

## DESIGN OF LOGISTICS COMPANY PERFORMANCE MEASUREMENT

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### ABSTRACT

*PT. Bubu Logistic Indonesia is a service company. Based on company reports the performance of the operational system shows quite good results, but integrated performance measurement has never been carried out. This study aims to design a performance measurement PT. Bubu Logistic Indonesia with several integrated aspects, namely financial perspective, customer perspective, internal business process perspective, as well as learning and growth perspective which will improve the performance of employees of PT. Bubu Logistics Indonesia. This research is a design process of measuring the performance of employees of PT. Bubu Logistic Indonesia uses the Analytical Hierarchy Process (AHP) and Balance Scorecard (BSC) methods. To find out the results of designing employee performance measurements, the next step is to make a strategic map that has been proposed and approved by management and then grouped into 4 Balance Scorecard (BSC) perspectives. To find out the weight and priority of each perspective, the Analytical Hierarchy Process (AHP) method is used. The financial perspective has a weight of 39.25%, followed by a customer perspective of 36.75%, an internal business perspective has a weight of 18.75%, and a growth and learning perspective has a weight of 5.25%. From the results of measuring the performance of employees of PT. Bubu Logistic Indonesia has an average performance measurement score for 6 months of 56%.*

**Keywords:** Performance Measurement, Balance Scorecard (BSC), Analytical Hierarchy Process (AHP)

### INTRODUCTION

International trade has become a hot issue related to logistics in recent years. More and more countries are doing international trade so that it opens up opportunities great opportunity for freight forwarder service providers to expand their business scope. However on the other hand, regulatory differences between countries regarding international trade

and tariff wars causing intense competition among freight forwarders. The company needs more pay attention to the company's performance evaluation system in order to remain competitive and be able to maintain quality and quantity (customers).

The company has been trying to make efficiencies in terms of costs, however still unable to measure performance in an integrated and balanced manner. It means the company has never carried out performance measurements related to vision, mission as well as corporate strategy. So far the company's performance assessment is only based on factors financial only. So the company considers that if profits increase, then indicates that the condition of the company's performance increases. In fact, measurements performance in this way is no longer suitable for use in a competitive industrial climate getting tighter. Seeing the changing operational conditions of the company, automatically Companies are required to carry out overall performance measurements, so that the information is later obtained, can be useful for the benefit of the company. Here's a report comparison of the decline in subscribers in the last 2 years.

**Table 1.** Comparison of Customer Decline

<b>Time Comparison</b>	<b>Decrease in Customers</b>
2019 to 2020	20%
2020 to 2021	42,5%

Of the problems that exist in the instability in running its business, researchers conduct research to determine the company's performance when measured by perspective Balanced Scorecard and propose the right strategy for the company to face competition.

## **LITERATURE REVIEW**

### **Work Effectiveness**

According to Steer (2015: 203) effectiveness is doing something accurately, timely, objectively and thoroughly in accordance with organizational goals. Effectiveness according to Emerson in Singodimedjo (2017:132) states that measurement is in the sense of achieving predetermined goals or objectives. Admosoeprapto (2016: 34) explains that work effectiveness is a measure that describes the extent to which goals can be achieved by employees based on targets or standards that have been set by the company.

## **METHOD**

This research was conducted for six months starting from July to October 2022. This research took place at PT. Bubu Logistic Indonesia.

Data Source Type :

1. Primary data, including questionnaires and interviews
2. Secondary data, including financial reports and reports on the number of customers.

### **Population and Data Sample**

The population in this study is the company's internal parties, namely as follows:

1. General Manager : 1 person
2. Director : 1 person
3. Operations Manager: 1 person
4. Accounting staff: 1 person

5. Admin staff: 1 person
6. PPJK staff: 1 person
7. Operational staff: 2 person
8. Sales/marketing: 4 person

So the researchers set a population of 12 people. Because of the population only 12 people, then the entire population becomes the sample. In accordance with the theory of samples and research sampling according to Arikunto (2010) that the sample is part or representative of the population studied. Based on the above understanding, it can be concluded that the sample is part of the population to be studied and represented population characteristics. If the research population is less than 100 then the sample taken are all, but if the study population is more than 100 then the sample can be taken between 10-15% or 20-25% or more. Deep sampling This research was conducted by means of a saturated sample technique, namely the technique of determining a sample that is take all members of the population as a sample.

### Method of collecting data

The data in this study were collected from various sources, namely as follows:

Questionnaire, which aims to obtain the weighting value of research variables and weighting criteria of research variables. Questionnaires were given to managers operational. The questionnaire refers to the Analytical Hierarchy Process method (AHP) by making pairwise comparisons in 2 stages. The first stage comparing between fellow variables and the second stage fellow criteria with variables the same one.

1. Interviews, to obtain target information and realization in each variable criteria interview research was conducted to managers related to variable criteria study.
2. Documentation, to find data regarding matters in the form of notes, transcripts, books, etc. This technique is used to retrieve internal company data such as company history, company profile, organizational structure and company report.

### Data Processing Methods

In order for the data obtained to be useful, the data must be processed and analyzed, so that it can be used to interpret and as a basis in decision-making. The data analysis used in this study is AHP method and performance measurement. In the AHP method the consistency index is expected to be less than or equal to 10%. Formula the calculation is as follows:

$$CI = \frac{\lambda_{max} - n}{n - 1}$$

Description :

CI = consistency index

$\lambda_{max}$  = The largest eigenvalue of the n order matrix

n = Matrix order

If CI is zero, then the pair wise comparison matrix is consistent. Limit the inconsistency that has been determined by Saaty (1993) is determined by using the Consistency Ratio (CR), namely the comparison of the consistency index with the value random index obtained from the Oak Ridge National Laboratory experiment later developed by the Wharton School. This value depends on the order of the matrix n. thus, the consistency ratio ( Saaty, 1993)

is formulated by the equation:

$$CR = \frac{CI}{RI}$$

Description :

CI = consistency index

CR = consistency ratio

RI = random index

After obtaining the value of each metric, it is continued by calculating the value of the criteria with the following formula:

<b>Criteria score = (metric weight x metric score)</b>
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In the data processing method used 2 methods, the first is the method analytical hierarchy process (AHP) and the balanced scorecard (BSC) method. step for to analyze this research are as follows:

1. The design stage of the balanced scorecard  
At this stage identify the vision and mission of the company. Identification is required for Find out what the goals of the company are.
2. Create a strategy map and discuss appropriate strategic goals
3. The stage of designing the company's key performance indicators  
Performance indicators are used as a basis for assessing the level of performance in all company activities and can assist companies in evaluating targets or company goals.
4. The weighting stage uses the analytical hierarchy process (AHP) method  
Data collection is done by giving questionnaires in the form KPI weighting. The KPI weighting process is carried out by the leadership of PT. Bubu Logistics Indonesia. It aims to provide a ranking of KPIs that contribute to company. Furthermore, the KPI data is weighted using the analytical method hierarchy process (AHP)
5. The value determination stage uses a traffic light system At this stage the aim is to find out which metrics need improvement. The three colors as an indicator are green for satisfactory performance (performance score  $\geq 80$ ) yellow for marginal performance ( $\geq 50$  score  $< 80$ ) and red for performance unsatisfactory or bad (performance score  $\leq 50$ ).

## RESULT AND DISCUSSION

Within 6 months of performance measurement that has been carried out by PT. Bubu Logistic Indonesia has a total score with an average per semester (per 6 months). The results of the score for 6 months are as follows:

**Table 2.** Average Performance Measurement

Cod e	Performan ce	Jul	Aug	Sept	Oct	Nov	Dec	Averag e
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F1	Profit Margins	11.3 %	9.9%	20.1 %	14.1 %	7.1%	23.0 %	14.2%
F2	Cost Efficiency	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%
C1	Increased Satisfaction Customer	23.7 %	22.7 %	25.9 %	11.0 %	10.2 %	10.2 %	17.3%
C2	Number Increase Customer	1.9%	1.5%	2.4%	1.4%	1.5%	3.7%	2.0%
I1	Product Innovation	12.5 %	11.7 %	14.1 %	14.1 %	10.1 %	11.4 %	12.3%
I2	Perfect Strategy and Opportunity Distribution to Customers	3.8%	4.1%	4.4%	4.1%	3.6%	3.3%	3.9%
G1	Organizing Training to Create HR competitive	1.6%	1.3%	1.1%	1.1%	1.3%	1.1%	1.2%
G2	Giving Appreciation to Improvement Work quality	1.1%	0.5%	1.1%	0.5%	0.5%	1.6%	0.9%
		<b>60%</b>	<b>56%</b>	<b>73%</b>	<b>50%</b>	<b>38%</b>	<b>58%</b>	<b>56%</b>

From the results of the performance measurement above, that the performance measurement indicators PT Bubu Logistic Indonesia is described in 4 perspectives of the Balance Scorecard (BSC) in several alternative performance strategies that are adjusted to the vision, mission, and operational strategy adjusted by the strategy map with the AHP questionnaire, then weighted by the AHP (Analytical Hierarchy Process) method and the determination of alternatives as well the results of the weighting used to determine the employee performance score of PT. Bubu Logistic Indonesia. After that the results of performance measurement can be analyzed as follows:

1. From the results of determining the strategy map, 8 alternative results were determined, namely profit margin (F1), cost efficiency (F2), increased customer satisfaction (C1), improvement number of customers (C2), product innovation (I1), perfecting strategies and opportunities distribution to customers (I2), conduct training to create qualified human resources competitive (G1), as well as giving appreciation for improving the quality of work (G2).
2. From the results of weighting using the AHP method, the financial perspective has the highest weight is 39.25%, followed by a customer perspective of 36.75%, internal business 18.75% and the perspective of growth and learning has a weight the smallest

is 5.25%. From the results of measuring the performance of employees of PT. Bubu Logistic Indonesia has an average performance measurement score for 6 months, namely 56%.

From the results of performance measurements for 6 months that have been implemented from month July to December, the performance level of PT. Bubu Logistic Indonesia can be seen from the indicators below this:

**Table 3.** Categories of Performance Measurement

<b>Performance Rate (%)</b>	<b>Score</b>	<b>Description</b>
86-100	A	Very Good
70-86	B	Good
50-69	C	Enough
30-49	D	Not Enough
0-29	E	Bad

From the results of performance measurements that have been carried out, the performance of PT. Bubu Logistic Indonesia is in the GOOD ENOUGH category. So that in the future it can be used performance evaluation once every 6 months and can be implemented by the company.

## **CONCLUSION**

Results of company performance measurement Based on the results of the research and discussion analysis that has been described in chapter previously, that the indicators for measuring the performance of employees of PT. Bubu Logistic Indonesia is described in 4 perspectives of the Balanced Scorecard (BSC) in several alternatives performance strategy tailored to the adjusted vision, mission and operational strategy by the strategy map with the AHP (Analytical Hierarchy Process) questionnaire then weighted with the AHP (Analytical Hierarchy Process) method and determination of alternatives and results weighting used to determine employee performance scores. From the results of determining the map strategy, alternative results set 8 variables, namely profit margin (F1), cost efficiency (F2), increase in customer satisfaction (C1), increase in the number of subscribers (C2), media optimization promos to customers (I1), perfecting strategies and opportunities for distribution to customers (I2), holding training to create competitive human resources (G1), as well as giving appreciation towards improving the quality of work (G2).

From the results of weighting using the AHP method, the financial perspective has the highest weight, followed by the customer perspective, internal business, and growth and learning. For every perspective, perspective financial (39.25%), customer perspective (36.75%), internal business (18.75%) and perspective growth and learning (5.25%). From the results of measuring the performance of employees of PT. Bubu Logistic Indonesia has an average performance measurement score for 6 months, namely 56%. Based on the results of this design and performance measurement, the research objectives were achieved. The corporate strategy is as follows:

1. Increase profit and make cost efficiencies
2. Increase customer satisfaction and increase the number of customers
3. Carrying out product or service innovations and perfecting strategies and distribution

opportunities to customers.

4. Conduct training to create competitive and provide human resources appreciation for improving the quality of work.

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