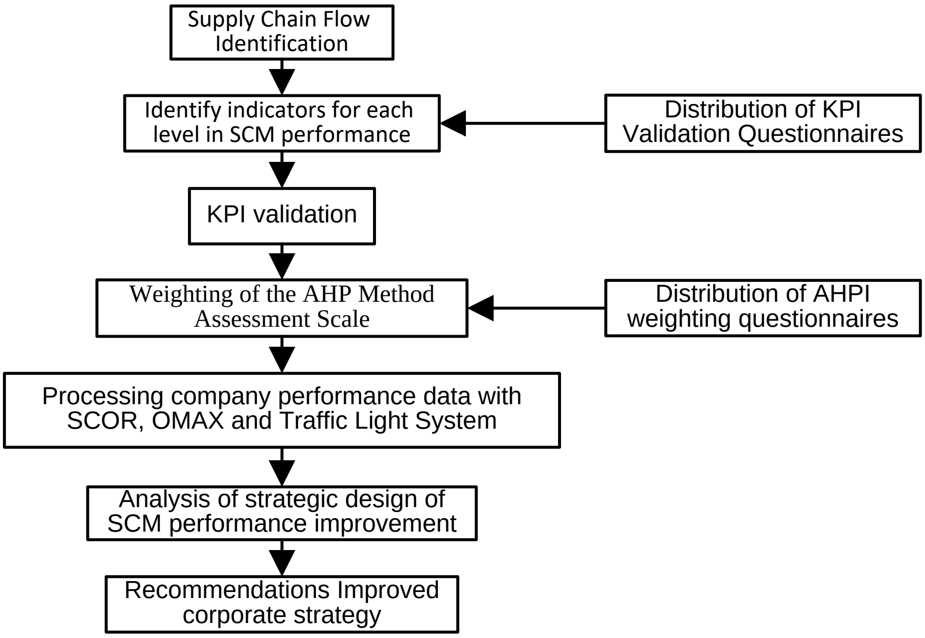
3. Method

This research uses the case study method. In general, case study research can be interpreted as a process of in-depth, detailed, and detailed investigation or examination of a particular or special event that occurred. This research uses a single instrumental case study intended to study a case in a place where the results will be used to improve or complement an existing theory or can also be used to spark a new theory. The reason for using a single instrument case study is that this research was conducted in one company.

The questionnaire used in this study consisted of 3 questionnaires, namely the KPI validity questionnaire, the KPI weight normalization questionnaire, and the AHP score weighting questionnaire. The KPI validity questionnaire identifies several supply chain KPIs required by the company. This questionnaire was filled in by 33 people consisting of managers, procurement staff, delivery/distribution staff, and marketing staff. The first stage is to compile KPIs that the manager level will validate according to the intensity level that is often carried out by employees. Validated KPIs will then be determined by distributing a second questionnaire to determine the normalized value of KPI weights to every employee at all levels, including manager level, procurement staff, delivery/distribution staff, and marketing staff (Jahangirian et al., 2017); (E. Kusrini et al., 2019); (S.Kong & Liangrokapart, 2019); (Elisa Kusrini et al., 2018); (Kaganski et al., 2017).

Furthermore, the score will be processed through the Snorm de Boer normalization method. This normalization is used to equalize the parameters to determine the actual score of each KPI indicator. The third questionnaire is a pairwise comparison questionnaire with the AHP method to determine the weight of each KPI indicator. This questionnaire is filled in by the managerial level, namely procurement, delivery/distribution, and marketing, who is considered to be the most aware of the state of the supply chain in PT. Multi Anugrah Satu (Sumanto et al., 2020); (Wiguna, 2020); (Kusuma et al., 2020); (Taherdoost, 2017); (Al-Harbi, 2001).

The next step is to determine the company's performance score by multiplying the score by the weight on each indicator that will be monitored using the performance indicator monitoring table. The performance indicator monitoring table shows that the indicators that need to be improved are those that are included in the poor, marginal, average, good, and excellent categories. Furthermore, analysis and suggestions for improvement will be carried out on indicators that require improvement (Hammadi et al., 2018); (Elisa Kusrini, 2019); (Nugraheni et al., 2013); (Rizkya et al., 2019); (Yumeina & Caroline, 2020). The flow chart of this research can be seen in Figure 1 below:



Source: Result of Processed Research

Figure 1. Research Method

4. Result and Discussion

This research begins by assessing the SCOR process at PT. Multi Anugrah Satu. This planning process includes the entire planning process, the employee performance control cycle, the scheduling cycle, and identifying product specifications. The source process includes the fulfillment and reliability of raw materials, information on raw material stock at suppliers, and ordering costs. The making process includes quality and safety in packing raw materials and the ability to meet consumer needs, including operational costs of shipping goods. The delivery process includes readiness for fulfillment and supplies of goods that are ready to be sent to consumers.

Finally, the return process includes handling customer guarantee complaints. In the research process with this planning, the researcher prepares a questionnaire to select points for KPIs that will be given to consumers in accordance with their duties and responsibilities in their work. Of the 32 KPIs for level 3 that ten respondents filled in through the first questionnaire, 24 KPIs were selected and validated, shown in Table 4.

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. The number of samples of 33 people consists of several different levels of positions according to the research interests. The respondent must fill in two types of questionnaires: the first is for KPI weighting, and the second is for AHP weighting. After that, create and select dimensions for level 2 from each of the core process variables from level 1. The indicator identification table for each level of SCM performance can be seen in Table 4 below:

Table 4. Identify Indicators for Each Level in SCM Performance

Core Process (level 1)	Dimension (level 2)	KPI	Key Performance Indicator (level 3)
Plan	Reliability	PR-1	Meeting with customers
		PR-2	Time identifies employee performance
	Responsiveness	PRe-1	Production scheduling period
		PRe-2	The timeframe identifies the new product specifications
	Asset	PA	Cash to cash cycle time
Source	Reliability	SR-1	Raw material defects
		SR-2	Fulfillment of raw materials
		SR-3	Reliability in delivery
	Responsiveness	SRe	Raw material lead time
	Flexibility	S.F.	Availability of suppliers
	Cost	SC	Cost of orders to suppliers
	Asset	S.A.	Daily supplies
Make	Reliability	MR-1	Error in packing
		MR-2	The number of defective products
	Responsiveness	MRe-1	Product manufacturing time
		MRe-2	Responsibility to produce a variety of consumer order
	Flexibility	M.F.	Flexibility in product manufacturing
	Cost	MC	Production cost
	Asset	MA	Long average hard packing life
Deliver	Reliability	DR-1	The level of fulfillment of finished product inventory is ready to ship
		DR-2	Out of product levels
	Responsiveness	DRe	The lead time for the finished product
Return	Reliability	R.R.	Complaint rate from customers
	Responsiveness	RRe	Time to replace defective products

Next, create KPI variables from each dimension from level 2 as the basis for weighting in the SCOR method. Distribute KPI variables to be weighted by importance according to consumer ratings. Calculate each KPI variable using the Snorm De Boer formula. Example:

$$PR-1=\frac{(1\;-\;0)}{(2\;-\;0)}\;x\;100=50$$

Table 5. KPI Normalized Value

Core Process	Dimension	KPI Number	Score
Plan	Reliability	PR-1	50
		PR-2	100
	Responsiveness	PRe-1	100
		PRe-2	50
	Asset	PA	50
Source	Reliability	SR-1	100
		SR-2	40
		SR-3	50
	Responsiveness	SRe	50
	Flexibility	SF	100
	Cost	SC	100
	Asset	SA	50
Make	Reliability	MR-1	100
		MR-2	100
	Responsiveness	MRe-1	100
		MRe-2	66.7

	Flexibility	MF	100
	Cost	MC	100
	Asset	MA	100
Deliver	Reliability	DR-1	100
		DR-2	100
	Responsiveness	DRe	100
Return	Reliability	RR	100
	Responsiveness	RRe	100

The next step is to calculate the weighting using the AHP method. Data from weighting values for the AHP method are obtained from questionnaires filled in by respondents. The AHP method's rating scale uses a comparison of 2 criteria of importance from the variables. The AHP method comparison scale table can be seen in Table 6 below:

Tabel 6. AHP Method Rating Scale

Value	Information
1	Criterion A is as important as criterion B.
2	A is slightly more important than B
5	A is clearly more important than B.
7	A is clearly more important than B.
9	Absolute is more important than B.
2,4,6,8	When in doubt between two adjacent values

From this research, it can be seen that the hierarchy using the APH method is shown in Figure 2 below:

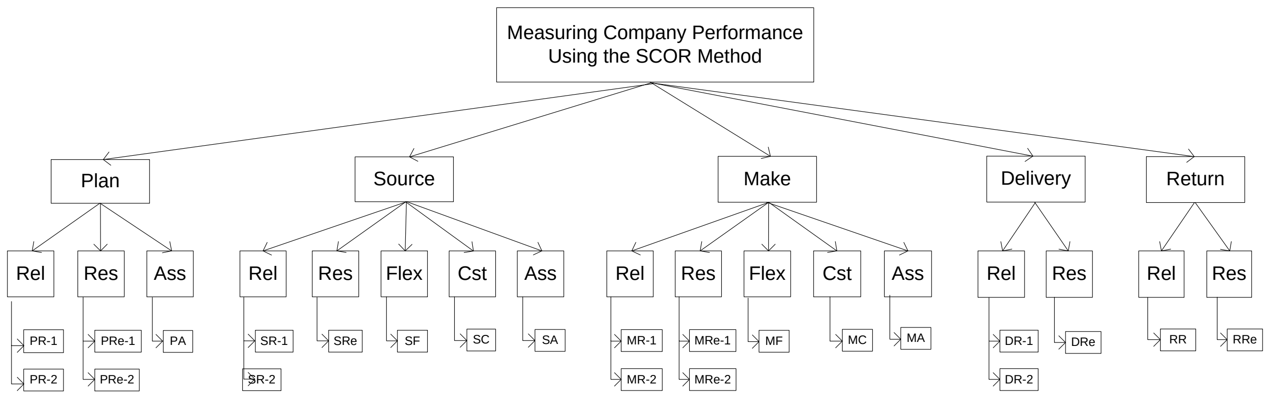


Figure 2. The KPI hierarchy of PT. Multi Anugrah Satu

Information:
Rel = Reliability
Res = Responsiveness
Flex = Flexibility
Cst = Cost
Ass = Asset

Next, make a pairwise comparison to calculate the results obtained from the respondents using the AHP matrix. From the results of comparisons of respondents, data is obtained in Table 7 below:

Table 7. Pairwise Comparison Matrix at Level 1

Criteria	Plan	Source	Make	Deliver	Return
Plan	1	1/3	1/2	3	6
Source	3	1	4	5	9
Make	2	1/4	1	4	4
Deliver	1/3	1/5	1/4	1	4
Return	1/6	1/9	1/4	¼	1
Jumlah	6.5	1.894	6	13.25	24

Next, divide the cell value in each column by the number of columns and recalculate the number of values in each column equal to 1. For example 0,154 = 1 / 6,5.

Tabel 8: Cell Value Calculation Matrix at Level 1

Criteria	Plan	Source	Make	Deliver	Return	Weighted Value
Plan	0.154	0.176	0.083	0.226	0.250	0.178
Source	0.462	0.528	0.667	0.377	0.375	0.482
Make	0.308	0.132	0.167	0.302	0.167	0.215
Deliver	0.051	0.106	0.042	0.075	0.167	0.088
Return	0.026	0.059	0.042	0.019	0.042	0.037
Jumlah	1.000	1.000	1.000	1.000	1.000	1.000

Next, look for the weighted value by finding the average value for each line. The weighted value becomes the weight for the dimensions at level 1. Then look for the value of λ max (eigenvalue) by adding up the multiplication of the total value per column with the weighted value per row, for example: λ max $= (6.5 \times 0{,}178) + (1.894 \times 0{,}482) + (6 \times 0{,}215) + (13.25 \times 0{,}088) + (24 \times 0{,}037) = 5.422$. The next step is to look for the Consistency Index (CI) by dividing the difference between the eigenvalue and the number of orders with the difference between the number of orders and 1, for example:

$$\text{Consistency Index (CI)} = \frac{(\lambda\, maks - n)}{(n-1)} = \frac{(5.422 - 5)}{(5-1)} = 0.105$$

The final calculation is to calculate the consistency ratio (C.R.) with the formula:

$$\text{Consistency Ratio (C.R.)} = \frac{\text{CI}}{\text{RI}} = \frac{0.105}{1.12} = 0.094$$

Table 9: Matric Order Value

Ordo	1	2	3	4	5	6	7	8	9	10
RI	0	0	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.49

Because for level 1, the matrix has an order of 5 x 5, R.I. chosen is 1.12. The calculated C.R. value <10% is 0.094, and it is concluded that the pairwise comparison matrix value has met the desired consistency ratio requirements. After the calculation process is complete, the weighting results are obtained from level 1 to level 3 as in table 10 below:

Tabel 10: Weight Value of Each Level

Core Process	Weight (W.V)	CR	Dimension	Weight	CR	KPI	Weight	CR
Plan	0.178	0.094	Reliability	0.623	0.022	PR-1	0.75	0
						PR-2	0.25	
			Responsiveness	0.137		PRe-1	0.75	0
						PRe-2	0.25	
			Asset	0.239		PA	1	0
Source	0.482		Reliability	0.135	0.097	SR-1	0.159	0.022
						SR-2	0.252	
						SR-3	0.589	
			Responsiveness	0.233		SRe	1	0
			Flexibility	0.09		SF	1	0
			Cost	0.475		SC	1	0
			Asset	0.067		SA	1	0
Make	0.215		Reliability	0.138	0.093	MR-1	0.333	0
						MR-2	0.667	
			Responsiveness	0.088		MRe-1	0.667	0
						MRe-2	0.333	
			Flexibility	0.119		MF	1	0
			Cost	0.369		MC	1	0
			Asset	0.285		MA	1	0

Core Process	Weight (W.V)	CR	Dimension	Weight	CR	KPI	Weight	CR
Deliver	0.088		Reliability	0.25	0	DR-1	0.25	0
						DR-2	0.75	
			Responsiveness	0.75		DRe	1	0
Return	0.037		Reliability	0.25	0	RR	1	0
			Responsiveness	0.75		RRe	1	0

The productivity criteria will be combined in one form and integrated into a matrix to facilitate identification. Each performance indicator is weighted according to the level of importance of the overall productivity goals of the company. OMAX consists of 3 parts: 1). part a → defining; 2). part b → quantifying; and 3). part c → monitoring. Furthermore, to make it easier to classify the achievement of company performance at the monitoring level based on three color categories using the Traffic Light System method, including 1). red → is at the threshold 0 – 2 (poor performance); 2). yellow → is at the threshold 3 – 7 (performance is good enough); and 3). green → is at the threshold 8 – 10 (good performance). Example: PR-1 is defining: Meeting with customers, quantifying: performance value (score x weight); and controlling: color in each cell which refers to the Traffic Light System. The results can be seen in table 11 for calculating the final KPI value

Table 11: KPI Final Score Calculation

Core Process	Dimension	Key Performance Indicator	Score	Weight	Performance Value (Score x Weight)	Total of each dimension
Plan	Reliability	Meeting with customers	50	0.75	37.5	62.5
		Time identifies employee performance	100	0.25	25	
	Responsiveness	Production scheduling period	100	0.75	75	87.5
		The timeframe identifies the new product specifications	50	0.25	12.5	
	Asset	Cash to cash cycle time	50	1	50	50
Source	Reliability	Raw material defects	100	0.159	15.9	55.43
		Fulfillment of raw materials	40	0.252	10.08	
		Reliability in delivery	50	0.589	29.45	
	Responsiveness	Raw material lead time	50	1	50	50
	Flexibility	Availability of suppliers	100	1	100	100
	Cost	Cost of orders to suppliers	100	1	100	100
	Asset	Daily supplies	50	1	50	50
Make	Reliability	Error in packing	100	0.333	33.3	100
		The number of defective products	100	0.667	66.7	
	Responsiveness	Product manufacturing time	100	0.667	66.7	88.91
		Responsibility to produce a variety of consumer order	66.7	0.333	22.21	
	Flexibility	Flexibility in product manufacturing	100	1	100	100
	Cost	Production cost	100	1	100	100
	Asset	Long average hard packing life	100	1	100	100
Deliver	Reliability	The level of fulfillment of finished product inventory is ready to ship	100	0.25	25	100
		Out of product levels	100	0.75	75	
	Responsiveness	The lead time for the finished product	100	1	100	100
Return	Reliability	Complaint rate from customers	100	1	100	100
	Responsiveness	Time to replace defective products	100	1	100	100

Furthermore, the calculation of the final SCM performance value for each dimension is obtained from the total multiplication of the performance value of each core process can be seen in table 12.

Table 12: Final Dimension Value Calculation

Core Process	Dimension	Score	zWeight	Performance Value (Score x Weight)	Total of each dimension
Plan	Reliability	62.5	0.623	38.94	62.88
	Responsiveness	87.5	0.137	11.99	
	Asset	50	0.239	11.95	
Source	Reliability	55.43	0.135	7.48	78.98
	Responsiveness	50	0.233	11.65	
	Flexibility	100	0.090	9	
	Cost	100	0.475	47.5	
	Asset	50	0.067	3.35	
Make	Reliability	100	0.138	13.8	98.92
	Responsiveness	88.91	0.088	7.82	
	Flexibility	100	0.119	11.9	
	Cost	100	0.369	36.9	
	Asset	100	0.285	28.5	
Deliver	Reliability	100	0.250	25	100.00
	Responsiveness	100	0.750	75	
Return	Reliability	100	0.250	25	100.00
	Responsiveness	100	0.750	75	

Table 13 below is the total score of SCM performance obtained from calculating the total score for each dimension and weight.

Table 13: Calculation of the Total Value of SCM Performance

Core Process	Score	Weight	Performance Value (Score x Weight)
Plan	63	0.196	12.35
Source	79	0.435	34.37
Make	99	0.233	23.07
Deliver	100	0.098	9.80
Return	100	0.039	3.90
TOTAL			83.48

Based on the results and discussion that has been done above, it can be obtained the identification of strategies for improving company performance as in Table 14 below:

Table 14. Identify Strategies in KPIs

	Strategy	Key Performance Indicator
P-1	Improve coordination between customers and company suppliers (Reliability)	Meeting with customers
P-2	Establish a reward system for employees (Reliability)	Time identifies employee performance
P-3	Understand market conditions (Responsiveness)	Production scheduling period
		The timeframe identifies the new product specifications
P-4	Bookkeeping in the form of regular payment records (Asset)	Cash to cash cycle time
S-1	Increase supplier loyalty (Reliability)	Raw material defects
S-2	Improve On Time Delivery (Reliability, Responsiveness, Asset)	Fulfillment of raw materials
		Raw material lead time
		Daily supplies
		Reliability in delivery
S-3	Improve the punctuality of payments (Cost)	Cost of orders to suppliers
M-1	Increase production capacity (Responsiveness)	Responsibility to produce a variety of consumer orders
M-2	Improve product quality (Reliability)	Error in packing

	Strategy	Key Performance Indicator
		The number of defective products
M-3	Improve equipment maintenance (Asset)	Long average hard packing life
M-4	Increase profit (Cost)	Production cost
M-5	Increase the accuracy of the quantity and time according to customer demand (Responsiveness)	Product manufacturing time
D-1	Increase finished product fulfillment (Reliability)	The level of fulfillment of finished product inventory is ready to ship
D-2	Increase storage of finished products (Reliability)	Out of product levels
D-3	Shorten the lead time of the finished product (Responsiveness)	The lead time for the finished product
R-1	Opening customer service (Reliability & Responsiveness)	Complaint rate from customers
		Time to replace defective products
		Increase customer loyalty

From the table above, the identification of improvement strategies can be made as a road map for the improvement of each indicator in supporting the company's development. The following is the road map for SCM performance improvement strategies, which can be seen in Figure 3 below:

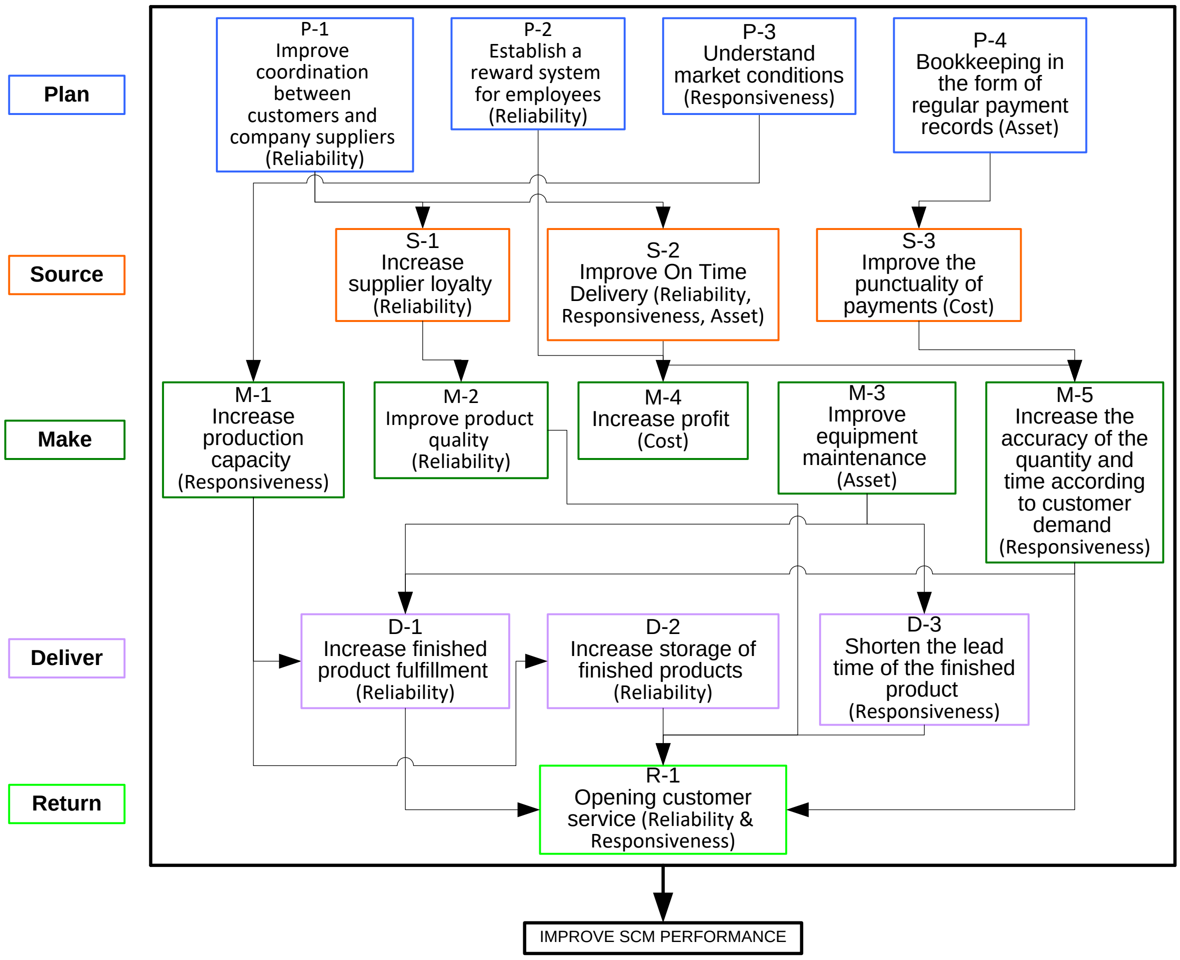


Figure 3. Road Map for Strategy to Improve SCM Performance

Many studies using the SCOR, AHP, OMAX, and Traffic Light methods have been carried out and given significant results. This is in line with research conducted by Handayani, A., & Setyatama, C. Y. (2020), Taherdoost, H. (2017), Wahyuni, N., & Alya, R. (2020), Zachariah, B., Ayuba, P., & Damuut, L. P. (2017) and others. The research's contribution is one of the case studies carried out in the service industry, so it is expected to develop operational management knowledge, especially related to SCM in the service industry sector. Research using the method mentioned above has previously been carried out in companies in the manufacturing industry, and as a novelty, this research integrates the methods used in previous studies, which are then applied to companies engaged in the service sector. So it can be concluded that there are several contributions to applying the method previously used in manufacturing companies. In this study, the method was used in the service sector. From the results of the analysis above, in addition to technical strategies using these tools, several managerial analyzes can be applied by the company related to the company's supply chain activities, including carrying out minimum on-hand inventory to avoid waiting times for delivery of goods from partner companies PT. Multi Anugra Satu, collaborates with several companies that have similar goods for the purpose of substituting goods for procurement and anticipating if the goods with the main company partners experience a shortage of goods. In Table 13, it is still found that performance is still poor, marked in red, and in the proposal for improvement, which is carried out in figure 3.

5. Conclusion

The conclusion obtained from this study is a proposed strategy that focuses more on decision-making at the management level and for the long term in the form of a strategy map during the COVID-19 pandemic. Improving SCM performance management at PT. Multi Anugrah Satu using the SCOR method is obtained at 83.48 out of 100, so there is a need for changes and applications to consider the strategies proposed in this study to achieve increased SCM performance during the COVID-19 pandemic.

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Conflict of Interest

The authors declare that the research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

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