The Application of Supply Chain Performance Measurement in CV X Using Balanced Score Card

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**Abstract**. CV. Mulya Jaya Abadi is a company engaged in the marketing of soap products, detergents, cosmetic products. The purpose of this study is to assess the performance of the company CV. Mulya Jaya Abadi by using a balanced scorecard. The results of research on the performance of a company have been carried out well from the four balanced scorecard perspectives, namely: (1) Financial perspective, the company's net profit margin from 2017 to 2018 has increased 0.2%, the operating profit margin is seen as a positive percentage of the year. 2017 to 2018. The company experienced an increase of 0.48%, ROI (Return On Investment) that from 2017 to 2018 experienced an increase that was not too large. (2) Customer perspective, the percentage of customer acquisition experienced an increase from 2017 to 2018 with a 3% increase in percentage and a 4% increase in customer retention. (3) Internal business and process perspectives, in the past 2 years there has been a decline in innovation from 2 innovations to 1 innovation, (4) Learning and growth perspective, this increased employee retention rate it was noted that in 2017 the number of employees who left were 50 people, while in 2018 there were 30 people.

1. Introduction

Nowadays, in 4.0 era supply chain is become bigger and important attention that enterprise needs to develop their effort in order to satisfaction customer. Market globalization has made supply chain management an interesting topic to be discussed: an efficient supply chain can lead to a range of benefits including reduced cost, increased market share and sales, and sustainable customer relationships [3]. It has also been cited that evaluation of supply chain performance can improve the overall performance of the organization [7}.

Several studies have focused on the evaluating performance of supply chain based on Balanced Score Card. The strongest point of BSC is its ability to illustrate the cause and effect relations between strategies and processes through the four BSC’s perspectives of financial perspective, customer perspective, internal business process perspective, as well as learning and growth perspective. The present paper is an attempt focusing on these relationships, especially the returnable ones. To do so, at first, all relationships between the four perspectives of BSC were determined and then the DEMATEL approach was employed to obtain a network structure. This network structure was then used to create a network DEA model. Since it was not possible to calculate the efficiency evaluation score by BSC, the data envelopment analysis (DEA) model was used for such an evaluation[11].

In today’s fierce global environment, continuous performance measurement is the key mantra for any kind of business successes. The performance measurement system is a framework to measure the efficiency of the supply chain. The purpose of this paper is to review the dearth of research into performance measurement systems in the context of the supply chain by reviewing the contemporary literature for the last two decades and evoking the potential avenues for future research [8]. . This article takes a different angle to the current supply chain performance frameworks by discussing performance through DMAIC cycle. Considering a through-life service, this paper presents a performance optimization framework to improve the supply chain performance in terms of an asset or component availability and cost of service [6].

The proposed approach models simultaneously product and supply chain architectures pointing out the sequencing of tasks and intertwined relations between partners. Through the introduction of compatibility, the goal is to help a company’s managers to select their most relevant partners not only based on suppliers’ selection criteria but also by using the inter-partners compatibility[12]. This paper presents a decision system model using GRAI method. This model is presented at the global level (i.e. the whole supply chain level) and at the local level (i.e. the level of each company of the chain). Then, performance indicators are proposed at both levels, using ECOGRAI Method. But in order to collect and aggregate such performance indicators at the global level, it is necessary for the various companies to use compatible decision support system [5].

The aim of this research is to identify antecedents of existing SC paradigm’s practices, as well as antecedents for SC performance measurement to formulate a conceptual framework. Based on this research, new sustainable SC performance measurement conceptual framework is proposed for existing SC paradigms [2].Therefore in the paper firstly an overview of definitions and developments in performance measurement and management systems and a structure for PMMS are given. Secondly guidelines for good and modern PMMS are discussed. Thirdly existing approaches for Supply Chain Management PMMS [10]. The aim of this paper is to support the Circular Economy and the remanufacturing industry with an approach to optimize international reverse supply chains and thus to become more sustainable [4].

Distribution by the company X is based on requests from consumers who are in stores and markets. Within this company, there is already a well-coordinated planning and scheduling of product distribution activities, so that demand for all types of products is controlled so that there is no shortage or excess supply, both at the factory and at the distributor. Performance is a work achievement which is the result of implementing work plans made by institutions carried out by leaders and employees (HR) who work at the institution, both the government and the company (business) to achieve organizational goals, [1].

The method that can be used to measure company performance is the Balanced Scorecard (BSC). According to [9] Balanced Scorecard (BSC) is an assessment method that includes four perspectives for measuring company performance, namely Financial Perspective, Customer Perspective, Internal Business Process Perspective and Learning and Growth Perspective. The objective and measurement in the Balanced Scorecard (BSC) is not only an amalgamation of existing financial and non-financial measures, but a result of a top-down (top-down) process. Based on the mission and strategy in the business unit, the mission and strategy must be translated into more tangible goals and measurements.This research was conducted at the Distributor X, a company engaged in the marketing of soap products, detergents, cosmetic products, nutritious drinks and tea bags. With the Balanced Scorecard (BSC) method, it is expected to improve the company's performance on the perspective of employee learning and growth, financial perspective, customer perspective and internal business process perspective.

1. Method

The technique used in this research is financial ratio analysis, then from these financial ratios four management perspectives are seen, namely: customer perspective, internal business process perspective, learning and growth, and financial perspective,witch is:

1. Financial perspective
2. Net profit margin

$$\frac{net profit }{Total sales}X100\%$$

1. Operating profit margin

$$\frac{Operating profit}{Total sales}X100\%$$

1. Return on Invesment (ROI)

$$\frac{(Total sales-Investation)}{Investation X 100\%}$$

1. Rentability ratio

Return on Equity $\frac{net profit}{bank capital}X100\%$

Return on assets $\frac{net profit}{Total asetts}X100\%$

Operating Expenses Operating Income $\frac{Operating cost}{Operating income}X100\%$

1. Customer perspective
2. Customer Acquisition $\frac{New Customer}{Total Customers}×100\%$
3. Customer Retention$\frac{number of old customers}{Total Customers}×100\%$
4. Internal business process perspective
5. Innovation Process
6. After sale service
7. Employee Learning and Growth Perspective
8. Employee Satisfaction Level
9. Employee Productivity $\frac{Total sales}{Total employees}×100\%$
10. Employee Retention (Employee Rettention)
11. Results and Discussion
	1. *Financial Perspective*

Table 1 Company financial statements

|  |  |  |
| --- | --- | --- |
|  |  *YEAR*  |  |
| *ACOUNT* | *2017* | *2018* |
|  Curent asset |  Rp. 3.293.686.056 |  Rp. 3.460.502.152 |
|  Total asset |  Rp. 3.682.054.368 |  Rp. 3.980.532.425 |
|  Current liabilities |  Rp. 218.716.277 |  Rp. 224.121.325 |
| Profit after tax |  Rp. 488.424.147 |  Rp. 520.455.112 |
|  Sales  |  Rp. 34.917.712.359 |  Rp. 35.605.515.421 |
| Cost of goods sold |  Rp. 32.997.238.179 |  Rp. 33.545.122.150 |
|  Net profit |  Rp. 1.920.474.180 |  Rp. 2.060.393.271 |
|  Operating profit |  Rp. 215.174.187 |  Rp. 238.240.626 |
|  |  |  |

* 1. *The customer perspective*

 Table 2 Customer perspective measurement reports

|  |  |  |
| --- | --- | --- |
|  |  *YEAR* |  |
|  *SIZE* | *2017* | *2018* |
|  Customer acquisition rate |  1.500 shop |  1.800 shop |
|  Customer retention rate |  1.200 loyal shop | * 1. yal shop
 |

* 1. *Internal business process perspective*

 Table 3 Internal business perspective measurement reports

|  |  |  |
| --- | --- | --- |
|  |  *YEAR* |  |
|  *SIZE* | *2017* | *2018* |
|  Inovation |  2 inovation |  1 inovation |
| After sale service | 20% bad stock replacement from shop request | 30% bad stock replacement from shop request |

* 1. *Employee learning and growth perspective*

 Table 4 Report on measurement of employee learning and growth perspectives

|  |  |  |
| --- | --- | --- |
|  |  *YEAR* |  |
|  *SIZE* | *2017* | *2018* |
|  Employee retention rate |  3% of employees left |  6% of employees left |
| Productivity level | 80% attendance is full | 90% attendance is full |

The results of calculation supply chain performance with the Balanced Scorecard approach in CV. X are as follows:

 **Table 5 Results of measurement from a financial perspective**

|  |  |  |
| --- | --- | --- |
|  |  *YEAR* |  |
|  *SIZE* | *2017* | *2018* |
|  Net profit margin |  5,5 % |  5,7% |
| Operating profit margin |  7,87 % |  8,35 % |
| *Return On Investment* |  2,49 % |  2,56 % |
| Rentability ratio: |   |   |
| ROEROABOPO | 1,20%0,58%3,23% | 1,10%0,63%2,29% |

 **Table 6 Measurement results from the customer perspective**

|  |  |  |
| --- | --- | --- |
|  |  *YEAR* |  |
|  *SIZE* | *2017* | *2018* |
|  Customer acquisition rate |  1,5 % |  1,8 % |
|  Customer retention rate |  1,2 % |  1,6 % |

 **Table 7 Measurement results from the internal business perspective**

|  |  |  |
| --- | --- | --- |
|  |  *YEAR* |  |
|  *SIZE* | *2017* | *2018* |
|  Inovation |  2 % |  1 % |
| After sale service | 20%  | 30% |

**Table 8 Measurement results from the perspective of learning and employee growth**

|  |  |  |
| --- | --- | --- |
|  |  *YEAR* |  |
|  *SIZE* | *2017* | *2018* |
|  Employee retention rate | 3 %  | 6 %  |
| Productivity level | 80 %  | 90 %  |

From the data above, it can be seen that the company's net profit margin from 2017 to 2018 has increased by 0.2%. The increase in net profit margin was due to the level of sales which had increased slightly from 2017. This was due to several company customers who only paid a little of their obligations after the payment was due.

The operating profit margin shows a positive percentage from 2017 to 2018. The company experienced an increase of 0.48%. The increase in operating profit margin was due to a fairly large level of sales and sufficient distribution costs so that the company in generating profit from operations had increased.

From the measurement results of the customer perspective, it can be seen that the percentage of customer acquisition has increased from 2017 to 2018 with an increase of 3%. This increase was due to the number of new customers CV. X

1. Conclusion

The results of the research on the performance of a company have been carried out well, seen from the four balanced scorecard perspectives, namely: (1) Financial perspective, the company's net profit margin from 2017 to 2018 has increased 0.2%, the operating profit margin is seen as a positive percentage of the year. 2017 to 2018. The company experienced an increase of 0.48%, ROI (Return On Investment) that from 2017 to 2018 experienced an increase that was not too large. It can be seen that the Return On Investment has increased by 0.07% from the previous year, the percentage of ROE profitability ratio decreased 0.10%, ROA increased by 0.05%, BOPO increased by 0.06% (2) Customer perspective, the percentage of customer acquisition experienced an increase from 2017 to 2018 with a 3% increase in percentage and a 4% increase in customer retention. (3) Internal business and process perspectives, in the past 2 years there has been a decline in innovations from 2 innovations to 1 innovation, 2017 to 2018 and an increase in bad stock replacement of 10% of store requests from the previous year. (4) Learning and growth perspective, this increased employee retention rate is because the number that left from 2017 to 2018 decreased from the reports obtained from the company, it was noted that in 2017 the number of employees who left was 50, while in 2018 there were 30 people. Employee productivity level is seen from employee attendance. In 2017, 80% entered full, while in 2018 90% entered full.

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