

Analyzing the measurement of employee performance with human resources scorecard and AHP

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Abstract

The Present development of globalization is improving and having an impact on the higher rate of business competition. An Employee is one of the biggest factors for the company development, therefore it is important to assess the employee performance for the company's success. This research aims to analyze the measurement result of the employee performance using the human resource scorecard and analytic hierarchy process. The data was obtained through a questionnaire that was distributed to 25 employees in heavy equipment rental department on PT. Surya Trias Gemilang Surabaya, conducted a data adequacy test, consistency test on the questionnaire, and continued with the AHP weighting. The result showed that the company experienced a decrease in employee performance from a financial perspective which means the company needs special attention from a financial perspective. The company needs to discover the utilization of net income obtained by the company to increase effectiveness for using company assets.

Keywords: *human resources scorecard, analytic hierarchy process, employee performance*

Introduction

The development of globalization is improving and affects a higher level of business competition, and many factors affect business growth due to customer, product, demographic and other factors as well as human resource factors (Costa & Negoro, 2021). The quality of human resources is one of the factors that influence the productivity improvement of the performance of an organization or institution (Setyadi, 2018). Whoever manages the organization will cultivate resources to achieve the company's goals. (Sundari, 2019). This forces the business unit to outperform competitors by optimally increasing operational efficiency. The success of the company is not only measured from the business plan but also the management and measurement of human resources (Badriyah, 2017). Performance measurement is the process of evaluating the goals and progress of human resource management for the production of goods and services, including information about the effectiveness and effectiveness of measures to achieve the company's goals and objectives

(Pratama & Ismail 2018). The performance of employees in an organization can be evaluated based on the quantity or quantity they provide individually and collectively, and on the quality or quality of their work (Abdurrahman, 2017). Measuring performance of employee is very important. Because of make excellent employee professional quality, the company needs to lead the business activities and achieve the desired goals (Fibriany, 2019).

PT Surya Trias Gemilang was established in 2017. PT Surya Trias Gemilang provides heavy equipment for sales, purchases, and rent According to information obtained from the Chief Operating Officer, the company succeeded in leasing 90 heavy equipment in 2020, but there is 29.13% of the total heavy equipment cancellation. The number of heavy equipment successfully rented from 2021 until August also decreased by 22.45% compared to the previous year. The decline experienced by the company was caused by the decrease in employee motivation, coordination between each other employees, and fastness in administration service and the company's employee performance measurement only considers the financial aspect. Therefore, the company needs to improve and conduct comprehensive performance measurements on employees and analyze the results of these performance measurements to choose what factors should be improved by PT. Surya Trias Gemilang Surabaya with Human Resources Scorecard (HRSC) and supported by the Analytical Hierarchy Process (AHP).

Human Resources Scorecard is known as ability to design and implement strategic personnel measurement system and become an important measurement tool for the companies use to carefully design and implement more effective human resource strategies (Ermayanti, 2017). Analytical Hierarchy Process (AHP) can determine Priorities For each criterion and alternative, it is necessary to do pairwise comparisons (Lorisa & Olyvia, 2017). This research is also based on the results of research by Sahaya & Wahyuni (2017), the research was conducted at a manufacturing company. The problem in this research is caused by frequent absences of employees at work, which is an example of a lack of motivation for employees to word and the lack of a career path is one of the problems with poor employee performance. If this situation continues, it will affect the productivity of the company. The indicators used in this research are employee cost, increase employee responsibility, Number of delays in giving salary, after measuring employee performance using human resources scorecard, we found that the financial perspective was the lowest. Research by Welan et al. (2019). The research was conducted by a sales company. The company has never used the human resource scorecard method before so this research will be using the human resource scorecard method. The indicators used in this research are regarding the leadership process, increasing profitability, customer satisfaction and etc. The result found that growth and learning prospects are the most influential criteria followed by internal business process perspectives, financial perspectives, employee perspectives, and company performance that need more improvement.

Based on these studies, the researcher wants to know how to measure employee performance at PT. Surya Trias Gemilang. Measurement concept is important for companies to improve employee performance and follow developments and compete to advance and maintain the company's survival

and this research is important to analyze employee performance measurement using the Human Resources Scorecard and AHP methods at the said company. The research was conducted on service companies and focused on renting heavy equipment. The indicators used in this study were selected based on the conditions and key factors that support the productivity of the company's employees. In addition, the indicators used have been adjusted to what the company needs to survive in the current pandemic.

Research Methods

In this study, the subjects selected were employees of the heavy equipment rental department of PT.Surya Trias Gemilang. There are 25 employees in this department. Since the department only has 25 employees, this research takes all the population as a sample. The method used in this research is questionnaire based on Human Resources Scorecard. Human resources scorecard is integrated with Analytical Hierarchy Process which aim to determine the criteria weight and priority scale improvement of performance indicator (Nasution & Tembiring, 2019).

According to Mahendra (2020) the human resources scorecard aims to measure whether the human resources within the company are in line with the goals set by the company or not. This method was selected for the study because the human resources scorecard can raise awareness of the outcome of human investment decisions and this measurement method is important for Human Resources managers to face challenges in the future (Fariz&Tutik, 2018). The measured data from 4 perspectives are mainly about the financial perspective, consumer perspective, internal business perspective, and growth and development perspective.

1. Financial perspective is implementation, and strategy of the company has contributed to the company. Each department of the company is responsible for the financial condition of the company.
2. Customer perspective, the company needs to have a good relationship with the customer's consumer. Good relationships with customers have a positive impact on the company. The implications of consumer relationships are that a company's reputation in the market is well known for its great bargaining power.
3. Internal business process perspective aims to identify each process to be executed and to develop work measurement methods that enable control processes. You can improve and maintain the company's own performance.
4. Growth and development perspective, the employee learning process is sustainable as the workplace experience increases. If your organizational culture supports process learning, you can maximize process learning (Sahaya & Wahyuni, 2017).

Key performance indicators are parameters that serve as a medium for measuring performance within a company (Ulfa&Ridwan, 2015). Key performance indicators can determine a company's success or failure in achieving the set goals and determine the success of activities, organizational development and activities (Rahman, 2020). Key performance indicators of the four perspectives in this research can be seen from the following table:

Table 1. Key Performance Indicator by Each Perspective

Perspective	Key Performance Indicator
Financial Perspective	Employee cost Enhancement in company profit Effectiveness for using company asset
Customer perspective	Customer Retention Customer Satisfaction Number of Complain Number of New Customer
Internal Business perspective	Coordination between The Boss and the employee Fastness in administration service Quantity of the computerized data
Growth and development perspective	Amount and type of employee training Percentage of employees who understand about heavy equipment rental Percentage of employees who have skills in technology and information systems

The research begins with giving a questionnaire to employees of PT. Surya Trias Gemilang Surabaya using a paired comparison questionnaire. After the questionnaire has been collected, the questionnaire will be tested for adequacy and consistency test to determine whether the data is sufficient, can be processed further, and whether the questionnaire is consistent. According to Azwar (2011), the adequacy data test formula is given as:

$$N' \geq \left(\frac{Za/z S}{e} \right)$$

In this case: N' = Total of adequacy data, Za/z = The normal probability distribution, S = confidence level, e = degree of accuracy.

According to Sugiyono (2012), the consistency test formula is given as :

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

In this case CI = Consistency Index, and n = amount of element

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

In this case: CR = Consistency Ratio, CI = Consistency Index and IR = Index Random Consistency.

According to Zaini&Suryadi(2020), The Analytic Hierarchy Process (AHP) is a multi-criteria evaluation approach for compiling and analyzing decisions, allowing you to select sub-criteria for measurement accuracy and evaluation. At AHP, decisions involve key performance indicators with respect to the use of a survey involving expert respondents who know the company and understand its goals and objectives comparing weighted priorities. Start by comparing two key performance indicators then weighing, the results of the weighted scores can be used as a scale for employee performance. The criteria for measuring employee performance are:

1. For a score of ≤ 1.8 , it means that the employee's performance is very low.
2. For a score of ≤ 2.6 , it means that the employee's performance is low.

3. For a score of ≤ 3.4 , it means that the employee's performance is average.
4. For a score of ≤ 4.2 , it means that the employee's performance is high.
5. For a score of ≤ 5.0 , it means that the employee's performance is very high.

Result and Discussions

The data used in this research were obtained through observation and questionnaires compiled and filled in by 25 employees at PT. Surya TriasGemilang Surabaya in heavy equipment rental department, all the questions are valid, and got the following results:

1. Financial Perspective

Table 2. Weighted Score Comparison in Financial Perspective 2020

Key Performance Indicator	Score	Weight	Weighted Score
Employee cost	3	0,5246	1,574
Enhancement in company profit	3	0,3337	1,0012
Effectiveness for using company assets	2	0,1415	0,283
Total			2,858

As seen from the results in table 2, a financial perspective employee performance measurement in 2020. Effectiveness for using company assets gets the lowest weighted score of 0.283. Employee cost got the highest weighted score of 1,574. In the final result, the score is 2.858 which indicates average for the employee's performance from a financial perspective.

Table 3. Weighted Score Comparison in Financial Perspective 2021

Key Performance Indicator	Score	Weight	Weighted Score
Employee cost	3	0,5246	1,574
Enhancement in company profit	2	0,3337	0,667
Effectiveness for using company assets	2	0,1415	0,283
Total			2,524

As seen from the results in table 3, a financial perspective employee performance measurement in 2021. Effectiveness for using company assets gets the lowest weighted score of 0.283. Employee cost got the highest weighted score of 1,574. In the final result, the score is 2,524 which indicates low for the employee's performance from a financial perspective.

2. Customer Perspective

Table 4. Weighted Score Comparison in Customer Perspective 2020

Key Performance Indicator	Score	Weight	Weighted Score
Customer Retention	3	0,62084	1,8625
Customer Satisfaction	3	0,17845	0,5353
Number of Complain	2	0,12142	0,2428
Number of New Customer	3	0,079274	0,2378
Total			2,8785

As seen from the results in table 4, a customer perspective employee

performance measurement in 2020. Number of New Customer gets the lowest weighted score of 0.283. Customer Retention got the highest weighted score of 1,574. In the final result, the score is 2,8785 which indicates average for the employee's performance from a customer perspective.

Table 5. Weighted Score Comparison in Customer Perspective 2021

Key Performance Indicator	Score	Weight	Weighted Score
Customer Retention	4	0,62084	2,4833
Customer Satisfaction	3	0,17845	0,5353
Number of Complain	3	0,12142	0,3642
Number of New Customer	2	0,079274	0,1585
Total			3,5415

As seen from the results in table 5, a customer perspective employee performance measurement in 2021. Number of New Customer gets the lowest weighted score 0,1585. Customer Retention got the highest weighted score of 2,4833. In the final result, the score is 3,5415 which indicates high for the employee's performance from a customer perspective.

3. Internal Business Perspective

Table 6. Weighted Score Comparison in Internal Business Perspective 2020

Key Performance Indicator	Score	Weight	Weighted Score
Coordination between The Boss and the employee	2	0,6686	1,3373
Fastness in administration service	3	0,2431	0,7293
Quantity of the computerized data	3	0,0882	0,2646
Total			2,3313

As seen from the results in table 6, an Internal Business perspective employee performance measurement in 2020. Quantity of the computerized data gets the lowest weighted score 0,2646. Coordination between The Boss and the employee got the highest weighted score of 1,3373. In the final result, the score is 2,3313 which indicates low for the employee's performance from an internal business perspective.

Table 7. Weighted Score Comparison in Internal Business Perspective 2021

Key Performance Indicator	Score	Weight	Weighted Score
Coordination between The Boss and the employee	3	0,66869	2,00609
Fastness in administration service	2	0,24310	0,48621
Quantity of the computerized data	3	0,08820	0,26460
Total			2,7568

As seen from the results in table 7, an Internal Business perspective employee performance measurement in 2021. Quantity of the computerized data gets the lowest weighted score 0,2646. Coordination between The Boss and the employee got the highest weighted score of 2,00609. In the final result, the score is 2,7568 which indicates average for the employee's performance from an internal business perspective.

4. Growth and Development Perspective

Table 8. Weighted Score Comparison in Growth and Development Perspective 2020

Key Performance Indicator	Score	Weight	Weighted Score
Amount and type of employee training	3	0,6333	1,90003
Percentage of employees who understand about heavy equipment rental	3	0,2604	0,7814
Percentage of employees who have skills in technology and information systems	2	0,1061	0,2123
Total			2,8936

As seen from the results in table 8, a growth and development perspective employee performance measurement in 2020. Percentage of employees who have skills in technology and information systems gets the lowest weighted score 0,2123. Amount and type of employee training got the highest weighted score of 1,90003. In the final result, the score is 2,8936 which indicates average for the employee's performance from a growth and development perspective.

Table 9. Weighted Score Comparison in Growth and Development Perspective 2021

Key Performance Indicator	Score	Weight	Weighted Score
Amount and type of employee training	3	0,6333	1,90003
Percentage of employees who understand about heavy equipment rental	3	0,2604	0,78149
Percentage of employees who have skills in technology and information systems	4	0,1061	0,42462
Total			3,10615

As seen from the results in table 9, a growth and development perspective employee performance measurement in 2021. Percentage of employees who have skills in technology and information systems gets the lowest weighted score 0,42462. Amount and type of employee training got the highest weighted score of 1,90003. In the final result, the score is 3,10615 which indicates average for the employee's performance from a learn and development perspective.

Table 10. Repair Recommendations for Companies

No	Perspective	Repair recommendation
1	Financial Perspective	Discover the utilization of net income obtained by the company to increase Effectiveness for using company assets
2	Customer Perspective	Conduct regular evaluations of customer service, satisfaction, and complaints. Improve employee communication skills with customers for quickly responding to customer requests and complaints. Provide a form or suggestion box for customers who want to write complaints or suggestions that are good for the company.
3	Internal Business Perspective	Maintain coordination between boss and employees and appreciate every employee's work, so that employee productivity and performance for the company will also

		increase.
		The company is recommended to improve facilities regarding systems for data and administrative processes so that employees also feel comfortable.
4	Growth and development perspective	Providing training is needed for employees so that employees have the skills and can-do better work to serve customers.

Conclusion

This research aims to analyze the measurement result of the employee performance using the human resource scorecard and analytic hierarchy process. The results found that the weighted score for each of the last 2 years perspective was 2.858 and 2.524 for finance, 2.8785 and 3.5415 for customers, 2.3313 and 2.756 for internal business, 2.8936 and 3.10615 for growth and development. So, the company needs special attention on the financial perspective because of the decreased employee performance. Based on the results of each perspective. To improve the company's performance starting from the financial perspective, discover the utilization of net income obtained by the company to increase effectiveness for using company assets. From the customer perspective, the company should continue to maintain and improve what has been implemented and increase employees' communication skills with customers, respond to customer requests and complaints quickly, and provide opportunities for customers to give suggestions for the company. From the internal business process perspective, the company can improve facilities regarding the system for data and administrative processes. Meanwhile, from the perspective of learning and growth, the company should provide training or increase employee skills in required fields such as understanding heavy equipment and expertise in information systems.

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