# Analysis of Delivery Service Rates Based on Postal Code and Type of Service at PT POS Indonesia KCU Purwokerto

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## ARTICLE INFO

## ABSTRACT

*The growth of public needs for fast, safe and affordable delivery services encourages PT Pos Indonesia KCU Purwokerto to continue to improve its competitiveness, especially in terms of service rates. This study aims to find out the delivery service rates mechanism and analyze the delivery service rates based on the postal code at PT Pos Indonesia KCU Purwokerto with a focus on Pos Express and Pos Regular services. The method used is descriptive with data collection techniques through interviews and observations. Rates are grouped by postal code prefix to determine zoning areas. The results showed that Pos Express is known to only be able to reach the island of Java so that the data is limited, pos regular the highest average rate was in zone 9 for the Sulawesi, Maluku and Papua regions while the lowest average rates was in zone 5 for the Central Java and Yogyakarta regions. PT Pos Indonesia KCU Purwokerto does not have the authority in terms of setting rates, but follows rates guidelines from the national head office. Thus, the postal code-based rate system implemented by PT Pos Indonesia is quite structured, but still has challenges in terms of logistics efficiency in reaching express services in areas outside Java.*

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## 1. INTRODUCTION

The need for delivery of goods has now become important, because every individual wants the goods to arrive on time and at their destination. This has led to intense competition among delivery companies. In Indonesia, the high demand for delivery reflects economic growth and people's lifestyles (Sutisna & Diningsih, 2018). Digital transformation is driving the shift of shopping to e-commerce platforms such as Tokopedia, Shopee, and Lazada, thus increasing the need for fast, precise, secure, and efficient logistics services. this, makes the shipping sector not just a support, but an important link in the digital trade value chain (Fanani et al., 2020).C

As a state-owned enterprise, PT Pos Indonesia plays an important role in providing affordable and equitable logistics services. However, competitive challenges and shipping rates are barriers to maintaining competitiveness. The mismatch of shipping rates with market needs can reduce customer satisfaction and encourage them to switch to other providers. At the operational level, such as at KCU Purwokerto, the issue of shipping rates is a crucial issue that needs to be studied so that PT Pos Indonesia remains competitive and able to meet consumer expectations (Ginny, 2019). Shipping rates are a strategic factor in attracting and retaining customers, so it is necessary to analyse shipping rates at PT Pos Indonesia KCU Purwokerto. This study aims to

assess whether the current shipping rates have considered the destination zone and type of service proportionally. This understanding is expected to help companies formulate shipping rates policies that are more transparent, competitive, and able to increase competitiveness amid the rapid development of the shipping service industry.

## 2. LITERATURE REVIEW
### 2.1. Definition of Shipping Rates
Shipping rates in logistics are fees charged to customers for services provided to customers. For the customer, the rate reflects the value of the service received. The higher shipping rates, the more likely customers to reassess the fit between costs and benefits. Therefore, shipping rates must be carefully structured to remain competitive and in line with market needs (Suliawati et al., 2021). shipping service rates are determined not only by the weight and volume of the goods, but are also influenced by the destination region (Agus et al., 2022). Shipping rates need to be customised according to the type of service offered. Services with high quality and speed are charged at higher rates because they require greater operational costs and risk management. Therefore, shipping rates should reflect differences in service characteristics according to customer needs (Saputra & Bailey, 2022).

### 2.2. Definition of Destination Region
Research (Dian Sudiantini et al., 2023), shipping rates on PT Pos Indonesia services are determined through a combination of service type, weight of goods, and destination area. This shows that in setting shipping rates, geographical elements are taken into consideration for service efficiency, although they are not always calculated in kilometres.

Research (Kasih & Maulidina, 2023) explains that distance travelled or destination area is one of the important components in planning delivery routes, with the hope of reducing logistics costs and increasing service speed. Therefore, in practice, destination areas are often grouped into certain zones. The use of these zones allows PT Pos Indonesia to simplify the calculation of shipping rates without neglecting operational efficiency. Thus, the destination area or mileage is not only understood in physical kilometres but can also be represented through zones.

### 2.3. Type of Delivery Service
Based on Law No. 39 of 2009, PT Pos Indonesia not only serves correspondence, but also provides package delivery services that cover national to international areas. According to (Nurmaya & Anny Khabibah, 2021) in general, the types of PT Pos Indonesia services include: Pos Express fast delivery services for important goods and documents with same day and next day service options, Pos Regular economical services for non-urgent shipments with a wide range, Jumbo Economy for shipping large items at low rates, EMS (Express Mail Service) international premium services with fast delivery, Registered Letter Network (RLN) international alternatives at more affordable costs. and Pos Export large-scale export goods delivery services with export support facilities such as customs assistance and export documents.

### 2.4. Effect of Destination Region in Shipping Rates
Research by (Cindy Mandasari, Erna Mulyati, 2023), highlighted the importance of optimising the distribution route of goods delivery between branch offices. The results showed significant cost savings of 27.98% for distance reduction, 13.82% for reduced transportation time, 28.33% for decreased fuel costs, and a reduction in daily fixed costs of 63.64%. These efficiencies are closely related to the shipping rate structure of service delivery because the more efficient the distribution system, the greater the opportunity for the company to set more competitive rates. (Nirwan, 2021) Using the Closed-Open Mixed Vehicle Routine Problem (COPMVR) model approach, mileage optimisation can be done by distinguishing between internal and rental vehicles. This approach is able to produce a shorter route of 7.8 km which has an impact on the flexibility of vehicle use and operational expenses that can help develop a more proportional shipping rate policy.

### 2.5. Effect of Service Type on shipping rates
Research at PT Pos Indonesia Manado confirms that service quality and price are key factors in customer decisions. Services with guaranteed speed and reliability have higher delivery rates, but are still in demand because they are considered worth the benefits. This suggests that tariffs reflect not only operational costs, but also the added value of the service (Lumenta et al., 2014). Meanwhile, research at PT Pos Indonesia Tangerang shows that price significantly affects customer satisfaction where customers tend to choose prices based on the service benefits received (Sudaryana, 2020).

## 3.   RESEARCH METHODOLOGY

The data analysis technique in this study used quantitative descriptive analysis. Primary data were obtained directly through interviews with PT Pos Indonesia KCU Purwokerto employees, especially counter officers who understand the structure and characteristics of service delivery rates. Meanwhile, secondary data came from the Task Mile Pos website to check shipping rates based on postal code and destination area, as well as relevant literature related to PT Pos Indonesia shipping rates.

## 4.   RESULTS

### 4.1. Shipping Rate Mechanism

Shipping rates at PT Pos Indonesia KCU Purwokerto basically refer directly to the guidelines set by the head office. In other words, PT Pos Indonesia KCU Purwokerto does not have the authority to compile or set shipping rate guidelines independently. All approval and determination of shipping rates are fully under the authority of the Head Office of PT Pos Indonesia. This creates uniformity in setting shipping rates throughout Indonesia. Determination of shipping rates is based on a system that refers to postal codes, not based on specific geographical distances.

### 4.2. Calculation of Shipping Rates by Postal Code

The calculation of average shipping rates based on postcode zones by PT Pos Indonesia KCU Purwokerto consists of 9 zones as follows:

$$Average\ Pos\ Express\ Zone\ 1 = \frac{387.500}{13} = 29.808$$

$$Average\ Pos\ Regular\ Zone\ 1 = \frac{194.000}{13} = 14.923$$

$$Average\ Pos\ Regular\ Zone\ 2 = \frac{6.177.500}{94} = 65.718$$

$$Average\ Pos\ Regular\ Zone\ 3 = \frac{2.352.500}{60} = 42.208$$

$$Average\ Pos\ Express\ Zone\ 4 = \frac{454.000}{19} = 23.921$$

$$Average\ Pos\ Regular\ Zone\ 4 = \frac{387.500}{27} = 14.321$$

$$Average\ Pos\ Express\ Zone\ 5 = \frac{603.500}{31} = 19.468$$

$$Average\ Pos\ Regular\ Zone\ 5 = \frac{387.500}{33} = 11.742$$

$$Average\ Pos\ Express\ Zone\ 6 = \frac{101.000}{4} = 25.250$$

$$Average\ Pos\ Regular\ Zone\ 6 = \frac{514.500}{37} = 13.905$$

$$Average\ Pos\ Regular\ Zona\ 7 = \frac{3.683.000}{56} = 65.768$$

$$Average\ Pos\ Regular\ Zone\ 8 = \frac{2.904.000}{41} = 70.829$$

$$Average\ Pos\ Regular\ Zone\ 9 = \frac{16.235.000}{144} = 112.743$$

## 5.   DISCUSSION

### 5.1. Shipping Rate Mechanism

Based on an interview with Mrs Ika Rachmawati as the counter officer, it is known that currently the services available at PT Pos Indonesia KCU Purwokerto include Express Post, Regular Post, Economy Jumbo Post. Express Mail Service, Registered Letter Network, and Export Post. Each service has characteristics according to customer needs. Of all these services, Regular Post and Express Post are the two services that are the main choice for the majority of customers.

The calculation of shipping rates at PT Pos Indonesia KCU Purwokerto is done automatically through the MileApp system which can only be accessed individually by counter officers through https://task.mile.app/login with an official account (NIPPOS or email @posindonesia.co.id). Officers do not have the authority to change shipping rates because all arrangements are controlled by PT Pos Indonesia head office. For transparency, information on shipping rates is provided through social media, the company website, and

informed directly by the officer before the customer chooses the service. Any changes in shipping rates are also announced through counters and social media to avoid customer misunderstanding.

### 5.2. Analysis of Shipping Rates by Postal code zone

Table 1. List of Postal Code Zone Areas

| Zone | Coverage Area | Average Pos Express | Average Pos Regular |
|---|---|---|---|
| 1 | Jakarta, parts of Banten and West Java | 29.808 | 14.923 |
| 2 | Aceh, North Sumatra, West Sumatra, Riau, and Riau Island | | 65.718 |
| 3 | Bengkulu, Jambi, Bangka Belitung, South Sumatera, and Lampung | | 42.208 |
| 4 | Banten dan West Java | 23.921 | 14.321 |
| 5 | Central Java, Yogyakarta | 19.468 | 11.742 |
| 6 | East Java | 25.250 | 13.905 |
| 7 | Kalimantan | | 65.768 |
| 8 | Nusa Tenggara, Bali | | 70.829 |
| 9 | Sulawesi, Maluku, Papua | | 112.743 |

In logistics, costing is an important factor in customer decisions. PT Pos Indonesia KCU Purwokerto sets delivery rates based on zip code zones, not kilometres. Postal codes are used as a basis for grouping areas with similar geographical characteristics, for distribution efficiency and ease of customer access to rates. This system is more predictive, transparent, and easy to understand than physical distance calculations. This study analysed the rates of Pos Express and Pos Regular services based on the initial postal code to see the pattern of delivery rates in each zone, using descriptive statistics such as average.

Based on the results of the calculation of shipping rates for Pos Express and Pos Regular PT Pos Indonesia KCU Purwokerto, there are differences in coverage and shipping rate patterns. Pos Express is known to only be able to reach the island of Java so that the data is limited, the highest average shipping rate in zone 1 is 29,808, reflecting the focus on service speed. Meanwhile, Pos Regular reaches the whole of Indonesia with the lowest average delivery rate in zone 5 is 11,752 covering Central Java, and the highest in zone 9 is 112,743 covering eastern regions such as Sulawesi, Papua and Maluku. This shows that the more distant and difficult to reach an area, the higher the shipping rates. This difference reflects Pos Express' orientation on speed, while Pos Regular considers geographical and operational factors.

Table 2. List of shipping rates between expeditions

| Destination | Service Type | | Service Type | | Service Type | |
|---|---|---|---|---|---|---|
| | Pos Express | Pos Regular | J&E Yes | J&N Reg | J&T Eco | J&T Ez |
| Jakarta | 28.500 | 14.000 | 19.000 | 17.000 | - | 14.000 |
| Medan | - | 41.000 | - | 80.000 | 28.500 | 41.000 |
| Palembang | - | 38.500 | - | 51.000 | - | 34.000 |
| Bandung | 22.000 | 11.000 | 22.000 | 18.000 | - | 19.000 |
| Semarang | 15.000 | 10.000 | 19.000 | 12.000 | - | 9.000 |
| Surabaya | 19.000 | 16.000 | - | 22.000 | - | 16.000 |
| Banjarmasin | - | 59.500 | - | 78.000 | 28.500 | 41.000 |
| Denpasar | - | 22.000 | - | 43.000 | 21.500 | 31.000 |
| Papua | - | 138.000 | - | 195.000 | - | 169.000 |

Overall, PT Pos Indonesia KCU Purwokerto's service rates compared to J&E and J&T show that postal rates are not always expensive or cheap, but depend on the destination area and the efficiency of the distribution network owned by each company. For the island of Java, postal rates can compete with J&E and J&T while for areas outside Java such as Jayapura, the rates are cheaper than J&E and J&T, but still quite high. This reflects that the structure of shipping rates depends on logistics accessibility and the company's operational ability to reach the destination. Thus, the postcode-based shipping rates system implemented by PT Pos Indonesia has a fairly good structure, but still has challenges in terms of logistical efficiency in reaching express services in areas outside Java.

### 6. CONCLUSION

The shipping rates mechanism at PT Pos Indonesia KCU Purwokerto refers to the official provisions and guidelines from the head office. Branch offices do not have the authority to change or set rates. The entire shipping

rate calculation process is carried out via the web https://task.mile.app/login using a NIPPOS account or by email using the official domain @posindonesia.co.id. For the mobile application version available, Mileapp Field can only be accessed with an official Pos Indonesia account. However, the overall appearance on the web and application versions is almost similar. Service rates are classified by postcode, not distance based on physical units. Based on the results of the analysis, the average shipping rates for regular posts based on zip code zones vary. Zone 5 covering Central Java has the lowest average shipping rate while Zone 9 covering Sulawesi, Maluku, and Papua has the highest average. In addition, compared to J&E and J&T, PT Pos Indonesia KCU Purwokerto's shipping rates are not too expensive and cheap so that it can compete with other competitors. Rates depend on the efficiency of the distribution channels and the coverage area of each company.

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