

THE ROLE OF POSTAL AGENTS IN MEDIATING THE INFLUENCE OF FIRST MILE AND POSTAL RATES ON THE PERFORMANCE OF REGULAR POSTAL SERVICES AT PT POS INDONESIA, MAKASSAR MAIN BRANCH OFFICE 90100

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ABSTRACT

This study examines the role of Postal Agents in mediating the influence of First Mile and Postal Rates on the Performance of Regular Postal Services at PT Pos Indonesia Makassar Main Branch Office 90100. The study used an explanatory quantitative approach with a cross-sectional survey method. The population consisted of 160 Postal Agents, and the sample size was determined using the Slovin formula, resulting in 114 respondents. Data were collected through structured questionnaires. Data analysis was conducted using SEM-PLS with SmartPLS software.

The descriptive analysis results indicate that the variables of First Mile, Postal Rates, Postal Agents, and Regular Postal Service Performance are categorized as fairly good but not yet optimal. The measurement model evaluation shows that all constructs meet the criteria for convergent validity, discriminant validity, and reliability, with outer loading values above 0.70, AVE values above 0.50, and Composite Reliability values above 0.70.

The structural model results show that First Mile positively and significantly affects Postal Agents ($\beta = 0.476$; $p < 0.001$) and Regular Postal Service Performance ($\beta = 0.112$; $p = 0.035$). Postal Rates also positively and significantly affect Postal Agents ($\beta = 0.296$; $p < 0.001$) and service performance ($\beta = 0.158$; $p < 0.001$). Postal Agents have the strongest influence on performance ($\beta = 0.756$; $p < 0.001$). The model explains 49.70% of the variance in Postal Agents and 89.20% of the variance in service performance.

Keywords: First Mile; Postal Rates; Postal Agents; Regular Postal Service Performance; SEM-PLS

1. INTRODUCTION

The rapid growth of e-commerce in Indonesia has significantly increased demand for logistics services that are fast, reliable, and affordable. The expansion of digital transactions has directly contributed to higher parcel delivery volumes, particularly in urban areas with strong economic activity and dense population mobility. In recent years, logistics companies have faced increasing pressure to improve operational efficiency, delivery speed, pricing competitiveness, and customer satisfaction in order to survive within highly competitive markets (Syafrianita & Agus Purnomo, 2025; Purnomo, 2024; Nguyen et al., 2024). The logistics sector has therefore become an essential component in supporting national economic growth and digital commerce ecosystems. One of the important operational activities in logistics services is the First Mile process, which refers to the initial shipment collection stage from customers or agents to the distribution center. Effective First Mile management is considered crucial because it influences delivery lead time, shipment accuracy, operational costs, and customer satisfaction. In addition, pricing strategy also plays an important role in determining market competitiveness and customer loyalty. Competitive postal rates are necessary to maintain sustainable logistics performance amid the rapid growth of private courier companies offering lower shipping costs and faster delivery services.

PT Pos Indonesia, through its Regular Postal Services, continues to play a strategic role in supporting goods and document distribution throughout Indonesia. In Makassar, Regular Postal Services are operated by the Makassar Main Branch Office 90100 and supported by a network of Postal Agents functioning as service intermediaries and operational partners. Postal Agents contribute to expanding service accessibility, increasing transaction coverage, and strengthening logistics distribution networks. However, several operational problems have emerged in recent years.

Empirical data indicate that Regular Postal revenue declined from IDR 45,363,543,670 in 2024 to IDR 39,146,792,961 in 2025, representing a decrease of 13.70%. Furthermore, the number of active Postal Agents decreased from 190 agents to 160 agents, or by 15.79%, indicating potential problems in maintaining agent performance and operational sustainability. Operational issues are also reflected in the First Mile process, where 148,239 customer complaints were recorded in 2025, with 26.23% related to shipment pickup delays conducted by Oranger officers. This condition indicates inefficiencies in shipment collection activities, especially considering that only six pickup officers served 160 Postal Agents.

In addition to operational inefficiencies, pricing competitiveness has become another major challenge. The shipping rate for Makassar–Jakarta deliveries with a weight of two kilograms is IDR 43,000, which is higher than several competitors, including J&T (IDR 37,000), JNE (IDR 38,000), and SiCepat (IDR 38,500). This pricing difference potentially affects customer decisions, reduces agent loyalty, and weakens the competitiveness of Regular Postal Services in the logistics market.

Previous studies have discussed the relationship between operational logistics factors and service performance. Several studies reported that First Mile management significantly improves logistics service performance through operational efficiency and faster shipment handling. Other studies found that pricing strategies positively influence customer retention and intermediary distribution performance. However, some previous studies reported inconsistent or insignificant relationships between First Mile operations, pricing strategy, intermediary networks, and logistics performance. Moreover, most previous studies examined these variables separately, while limited studies have simultaneously analyzed the mediating role of Postal Agents in the relationship between First Mile, Postal Rates, and Regular Postal Service Performance, particularly in the Indonesian postal logistics sector.

These inconsistencies indicate the existence of both theoretical and empirical research gaps. Theoretically, there is still limited understanding regarding the integration of operational logistics factors and intermediary distribution networks within postal service performance models. Empirically, studies specifically focusing on PT Pos Indonesia and Postal Agent mediation mechanisms remain limited, particularly in the Makassar logistics service context.

Based on these conditions, this study examines the influence of First Mile and Postal Rates on Regular Postal Service Performance, with Postal Agents serving as a mediating variable at PT Pos Indonesia Makassar Main Branch Office 90100. This research is important because improving First Mile efficiency, pricing competitiveness, and Postal Agent performance is expected to strengthen logistics service quality and organizational competitiveness in Indonesia's rapidly growing e-commerce market.

The findings of this study are expected to provide theoretical implications by enriching logistics management literature related to First Mile operations, pricing strategy, intermediary networks, and service performance. Practically, the study is expected to provide managerial recommendations for PT Pos Indonesia in improving operational efficiency, strengthening Postal Agent networks, and enhancing pricing competitiveness.

Accordingly, the research questions addressed in this study are:

1. Does First Mile positively and significantly affect Postal Agents?
2. Does First Mile positively and significantly affect Regular Postal Service Performance?
3. Do Postal Rates positively and significantly affect Postal Agents?
4. Do Postal Rates positively and significantly affect Regular Postal Service Performance?
5. Do Postal Agents positively and significantly affect Regular Postal Service Performance?

6. Does First Mile indirectly affect Regular Postal Service Performance through Postal Agents?
7. Do Postal Rates indirectly affect Regular Postal Service Performance through Postal Agents?

The originality and scientific novelty of this study lie in the integration of First Mile, Postal Rates, Postal Agents, and Regular Postal Service Performance within a single empirical model in the Indonesian postal logistics sector. This study also introduces Postal Agents as a mediating variable, which has received limited attention in previous logistics and postal service studies, particularly within the context of PT Pos Indonesia Makassar Main Branch Office 90100.

2. LITERATURE REVIEW

2.1 Supply Chain Management Theory

Supply Chain Management (SCM) theory explains the integrated management of material flows, information flows, and financial flows from suppliers to end customers in order to improve operational efficiency and customer value creation (Christopher, 2023). SCM emphasizes coordination among all actors involved in logistics activities, including suppliers, distributors, transportation providers, intermediary agents, and customers. Effective supply chain integration enables organizations to reduce operational costs, improve delivery reliability, increase responsiveness, and strengthen competitive advantage.

In postal logistics services, SCM is highly relevant because postal operations involve interconnected activities such as shipment collection, transportation, sorting, warehousing, distribution, and final delivery. Efficient coordination among these activities is essential to ensure service quality and customer satisfaction. Hsieh et al. (2023) reported that integrated logistics coordination positively affects delivery performance and operational productivity. Similarly, Queiroz et al. (2024) found that supply chain integration improves logistics responsiveness and strengthens organizational competitiveness in digital commerce environments.

However, previous studies also identified several weaknesses in logistics supply chain systems, particularly related to operational coordination, shipment visibility, and intermediary distribution management. Most previous studies focused on transportation efficiency and digital logistics systems, while limited research examined the integration of First Mile operations, pricing strategies, and intermediary agent networks within postal logistics services. Therefore, further research is required to develop a more comprehensive understanding of operational logistics performance in postal service organizations.

2.2 Supply Chain Efficiency Theory

Supply Chain Efficiency theory emphasizes the optimization of logistics resources, operational processes, transportation systems, and distribution activities to minimize waste and maximize productivity (Ravindran et al., 2023). Efficiency within logistics systems is

commonly measured through delivery speed, operational costs, shipment reliability, asset utilization, and customer service effectiveness.

In postal logistics services, operational efficiency is strongly influenced by First Mile effectiveness, transportation management, and distribution network coordination. Efficient shipment collection activities contribute to faster processing time, reduced operational delays, and improved customer satisfaction. Furthermore, competitive pricing strategies and effective intermediary networks can support transaction growth and market expansion.

Previous studies concluded that operational efficiency positively influences logistics performance and customer retention. Ravindran et al. (2023) found that efficient logistics coordination improves organizational productivity and reduces operational costs. Nevertheless, some studies reported that operational efficiency alone is insufficient to improve logistics performance when companies face pricing competition and weak intermediary support. This indicates that logistics efficiency should be analyzed together with pricing strategies and distribution network effectiveness.

2.3 First Mile

First Mile refers to the initial stage of logistics operations involving shipment collection from customers or agents to the distribution center (Dinakaran & Kumari, 2025). First Mile activities include pickup scheduling, shipment collection coordination, route planning, transportation management, shipment tracking, and information integration. As the starting point of logistics distribution, First Mile significantly affects delivery lead time, operational efficiency, and customer satisfaction.

The dimensions of First Mile in this study consist of Pickup Management and Transportation Efficiency. Pickup Management includes indicators such as pickup scheduling, shipment collection accuracy, and operational coordination. Transportation Efficiency includes route planning effectiveness, transportation speed, shipment tracking systems, and logistics data integration.

Several previous studies found that First Mile management positively influences logistics service quality and operational performance. Dinakaran and Kumari (2025) reported that effective shipment collection systems improve delivery reliability and reduce operational delays. Other studies also concluded that transportation coordination and digital tracking systems strengthen logistics responsiveness and customer satisfaction.

However, previous research still presents inconsistent findings. Some studies found that First Mile operations have insignificant effects on organizational performance due to limited operational resources, insufficient manpower, and poor coordination systems. In addition, previous studies mainly focused on private logistics companies and e-commerce delivery services, while studies specifically examining First Mile operations within postal service organizations remain limited. This limitation provides an opportunity for further research in the postal logistics sector.

2.4 Postal Rates

Postal Rates refer to shipping charges imposed on customers based on shipment weight, service type, and delivery destination (Ramadhani et al., 2025). Pricing strategy is one of the most important competitive factors in logistics services because customers tend to compare prices among service providers before selecting shipping services.

The dimensions of Postal Rates include tariff structure and shipping costs. The indicators consist of competitive pricing, transparent tariffs, tariff discounts, weight-based rates, and distance-based rates. Competitive and transparent pricing can improve customer trust, increase transaction volume, and strengthen intermediary loyalty.

Previous studies showed that pricing strategies significantly influence customer satisfaction and organizational competitiveness. Ramadhani et al. (2025) found that affordable logistics tariffs positively affect customer retention and market competitiveness. Other studies also concluded that pricing flexibility strengthens intermediary relationships and increases service demand.

Nevertheless, several studies reported insignificant relationships between pricing and logistics performance because customers may prioritize delivery speed, reliability, and service quality rather than price alone. Furthermore, most previous studies analyzed pricing strategies independently without considering the mediating role of intermediary distribution networks such as Postal Agents. Therefore, further studies integrating pricing and intermediary variables are still necessary.

2.5 Postal Agents

Postal Agents are official business partners of PT Pos Indonesia that provide postal, logistics, and transaction services to the public (PT Pos Indonesia, 2023). Postal Agents function as intermediary distribution channels that help companies expand service accessibility and strengthen logistics networks within local communities.

The indicators of Postal Agents include operational cooperation, shipping services, customer accessibility, service coverage, payment transaction services, and digital operating system access. Effective Postal Agent performance contributes to wider distribution coverage, increased shipment transactions, and improved customer convenience.

Distribution channel theory explains that intermediary agents play an important role in connecting service providers with customers. Previous studies found that intermediary networks positively influence organizational performance by improving market reach and reducing operational burdens. However, limited studies specifically discuss Postal Agents within postal logistics systems, particularly as mediating variables between operational logistics factors and service performance. This limitation indicates the need for further empirical investigation.

2.6 Regular Postal Service Performance

Regular Postal Service Performance refers to the organizational capability to achieve operational objectives, create customer value, and maintain service competitiveness (Syuhud & Komariyatin, 2025). Service performance reflects organizational effectiveness in managing logistics operations, customer relationships, and competitive positioning.

The dimensions of service performance in this study include sales performance, customer satisfaction, and competitiveness. The indicators consist of increased sales volume, increased revenue, customer growth, delivery reliability, service quality, and tariff competitiveness.

Previous studies concluded that logistics operational quality significantly affects service performance. Syuhud and Komariyatin (2025) found that operational reliability and service responsiveness positively influence organizational competitiveness and customer satisfaction. Nevertheless, some studies suggested that service performance is multidimensional and influenced not only by operational factors but also by pricing strategies and intermediary distribution systems.

Therefore, this study develops a more comprehensive model by integrating First Mile, Postal Rates, Postal Agents, and Regular Postal Service Performance within a single conceptual framework in the postal logistics sector.

3. METHODS

Research methods with a quantitative approach must describe (objectives and research variables), research targets (population, sample, and data collection techniques), research models, research development, and data analysis techniques. The research hypothesis must be stated implicitly. While the research design for qualitative must present the research methods used such as phenomenology, ethnomethodology, ethnography, and others.

3.1 Research Design and Research Variables

This study employs a quantitative explanatory research approach using a cross-sectional survey design. The quantitative approach is used to examine the causal relationships among First Mile, Postal Rates, Postal Agents, and Regular Postal Service Performance at PT Pos Indonesia Makassar Main Branch Office 90100. Explanatory research is appropriate because this study aims to explain the influence among variables and test the structural relationships within the proposed research model (Sugiyono, 2023).

The research variables consist of:

1. Exogenous Variables:
 - First Mile (X1)
 - Postal Rates (X2)
2. Intervening Variable:

- Postal Agents (Y)

3. Endogenous Variable:

- Regular Postal Service Performance (Z)

First Mile is measured through Pickup Management and Transportation Efficiency dimensions. Postal Rates are measured through tariff structure and shipping cost indicators. Postal Agents are measured through operational cooperation, service accessibility, and transaction support indicators. Regular Postal Service Performance is measured through sales performance, customer satisfaction, and competitiveness indicators.

3.2 Research Population and Sample

The research population consists of all active Postal Agents registered at PT Pos Indonesia Makassar Main Branch Office 90100. Based on company operational data in 2025, the total population consists of 160 active Postal Agents. The sample size was determined using the Slovin formula, resulting in 114.29, which was rounded to 114 respondents.

The sampling technique used in this study is saturated sampling (census sampling), where all members of the population are used as research respondents. Saturated sampling is applied because the population size is relatively limited and accessible for comprehensive data collection. Thus, the total sample used in this study consists of 160 Postal Agents.

3.3 Data Collection Techniques

This study uses primary and secondary data sources. Primary data are collected directly from respondents through structured questionnaires distributed to Postal Agents. The questionnaire is developed using indicators derived from previous studies and related theories concerning logistics management, pricing strategy, intermediary distribution networks, and service performance.

The measurement scale used is a five-point Likert scale, ranging from:

1 = Strongly Disagree,

2 = Disagree,

3 = Neutral,

4 = Agree,

5 = Strongly Agree.

Secondary data are obtained from company operational reports, shipment complaint records, revenue reports, and other organizational documents related to Regular Postal Service operations at PT Pos Indonesia Makassar Main Branch Office 90100.

3.4 Research Model Development

This study develops a structural model examining the influence of First Mile and Postal Rates on Regular Postal Service Performance through Postal Agents as a mediating variable. The model is developed based on Supply Chain Management Theory, Supply Chain Efficiency Theory, and Distribution Channel Theory.

The conceptual relationships proposed in this study assume that effective First Mile operations and competitive Postal Rates contribute to stronger Postal Agent performance and improved Regular Postal Service Performance. Furthermore, Postal Agents are assumed to mediate the relationship between operational logistics factors and service performance outcomes.

The structural model of this research is presented in Figure 1.

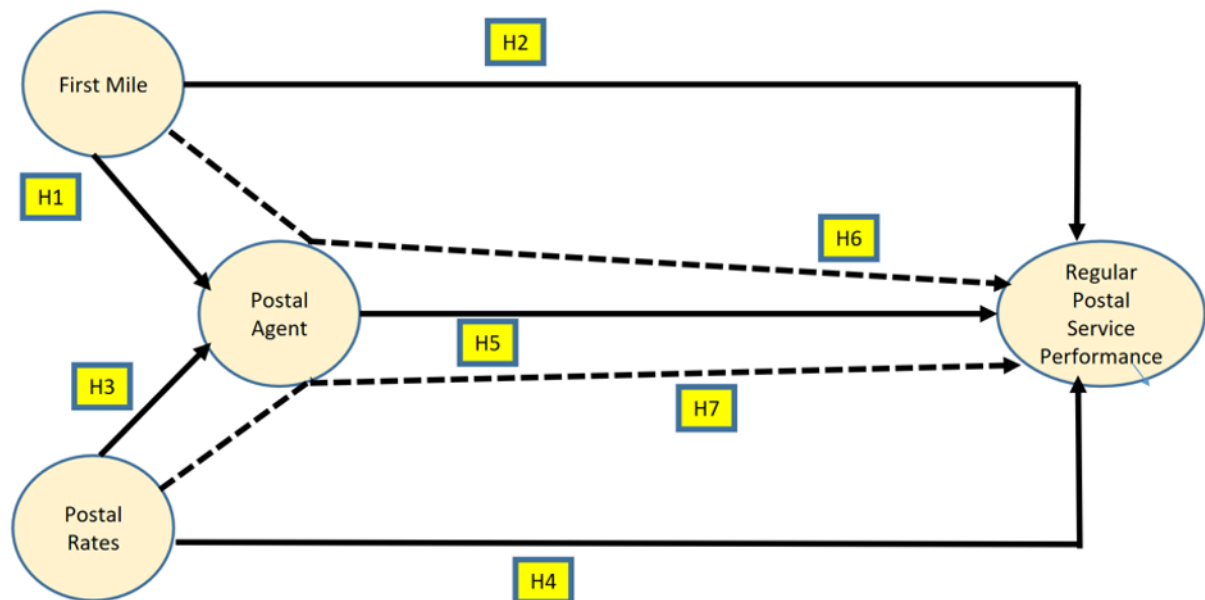


Figure 1. Research Model

The hypotheses are developed implicitly through the proposed causal relationships among variables within the structural model.

The hypotheses tested are as follows:

H1: First Mile effects Postal Agents

H2: First Mile effects Regular Postal Service Performance

H3: Postal Rates effects Postal Agents

H4: Postal Rates effects Regular Postal Service Performance

H5: Postal Agents effects Regular Postal Service Performance

H6: First Mile effects Regular Postal Service Performance through Postal Agents

H7: Postal Rates effects Regular Postal Service Performance through Postal Agents

3.5 Data Analysis Techniques

The data analysis technique used in this study is Structural Equation Modeling–Partial Least Squares (SEM-PLS) using SmartPLS software. SEM-PLS is selected because it is suitable for predictive and exploratory models involving multiple latent variables and mediation relationships simultaneously.

The analysis consists of two stages:

1. Measurement Model Evaluation (Outer Model)

The outer model evaluation is conducted to assess the validity and reliability of the research instruments through:

- a. Convergent Validity using Outer Loading and Average Variance Extracted (AVE),
- b. Discriminant Validity using Cross Loading and Fornell-Larcker Criterion,
- c. Composite Reliability,
- d. Cronbach's Alpha.

The indicator is considered valid if the outer loading value exceeds 0.70, while AVE values must exceed 0.50. Reliability is considered acceptable if Composite Reliability and Cronbach's Alpha values exceed 0.70.

2. Structural Model Evaluation (Inner Model)

The inner model evaluation is conducted to examine the structural relationships among variables through:

- a. Coefficient of Determination (R^2),
- b. Predictive Relevance (Q^2),
- c. Effect Size (f^2),
- d. Path Coefficient Analysis,
- e. Hypothesis Testing using Bootstrapping procedures.

Hypothesis testing is conducted using T-statistics and P-values. The relationship among variables is considered significant if the T-statistic value exceeds 1.96 and the P-value is less than 0.05 at a 95% confidence level.

Indirect effect analysis is also conducted to examine the mediating role of Postal Agents in the relationship between First Mile, Postal Rates, and Regular Postal Service Performance.

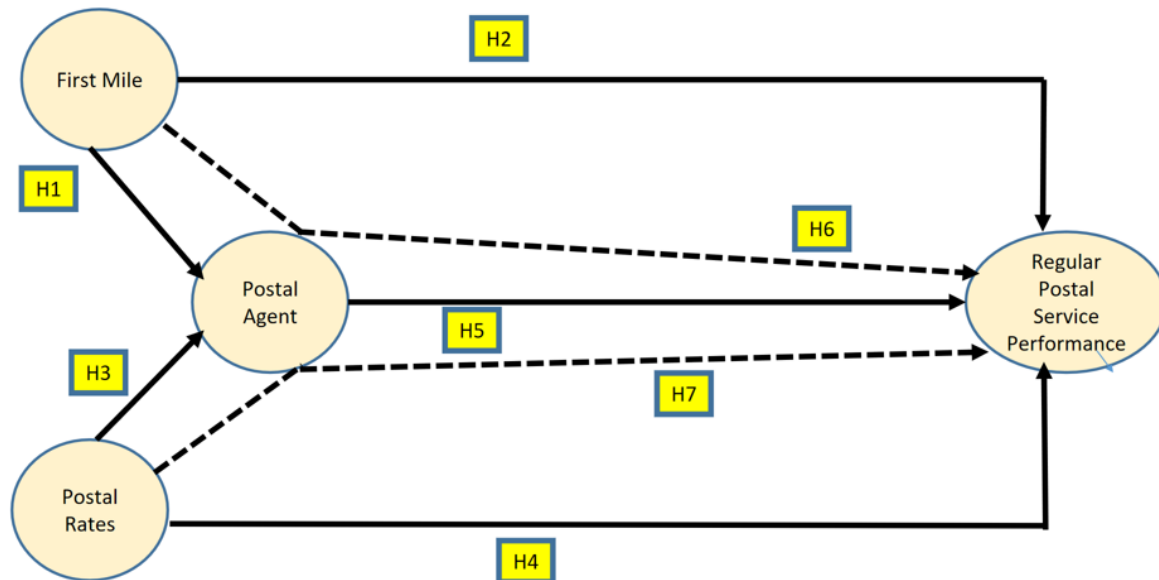


Figure 1. Research Model

The hypotheses tested are as follows:

- H1: First Mile → Postal Agents
- H2: First Mile → Regular Postal Service Performance
- H3: Postal Rates → Postal Agents
- H4: Postal Rates → Regular Postal Service Performance
- H5: Postal Agents → Regular Postal Service Performance
- H6: First Mile → Regular Postal Service Performance through Postal Agents
- H7: Postal Rates → Regular Postal Service Performance through Postal Agents

3.3 Population and Sample

The population consists of 160 Postal Agents operating under PT Pos Indonesia Makassar Main Branch Office 90100. The sample size was determined using the Slovin formula with a 5% margin of error: The sample size was determined using the Slovin formula, resulting in 114 respondents

3.4 Data Collection

Data were collected using structured questionnaires distributed to Postal Agent owners and operators involved in postal logistics activities in Makassar. The questionnaire consisted of 28

indicators measured using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The data collection process was conducted through direct and online surveys. All 114 questionnaires were returned and considered valid for analysis using SEM-PLS with SmartPLS software.

4. RESULTS AND DISCUSSION

4.1 Numerical Results

4.1.1 Descriptive Analysis

Table 1. Descriptive Analysis Results

VariablesS	Name Of Indicators	Average Score	Interpretation	Decision
First Mile	FM	2,97	Fairly Good	Worth Researching
Postal Rates	TAR	2,95	Fairly Good	Worth Researching
Postal Agen	AP	3,00	Fairly Good	Worth Researching
Regular Postal Service Performance	KL	3,04	Fairly Good	Worth Researching

Source : Questionnaire Data Processed By Using Smart PLS3 (2026)

The descriptive analysis results indicate that the variables of First Mile, Postal Rates, Postal Agents, and Regular Postal Service Performance are categorized as fairly good but not yet optimal. These findings indicate the need for improvement in logistics operational management and service competitiveness.

4.1.2 Convergent Validity

Table 2. Outer Loading Test Result

Variables	Name Of Indicators	Outer Loading Value	Standard	Decision
First Mile	FM	0,707-0,802	Greater Than 0,700	Valid
Postal Rates	TAR	0,741-0,799	Greater Than 0,700	Valid
Postal Agent	AP	0,707-0,802	Greater Than 0,700	Valid
Regular Postal Service Performance	KL	0,729-0,892	Greater Than 0,700	Valid

Source : Questionnaire Data Processed By Using Smart PLS3 (2026)

Table 3. Average Variance Extracted (AVE) Test Result

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
First Mile	0.885	0.908	0.911	0.631
Postal Agent	0.861	0.873	0.893	0.545
Postal Rates	0.861	0.922	0.889	0.573
Reguler Postal Service Performance	0.926	0.929	0.939	0.632

Source : Questionnaire Data Processed By Using Smart PLS3 (2026)

The convergent validity results indicate that all indicators have outer loading values above 0.70 (table 2) and AVE values above 0.50.(Table 3). Therefore, all indicators are considered valid and capable of measuring the constructs accurately.

4.1.3 Discriminant Validity

Table 4. Discriminant Validity Test Result

	First Mile	Postal Agent	Postal Rates	Regular Postal Service Performance
First Mile	0.794			
Postal Agent	0.677	0.738		
Postal Rates	0.680	0.620	0.757	
Regular Postal Service Performance	0.731	0.729	0.702	0.795

Source : Questionnaire Data Processed By Using Smart PLS3 (2026)

The discriminant validity results using the Fornell–Larcker criterion show that the square root of AVE for each variable is greater than the correlations with other constructs. This confirms that all variables have adequate discriminant validity and are empirically distinct.

4.1.4 Reliability Test

Table 5. Reliability Test Result

	Cronbach's Alpha	rho_A	Composite Reliability
First Mile	0.885	0.908	0.911
Postal Agent	0.861	0.873	0.893
Postal Rates	0.861	0.922	0.889
Regular Postal Service Performance	0.926	0.929	0.939

Source : Questionnaire Data Processed By Using Smart PLS3 (2026)

The reliability test results indicate that all variables have Cronbach's Alpha, rho_A, and Composite Reliability values above 0.70. Therefore, the research instrument demonstrates strong internal consistency and reliability.

4.1.5 Structural Model (Path Analysis)

The structural model results show that First Mile and Postal Rates significantly influence Postal Agents. The structural equation is as follows:

$$Y = 0.476X_1 + 0.296X_2$$

where:

- Y = Postal Agents
- X₁ = First Mile
- X₂ = Postal Rates

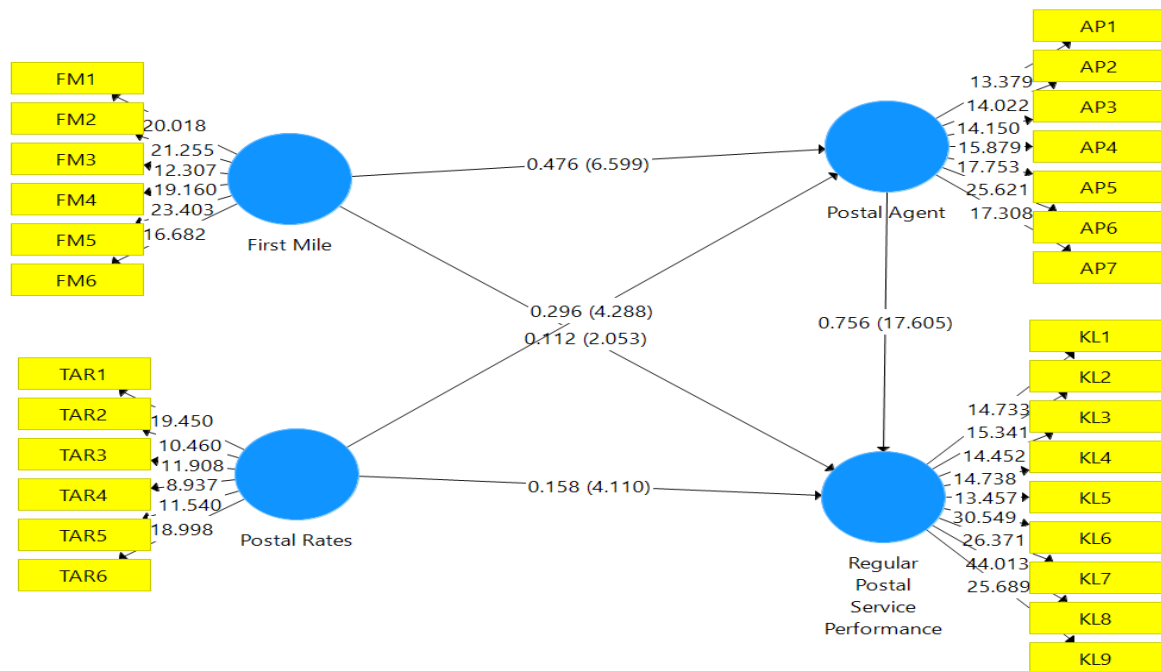
Furthermore, the equation for Regular Postal Service Performance is:

$$Z = 0.112 X_1 + 0.158 X_2 + 0.756 Y$$

where:

- Z = Regular Postal Service Performance
- Y = Postal Agents

The results indicate that Postal Agents have the strongest influence on service performance.



Source : Questionnaire Data Processed By Using Smart PLS3 (2026)

Figure 2. Research Result

4.1.6 Hypothesis Testing

Table 6. Hypothesis Testing Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
First Mile -> Postal Agent	0.476	0.475	0.068	7.031	0.000
First Mile -> Regular Postal Service Performance	0.112	0.109	0.053	2.118	0.035
Postal Agent -> Regular Postal Service Performance	0.756	0.758	0.043	17.524	0.000
Postal Rates -> Postal Agent	0.296	0.305	0.063	4.693	0.000
Postal Rates -> Regular Postal Service Performance	0.158	0.159	0.040	3.898	0.000
First Mile -> Postal Agent -> Regular Postal Service Performance	0.360	0.361	0.061	5.854	0.000
Postal Rates -> Postal Agent -> Regular Postal Service Performance	0.224	0.231	0.047	4.739	0.000

Source : Questionnaire Data Processed By Using Smart PLS3 (2026)

The hypothesis testing results demonstrate that all relationships among variables are positive and statistically significant.

1. First Mile significantly affects Postal Agents ($\beta = 0.476$; $p < 0.000$).
2. First Mile significantly affects Regular Postal Service Performance ($\beta = 0.112$; $p = 0.035$).
3. Postal Rates significantly affect Postal Agents ($\beta = 0.296$; $p < 0.000$).
4. Postal Rates significantly affect Regular Postal Service Performance ($\beta = 0.158$; $p = 0.000$).

5. Postal Agents significantly affect Regular Postal Service Performance ($\beta = 0.756$; $p < 0.000$).
6. First Mile significantly affects performance through Postal Agents ($\beta = 0.360$; $p < 0.000$).
7. Postal Rates significantly affect performance through Postal Agents ($\beta = 0.224$; $p < 0.000$).

These findings confirm the strategic mediating role of Postal Agents in improving postal service performance.

4.2 Coefficient of Determination (R-Square Test)

Table 7. Coefficient of Determination (R-Square) Test Results

	R Square	R Square Adjusted
Postal Agent	0.506	0.497
Regular Postal Service Performance	0.895	0.892

Source : Questionnaire Data Processed By Using Smart PLS3 (2026)

The Adjusted R-Square value for Postal Agents is 0.497 , indicating that First Mile and Postal Rates explain 49,70% of the variance in Postal Agents. Meanwhile, the Adjusted R-Square value for Regular Postal Service Performance is 0.892 indicating that First Mile, Postal Rates, and Postal Agents explain 89,20 % of the variance in service performance. This demonstrates that the model has strong explanatory power.

4.3 Discussion

The findings confirm that First Mile management significantly influences both Postal Agents and Regular Postal Service Performance. Effective pickup scheduling, shipment collection, route planning, and tracking systems contribute to operational efficiency and service quality improvement.

Postal Rates also significantly affect Postal Agents and service performance. Competitive and transparent tariffs improve transaction volume and strengthen service competitiveness.

Postal Agents were found to be the most dominant factor affecting service performance. This indicates that the expansion of agent networks, operational collaboration, customer accessibility, and digital integration are essential factors in improving postal logistics performance.

Furthermore, the mediation analysis confirms that Postal Agents strengthen the influence of First Mile and Postal Rates on service performance. Therefore, Postal Agents play a strategic role in the Supply Chain Management system of PT Pos Indonesia.

5. CONCLUSION AND LIMITATION

This study concludes that all proposed hypotheses are accepted. First Mile and Postal Rates have positive and significant effects on Regular Postal Service Performance, both directly and indirectly through Postal Agents. Postal Agents are proven to be the most dominant variable influencing service performance.

These findings confirm that strengthening Postal Agent networks, improving First Mile operations, and implementing competitive pricing strategies are essential in enhancing the

performance of Regular Postal Services at PT Pos Indonesia Makassar Main Branch Office 90100.

Managerial Implications

Based on the research findings, several managerial recommendations are proposed:

1. Optimizing First Mile operations through digital tracking systems and standardized pickup scheduling.
2. Implementing competitive and transparent pricing strategies based on market benchmarking.
3. Strengthening Postal Agent capabilities through training, incentives, and performance-based evaluation systems.
4. Expanding Postal Agent networks in strategic MSME and e-commerce areas.
5. Improving digital integration between Postal Agents and PT Pos Indonesia operational systems.

Future Research

Future studies are recommended to include additional variables such as digital capability, customer satisfaction, service quality, last mile delivery, logistics information systems, and customer trust to improve the comprehensiveness of the research model.

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