

## **PERFORMANCE MEASUREMENT OF DELIVERY DEPARTMENT EMPLOYEES AT UD. BIMA SAKTI TIMUR RAYA SURABAYA USING THE KEY PERFORMANCE INDICATOR (KPI) METHOD**

Krisnadhi Hariyanto<sup>1,a</sup>, M. Hasan Abdullah<sup>2,b</sup>, Ong Andre Wahyu Riyanto<sup>3,c</sup>,  
Onny Purnamayudhia<sup>4,d</sup>, Fitriya Gemala Dewi<sup>5,e</sup>, Ampar Jaya Suwondo<sup>6,f</sup>,  
Subaderi<sup>7,g</sup>

Industrial Engineering Study Program, Wijaya Putra University<sup>1,2,3,4,5,6,7</sup>

Jl. Raya Benowo No. 1-3 Surabaya, East Java, Indonesia<sup>1,2,3,4,5,6,7</sup>

<sup>a</sup> krisnadi@uwp.ac.id, <sup>b</sup> mhasanabdullah@uwp.ac.id, <sup>c</sup> ongandre@uwp.ac.id,

<sup>d</sup> onnypurnamayudhia@uwp.ac.id, <sup>e</sup> fitriyagemala@uwp.ac.id, <sup>f</sup> amparjaya@uwp.ac.id,

<sup>g</sup> subaderi@uwp.ac.id

### **Abstract**

In the era of globalization and digitalization, business competition has become increasingly intense. Companies must continuously improve their services, one of which is by maintaining customer satisfaction. UD. Bima Sakti Timur Raya in Surabaya understands the importance of fast, accurate, and order-compliant goods distribution to maintain customer trust. However, challenges such as delivery delays and lack of internal coordination are still being faced. In order to address these issues, a performance evaluation system based on Key Performance Indicators (KPIs) that are specific, measurable, relevant, and time-bound is required. The KPIs used aim to measure timeliness rate, number of deliveries, delivery success rate, delivery errors, and customer satisfaction. This performance measurement helps identify employee strengths, weaknesses, and training needs. The research methodology was carried out through observation, interviews, questionnaires, and documentation, involving eight delivery employees as subjects. KPI-based analysis showed an average timeliness rate of 90–94% across five distribution routes. The evaluation results are expected to enhance operational efficiency, improve service quality, and continuously increase customer satisfaction.

**Keywords:** Employee Performance, KPI, Logistics, Goods Delivery, Work Evaluation

### **Abstrak**

Dalam era globalisasi dan digitalisasi, persaingan bisnis semakin ketat. Perusahaan harus terus meningkatkan layanan, salah satunya dengan menjaga kepuasan pelanggan. UD. Bima Sakti Timur Raya di Surabaya memahami pentingnya distribusi barang yang cepat, akurat, dan sesuai pesanan untuk mempertahankan kepercayaan pelanggan. Tantangan seperti keterlambatan pengiriman dan koordinasi internal yang kurang masih dihadapi. Hal lain dalam mengatasinya diperlukan sistem evaluasi kinerja berbasis *Key Performance Indicators* (KPI) yang spesifik, terukur, relevan, dan terbatas waktu. Tujuan KPI yang digunakan mencakup tingkat ketepatan waktu, jumlah pengiriman, keberhasilan pengiriman, kesalahan pengiriman, dan kepuasan pelanggan. Pengukuran kinerja ini membantu mengidentifikasi kekuatan, kelemahan, dan kebutuhan pelatihan karyawan. Metodologi penelitian dilakukan melalui observasi, wawancara, kuesioner, dan dokumentasi, dengan delapan karyawan pengiriman sebagai subjek. Analisis berbasis KPI menunjukkan tingkat ketepatan waktu rata-rata sebesar 90–94% di lima jalur distribusi. Hasil evaluasi ini diharapkan dapat meningkatkan efisiensi operasional, memperbaiki kualitas layanan, dan meningkatkan kepuasan pelanggan secara berkelanjutan.

**Kata kunci:** Kinerja Karyawan, KPI, Logistik, Pengiriman Barang, Evaluasi Kerja

## **Introduction**

In today's era of globalization and digitalization, the business world is facing increasingly intense competition across various sectors. Companies are required to continuously innovate and improve the quality of their services in order to survive and grow amidst the rapidly changing market dynamics. One of the key indicators of a company's success in maintaining its existence is the level of customer satisfaction. Satisfied customers will not only make repeat purchases, but also have the potential to become effective promotional agents through word-of-mouth and social media recommendations. Therefore, focusing on customer satisfaction has become a necessity in the operational strategies of modern companies [1].

In the context of companies engaged in trade, such as UD. Bima Sakti Timur Raya, located in Surabaya, customer satisfaction heavily depends on the reliability of the goods distribution system. This company realizes that fast, accurate, and order-compliant delivery is the foundation of maintaining customer trust. However, in practice, various challenges are still encountered. Some common issues include delivery delays, discrepancies between the shipped goods and the orders, and a lack of coordination between the sales, warehouse, and delivery departments. These obstacles not only directly affect the customer experience but also have the potential to damage the company's reputation in the public eye. In order to address these issues, strategic steps are needed to improve the efficiency and effectiveness of the goods delivery process. One approach that can be utilized is the implementation of a comprehensive, data-based performance evaluation system. Performance evaluation is not only intended to assess employee work outcomes but also serves as a diagnostic tool to help the company understand the root causes of problems and formulate relevant improvement policies. Through objective and systematic performance measurement, the company can determine the extent of each employee's contribution to achieving operational targets, particularly in areas directly involved in the distribution process [2].

In this regard, the use of Key Performance Indicators (KPIs) becomes highly important. KPIs are a set of indicators used to measure the performance achievements of individuals or teams against the goals set by the company. With KPIs, the company can identify strengths and weaknesses in the delivery process, monitor work progress regularly, and establish clear and measurable work standards. Furthermore, KPIs can also serve as a basis for providing fair rewards or sanctions, thereby fostering work motivation and employee professionalism. More broadly, the proper implementation of KPIs will contribute to enhancing the company's competitiveness in the market [3]. Thus, the effort to develop a KPI-based performance evaluation system becomes a crucial step for UD. Bima Sakti Timur Raya in strengthening the quality of its delivery service. Through this approach, the company is expected to respond more adaptively to distribution challenges, improve operational efficiency, and ultimately, achieve sustainable customer satisfaction.

## **Literature Review**

### **The Importance of Performance Measurement in the Delivery Process**

In this era of globalization and increasingly fierce business competition, companies are required to provide optimal services to maintain customer loyalty and strengthen their market position. One critical aspect of service delivery is the shipment of goods that is fast, on time, and error-free. Deliveries that fail to meet customer expectations can diminish trust, damage the company's image, and lead to operational losses. UD. Bima Sakti Timur Raya, a trading company operating in Surabaya, plays a crucial role in meeting consumer demand through its distribution process. However, field challenges such as delivery delays, mishandling of goods, and lack of internal coordination require special attention. Therefore, performance measurement of delivery personnel becomes an urgent need not only as an evaluation tool but also as a foundation for planning improvements in performance and operational efficiency [4].

## **Employee Performance**

Employee performance is a measure of how well an individual in an organization carries out the tasks assigned to them. Performance is the quality and quantity of work achieved by an employee in carrying out their duties in accordance with the responsibilities given. In the context of logistics and delivery, performance is not only measured by the number of deliveries completed, but also by accuracy, time efficiency, and the level of customer satisfaction generated from their activities. Factors affecting performance include individual ability, task understanding, work motivation, availability of tools and infrastructure, and a fair performance appraisal system. Without proper indicators and evaluation methods, companies will struggle to identify employee potential, determine necessary training, or even provide appropriate rewards [5].

### **Key Performance Indicator (KPI)**

A Key Performance Indicator (KPI) is a specific performance measurement tool designed to assess the achievement of organizational goals through quantitative and qualitative indicators. KPIs allow companies to monitor employee results and ensure that their work aligns with the organization's strategic goals. KPIs are measures that have a significant impact on organizational success and are directly linked to long-term business objectives [6].

In the delivery sector, some commonly used KPIs for measuring employee performance include :

1. **On-Time Delivery Rate:** Measures how often employees deliver goods within the promised time. This is crucial for building a company's reputation.
2. **Number of Deliveries Per Day:** Assesses the productivity of individuals or delivery teams based on the number of deliveries completed within a certain time frame.
3. **Successful Delivery Rate:** Refers to deliveries received by customers without damage, loss, or address errors.
4. **Delivery Error Rate:** Includes the number of errors during the delivery process, such as wrong addresses, incorrect items, or incomplete shipping documents.
5. **Customer Satisfaction:** Obtained through customer surveys or feedback regarding the delivery service. This reflects the perceived service quality and is an important benchmark for customer loyalty.

KPIs should be SMART—Specific, Measurable, Achievable, Relevant, and Time-bound. Using KPIs not only aids in individual assessment but also promotes a professional and results-oriented work culture.

### **Performance Measurement in Logistics**

Performance measurement in logistics involves assessing the effectiveness and efficiency of transportation, storage, and delivery activities. The main goals of logistics performance measurement are to identify delays, reduce logistics costs, improve service quality, and optimize decision-making processes.

Some key aspects in measuring logistics performance include:

1. **Time Efficiency:** Measures the time required to complete each logistics process from the warehouse to the end customer.
2. **Cost Efficiency:** Analyzes the total logistics costs, including transportation, labor, fuel, and damage costs.
3. **Delivery Quality:** Assesses the condition of goods upon receipt by the customer, whether they are intact, in correct quantity, and according to specifications.
4. **Process Flexibility:** Evaluates the logistics system's ability to adapt to changes in demand, delivery routes, or other operational constraints.

In practice, logistics performance measurement should be conducted regularly and be integrated with the company's information systems, so that the data collected can serve as a basis for quick and accurate decision-making. By utilizing technologies such as GPS tracking, Transportation Management Systems (TMS), and customer databases, companies can obtain real-time and historical data for deeper analysis [7].

### **Integrating KPI into Employee Performance Evaluation Systems**

The integration of KPI concepts with logistics performance measurement is essential in creating a transparent, accurate, and fair employee evaluation system. KPIs in the delivery sector serve not only as a monitoring tool but also as a way to motivate employees through clear and measurable targets. By implementing a standardized KPI system can develop periodic reports that provide an overview of each delivery employee's performance. This is useful not only for annual evaluations but also for short-term decisions such as workload adjustments, promotions, employee rotations, or incentive allocations. Furthermore, performance measurement results can serve as the basis for designing specialized training, such as route efficiency training, logistics application usage, or delivery documentation management. Enhancing employees' technical and non-technical skills will directly impact the quality of service delivered to customers [8].

KPIs must be carefully selected to reflect performance indicators that are critical to the organization, aligned with the company's strategy and key success factors. The establishment of KPIs and the targets to be achieved cannot be done carelessly, but must be selected and determined using appropriate and systematic methods [9]. Selecting KPIs and setting KPI targets accurately will guide the organization in identifying opportunities for improvement or performance enhancement, which is why KPIs are often associated with performance improvement initiatives. Performance is a highly abstract concept and requires specific definitions by clearly and thoroughly specifying its attributes [10]. The challenge lies in the fact that performance is largely conceptual, even though each context has different indicators. Therefore, to define performance properly, a context is needed—such as employees, workgroups, companies, computers, transportation, and so on. Without such context, the meaning of performance remains too simplistic.

### **Research Methodology**

This research methodology is designed to provide a systematic overview of the process used to collect, process, and analyze data in an effort to evaluate the performance of delivery department employees at UD. Bima Sakti Timur Raya. This approach was chosen to ensure that the research results are objective, relevant, and can serve as a foundation for managerial decision-making. The research was conducted at UD. Bima Sakti Timur Raya, a trading company located in Surabaya, East Java. The location was selected based on the issues currently faced by the company, particularly in the area of goods delivery to customers. The delivery department is one of the vital elements in the supply chain, as it is directly related to timeliness and quality of service.

The subjects of this research are eight employees who are directly involved in the delivery process. These employees include couriers, warehouse staff, and delivery administration personnel. They were selected purposively as they are considered capable of providing in-depth information related to the operational conditions in the field. Data collection was conducted through several techniques to ensure that the information obtained is triangulated and encompasses various perspectives. Direct observation was carried out by monitoring operational activities in the delivery department. This included the process of goods preparation, logistics arrangement, delivery time, and inter-department interactions. The aim was to gain a concrete understanding of the workflow and possible obstacles encountered.

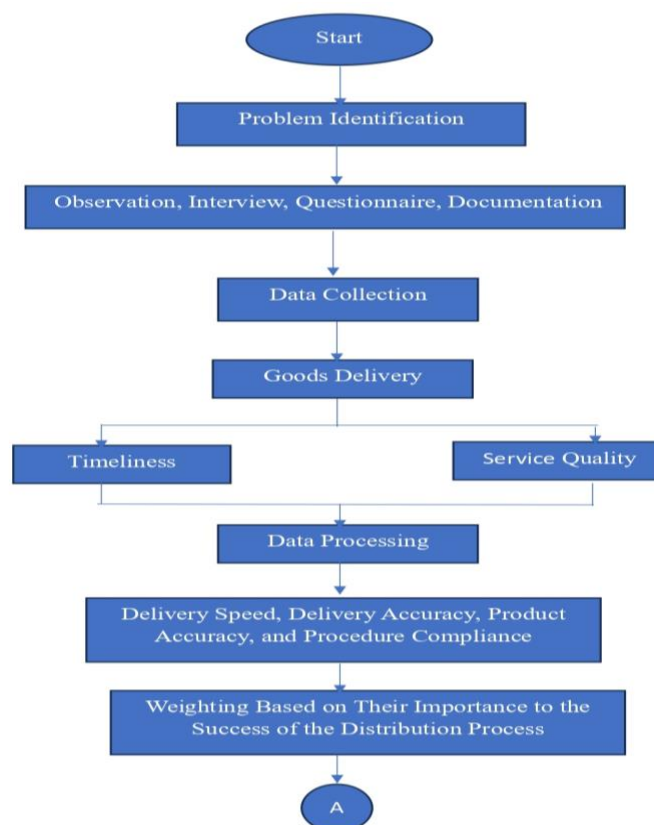
In-depth interviews were conducted with the head of logistics and delivery staff to gather more detailed information about internal policies, work systems, as well as perceptions of performance and existing challenges. A questionnaire was developed to measure employees' perceptions of the

performance indicators used. The questionnaire covered aspects such as work effectiveness, discipline, punctuality, and team coordination skills. The results of the questionnaire were used to obtain quantitative data to complement the qualitative data from interviews and observations.

Documentation included the collection of secondary data from delivery reports, attendance records, and shipment recap data within a specific period. This data was used to verify the observations and provide a historical overview of work performance.

Data analysis was conducted using the Key Performance Indicator (KPI) approach. KPI was used as the main measurement tool because it provides quantitative parameters to assess both individual and team performance achievements. Each performance indicator—such as delivery speed, delivery accuracy, item correctness, and compliance with procedures—was weighted according to its importance to the success of the distribution process. Subsequently, performance evaluation was carried out using a scoring system, in which each indicator was rated on a specific scale and then comprehensively calculated according to the predetermined weights. The results of this assessment will indicate the performance level of each employee and serve as a basis for recommendations for improvement, training, or performance incentives.

This methodology is expected to produce an accurate depiction of the working conditions in the delivery department and assist management in formulating strategies to improve efficiency and customer satisfaction.



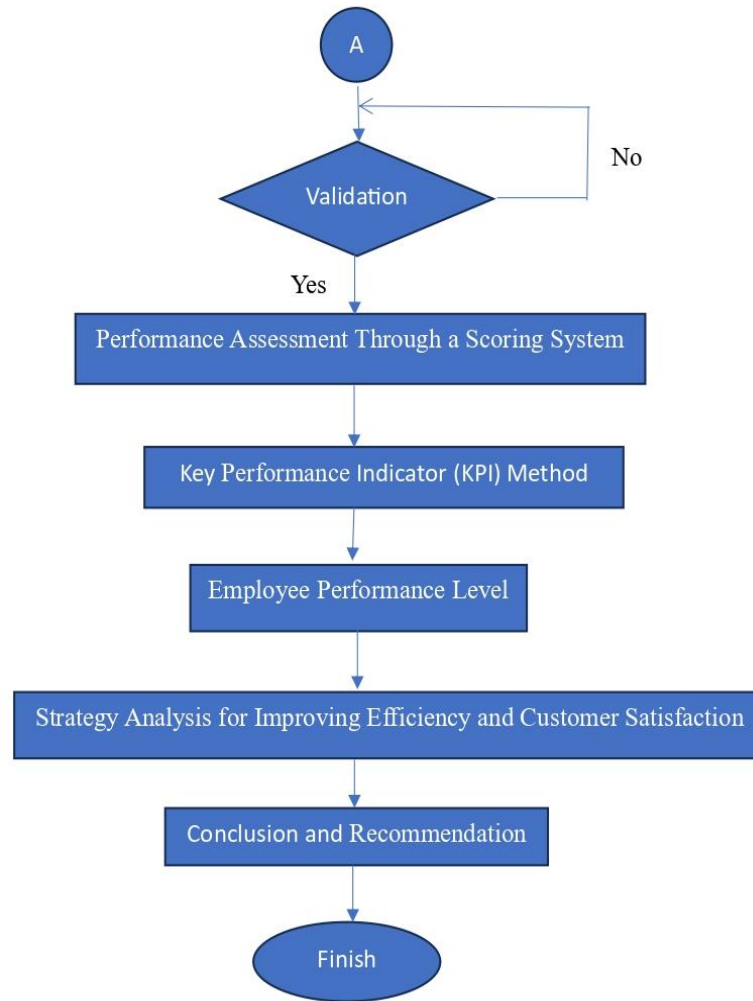


Figure 1. Flowchart of Research Methodology

## Results And Discussion

Table 1. Routes, Number of Deliveries, On-Time Deliveries at UD. Bima Sakti Timur Raya

Route	Number of Deliveries	On-Time Deliveries
1	20	18
2	40	36
3	30	27
4	60	54
5	50	47

Source: UD. Bima Sakti Timur Raya Data, processed (2025)

Based on Table 1, it is explained that routes 1–5 represent different delivery paths, where the company has five different delivery routes, each leading to different locations. The number of deliveries is based on the total deliveries made on each route, showing how many deliveries occurred on each route. For example, route 2 had 40 deliveries. The number of deliveries can indicate how many arrived on schedule (on time), which means measuring how many deliveries were successful in arriving within the planned timeframe. This is important for assessing the company's reliability in meeting delivery timelines.

Table 2. Routes, On-Time Deliveries, Timeliness at UD. Bima Sakti Timur Raya

Route	On-Time Deliveries	Timeliness (%)
1	18	90
2	36	90
3	27	90
4	54	90
5	47	94

Source: UD. Bima Sakti Timur Raya Data, processed (2025)

Based on Table 2, it shows the routes, on-time deliveries, and timeliness of UD. Bima Sakti Timur Raya, providing information on the company's delivery performance, especially regarding the number of deliveries that arrived on time and the timeliness percentage for each route. Routes 1 to 4 have a timeliness rate of 90%, which indicates consistent and good efficiency, while route 5 shows a higher performance with a 94% timeliness rate, meaning that this route is slightly more reliable than the others.

Table 3. Routes, Average Time, Timeliness Weight at UD. Bima Sakti Timur Raya

Route	Average Time Per Route (Minutes)	Timeliness Weight (%)
1	60	100
2	45	25
3	50	15
4	40	20
5	32	30

Source: UD. Bima Sakti Timur Raya Data, processed (2025)

Based on Table 3, route 1 has the longest average delivery time (60 minutes) but the highest timeliness weight (100%), meaning that while the delivery takes longer, all deliveries are consistently on time, making this route the most important and the most decisive for the company's timeliness performance. Route 5 has the fastest delivery time (32 minutes), but its timeliness weight is only 30%, indicating that while the route is fast, it is not always on time, and it has a relatively smaller overall performance compared to others. Routes 2–4 have relatively low timeliness weights (15%–25%), indicating that they are less consistent in being on time or that they have fewer deliveries than route 1.

Table 4. Performance Evaluation of UD. Bima Sakti Timur Raya

Route	Number of Deliveries	On-Time Deliveries	Timeliness (%)	Average Time Per Route (Minutes)	Timeliness Weight (%)	KPI (%)
1	20	18	90	60	100	78
2	40	36	90	45	25	72
3	30	27	90	50	15	74
4	60	54	90	40	20	70
5	50	47	94	32	30	69,2

Source: UD. Bima Sakti Timur Raya Data, processed (2025)

Based on Table 4, route 1 has the highest KPI value (78%), with the longest travel time (60 minutes) and the highest timeliness weight (100%), indicating consistency and a major impact on the company's performance. Route 5 has the highest timeliness (94%) and the fastest delivery time (32 minutes), but its KPI value is the lowest (69.2%), likely because its contribution weight is not as

high as route 1, or the number of deliveries is smaller than the others. Routes 2–4 have KPI values close to the average (70–74%), indicating stable performance but not yet optimal.

## **Conclusion**

**Timeliness Performance is Excellent.** All delivery routes consistently demonstrate exceptional timeliness, with each route exceeding a 90% on-time delivery rate. Notably, Route 5 achieves the highest performance, reaching 94% timeliness, which reflects a high level of efficiency in this route. This consistent performance across all routes showcases a delivery system that is well-organized, disciplined, and highly reliable in meeting customer expectations.

**Travel Time Varies Across Routes.** The average travel time for deliveries shows significant variation, with Route 5 being the fastest, averaging just 32 minutes, and Route 1 taking the longest at 60 minutes. Despite the shorter travel time of Route 5, it does not necessarily contribute the most to overall performance, highlighting that speed alone is not the sole determinant of a route's effectiveness. Other factors, such as the volume of deliveries and consistency, also play critical roles.

**Timeliness Weight Varies Among Routes.** The importance of each route to the overall performance is reflected in the timeliness weight assigned to it. Route 1, with a weight of 100%, has the greatest impact on the delivery system's performance, indicating its crucial role in the success of the operation. In comparison, the other routes contribute less to the overall timeliness weight, though they still play important roles in the overall efficiency of the system.

**KPI Evaluation Highlights Priority Routes.** Based on the Key Performance Indicators (KPI), Route 1 stands out with the highest KPI score of 78%, indicating it is the most optimal route in terms of performance. Route 5, although it excels in speed and on-time delivery, has the lowest KPI score (69.2%), signaling that while it performs well in timeliness, its overall contribution to the company's performance is still not fully optimized. Routes 2–4 show stable performance, with KPIs ranging from 70% to 74%, suggesting that these routes maintain a consistent level of efficiency but may have room for improvement in their performance metrics.

## **Suggestion**

**Maximize Route 5's Potential:** Despite its excellent timeliness and speed, Route 5's overall KPI is low. Improving factors like delivery volume or logistics efficiency could make it more impactful. **Optimize Route 1's Efficiency:** While Route 1 has a strong influence on performance, its longer travel time can be optimized to improve overall efficiency without compromising quality. **Enhance Routes 2–4:** Routes 2–4 show stable performance but need improvement to match Route 1's KPI. Analyzing operational inefficiencies could help boost these routes' performance. **Data-Driven Approach** is regular evaluation of routes using KPIs and timeliness data will uncover opportunities for improvement and ensure a more balanced and efficient delivery system. **Resource Allocation:** Allocate resources based on the importance of each route. Route 1 may need more resources, while Route 5 could benefit from adjustments to further improve its timeliness.

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