



Analyzing the Measurement of Employee Performance using Human Resources Scorecard Method and Analytical Hierarchy Process

Ahmad Baheshti¹, Mochamad Tutuk Safirin¹

¹Industrial Engineering, Faculty of Science & Engineering, Universitas Pembangunan Nasional Veteran Jawa Timur, Surabaya, Indonesia

*Corresponding Author: Ahmad Baheshti

E-mail: 18032010070@student.upnjatim.ac.id



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Abstract

PT. XYZ is a marine cargo expedition company engaged in cargo transportation services, shipping and sea distributors. This study aims to measure employee performance of PT. XYZ using Human Resources Scorecard (HRSC) method where the measurement system is based on 4 perspectives which include financial, customer, internal business process, and learning and growth perspective. The weighting method using the Analytical Hierarchy Process (AHP). The results can be concluded that the financial perspective performance is 3.62, the customer perspective performance is 4, the internal business process perspective performance is 4, and the learning and growth perspective performance is 3.87. Comprehensively, human resource performance is 3.78 (high). This indicates that comprehensive employee performance is good, but some improvements are needed so that employee performance can increase.

Introduction

The rapid developments in the current era of globalization has given a significant boost to the intensity of competition in the business world (Costa et al., 2021). Various factors play an important role in improving a company's performance, not limited to customer, product and demographic aspects, but also including the Human Resources (HR) dimension (Nuraeni et al., 2021). Human resources are the main element of an organization compared to other resource elements such as capital and technology, because humans themselves control other factors (Susan, 2019). The role of Human Resources (HR) in an organization or company is the key to achieving the company's success. Competent and strategic human resources will provide added value as a benchmark of the company's success (Uliana et al., 2022).

PT. XYZ is a marine cargo expedition company engaged in cargo transportation services, shipping, and sea distributors. The percentage of profit obtained by the company in the last 3 years ranges from 6% to 7%. Although the percentage of profit obtained by the company increased, the increase was relatively thin. Therefore, companies must be able to maintain service quality, manage risks well, and maintain stable growth. In its development, shipping expedition services have become the main choice of the Indonesian people, especially distributors or entrepreneurs who often send goods in large quantities because in terms of costs can be reduced, the freedom to send goods in large quantities, and unlimited dimensions, as well as the costs incurred are much cheaper (Bernanda & Loisa, 2020). Therefore, it is necessary to measure employee performance at PT XYZ using the Human Resources Scorecard (HRSC) method and weighting supported by the Analytical Hierarchy Process (AHP) method.

Previous study results from Aisyah & Samanhudi (2023) shows that the company as the object of their research experienced a decline 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. Another previous study is from (Amelia et al., 2019) where the study aims to analyze the performance of human resources in certain hospital in Surabaya using the Human Resources Scorecard method. The results of the study show that the hospital has successfully implemented the right process to achieve its strategic targets. This can be seen from the results of performance measurement using the Human Resources Scorecard method, where the performance of the lagging indicator and the leading indicator are still maintained in balance and are in a green category.

Methods

The object of this study is PT XYZ. The method used in this study is 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. Human Resources Scorecard is a tool used to measure organizational performance against the strategic goals set by a company. There are 4 perspectives in the Human Resource Scorecard, including financial, customer, internal business processes, and learning and growth perspective. (1) Financial perspective, which is a perspective that provides guidelines from the strategy applied can contribute to profitability or increase the company's profit or not; (2) Customer perspective, which is the perspective that is used as a benchmark that employees are assets, users, or outputs from the implementation of HR strategies that will have an impact on customers; (3) Internal Business Process Perspective, which is a perspective that provides a benchmark that the company's internal processes will have an impact on achieving goals financially and customer satisfaction; (4) Learning and Growth Perspective, which is a perspective that focuses on strategies for human resource development in the company (Mahendra, 2020).

Key Performance Indicators (KPI) are a parameter that serve as a medium for measuring performance in a company using a range of numbers, values or percentages. The use of KPIs can determine whether or not an agency is successful in achieving the targets that have been set (Warganegara et al., 2021). Key performance indicators of the 4 perspectives in this study can be seen from the following table:

Table 1. Key Performance Indicator by Each Perspective

Perspective	Objective Strategy	Key Performance Indicator
Financial	Increasing cash flow and liquidity, ensuring compliance and optimizing tax aspects, increase profitability	<ul style="list-style-type: none"> Percentage of Receivables Repayment Accuracy of Taxation Aspects Company Net Profit
Customer	Increasing customer satisfaction through service quality, ensuring the safety and accuracy of freight delivery	<ul style="list-style-type: none"> Quality of Services Freight Delivery Speed Completeness of Shipping Facilities Freight Delivery Security
Internal Business Process	Reduce lead time of freight loading and unloading and improve work safety	<ul style="list-style-type: none"> Number of Work Accidents Lead Time of Unloading Freight Lead Time of Loading Freight
Learning and Growth	Reducing employee turnover and improving employee competency through training	<ul style="list-style-type: none"> Number of trainings held Number of employees who participated in the training Employee Turnover Rate

Analytical Hierarchy Process (AHP) is a method that used to get performance weights based on how preference the pick is decisions on the level of importance from the perspective of

each KPI group (Puji et al., 2022). To find out if the AHP weighting questionnaire has consistent, then there needs to be a consistency test. The requirement of logical consistency is lacking from 10% or $CR \leq 0.1$. If the value obtained after the ratio consistency test is more than 10% ($CR > 0.1$), data collection is repeated until the ratio consistency value is less than 0.1 and validated.

According to Karlina & Samanhudi (2023) the consistency test formula is given as:

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

Next, the consistency ratio is formulated as:

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

In this case: CI = Consistency Index
 λ = Maximum Eigenvalue
n = Matrix Size
CR = Consistency Ratio
IR = Index Random

According to Rusindiyanto (2009), the criteria for measuring employee performance are: (1) For a score of $1.0 \leq x < 1.8$, it means that the employee's performance is very low.; (2) For a score of $1.8 \leq x < 2.6$, it means that the employee's performance is low; (3) For a score of $2.6 \leq x < 3.4$, it means that the employee's performance is medium; (4) For a score of $3.4 \leq x < 4.2$, it means that the employee's performance is high; (5) For a score of $4.2 \leq x < 5.0$, it means that the employee's performance is very high.

Results and Discussion

The data used in this study were obtained through observation and questionnaires at PT. XYZ. After the calculation was carried out using the AHP method, all the questions are valid, and got the following results.

Financial Perspective

Table 2. Weighted Score of Financial Perspective

KPI	Score	Weight	Weighted Score
Percentage of Receivables Repayment	4	0,060	0,240
Accuracy of Taxation Aspects	5	0,282	1,410
Company Net Profit	3	0,658	1,974
Total			3,624

From table 2, it can be seen that the weighted score for Percentage of Receivables Repayment is 0,24, weighted score for Accuracy of Taxation Aspects is 1,41, and weighted score for Company Net Profit is 1,974. Therefore, the total weighted score of financial perspective is 3,624 which indicates employee's performance from financial perspective is good.

Customer Perspective

Table 3. Weighted Score of Customer Perspective

KPI	Score	Weight	Weighted Score
Quality of Services	4	0,128	0,512
Freight Delivery Speed	4	0,253	1,012
Completeness of Shipping Facilities	4	0,048	0,192
Freight Delivery Security	4	0,571	2,284
Total			4

From table 3, it can be seen that the weighted score for Quality of Services is 0,512, weighted score for Cargo Delivery Speed is 1,012, weighted score for Completeness of Shipping Facilities is 0,192, and weighted score for Fright Delivery Security is 2,284. Therefore, the total weighted score of customer perspective is 4 which indicates employee's performance from customer perspective is good.

Internal Business Process Perspective

Table 4. Weighted Score of Internal Business Process Perspective

KPI	Score	Weight	Weighted Score
Number of Work Accidents	4	0,808	3,232
Lead Time of Unloading Freight	4	0,074	0,296
Lead Time of Loading Freight	4	0,118	0,472
Total			4

From table 4, it can be seen that the weighted score for Number of Work Accidents is 3,232, weighted score for Lead Time of Unloading Freight is 0,296, and weighted score for Lead Time of Loading Freight is 0,472. Therefore, the total weighted score of internal business process perspective is 4 which indicates employee's performance from internal business process perspective is good.

Learning and Growth Perspective

Table 5. Weighted Score of Learning and Growth Perspective

KPI	Score	Weight	Weighted Score
Number of trainings held	4	0,075	0,300
Number of employees who participated in the training	3	0,124	0,373
Employee Turnover Rate	4	0,800	3,200
Total			3,872

From table 5, it can be seen that the weighted score for Number of trainings held is 0,3, weighted score for Number of employees who participated in the training is 0,373, and weighted score for Employee Turnover Rate is 3,2. Therefore, the total weighted score of learning and growth perspective is 3,872 which indicates employee's performance from learning and growth perspective is good.

Four Perspectives of HRSC

Table 6. Weighted Score of Four Perspectives of HRSC

HRSC Perspectives	Score	Weight	Weighted Score
Financial	3,624	0,542	1,965
Customer	4,000	0,233	0,933
Internal Business Process	4,000	0,140	0,559
Learning and Growth	3,872	0,085	0,328
Total			3,785

From table 6, it can be seen that the weighted score for Financial Perspective is 1,965, weighted score for Customer is 0,933, weighted score for Internal Business Process is 0,559, and weighted score for Learning and Growth is 0,328. Therefore, the total weighted score of employee's performance is 3,785 which indicates employee's performance is good.

Table 7. Repair Recommendations for Company

Perspective	Repair Recommendations
Financial	<ul style="list-style-type: none"> • Increase efficiency in receivables repayment to optimize the company's cash flow. • Pay attention to the accuracy of taxation aspects by increasing understanding and compliance with applicable tax regulations.

	<ul style="list-style-type: none"> Monitoring and improving financial performance to ensure sustainable net profit achievement.
Customer	<ul style="list-style-type: none"> Improve service quality with a focus on customer satisfaction, including responsiveness to customer complaints and feedback. Optimizing the speed and safety of freight delivery to ensure a satisfactory experience for customers. Pay attention to the completeness of delivery facilities to increase efficiency and convenience in the delivery process
Internal Business Process	<ul style="list-style-type: none"> Reduce the number of occupational accidents by raising awareness of occupational safety and health, and implementing safe work practices. Maintain the lead time for unloading and loading freight by evaluating internal processes and improving operational efficiency.
Learning and Growth	<ul style="list-style-type: none"> Increase the number and quality of training organized to develop employee skills and knowledge. Reduce employee turnover rates by creating a motivating work environment, providing career development opportunities, and improving overall employee prosperity.

Conclusion

Based on the results of the study, it can be concluded that the performance of employees at PT XYZ is good. This can be seen from the weighted score of human resources performance obtained is 3,875. To improve the company's overall performance, it is necessary to take several improvement steps. From a financial perspective, the receivables repayment efficiency needs to be improved, compliance with tax regulations is strengthened, and financial performance is continuously monitored to ensure sustainable net income. From the customer's perspective, the quality of service, speed, and safety of freight delivery must be optimized, and delivery facilities are equipped to increase customer satisfaction. From the perspective of internal business processes, it is necessary to reduce the number of work accidents through increasing safety awareness and evaluating internal processes to accelerate the lead time of unloading and loading freight. For the perspective of learning and growth, it is necessary to increase the number and quality of training for employees and create a supportive work environment to reduce employee turnover rates.

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