

Customer Satisfaction Analysis with Servqual and Kano Model Integration to Improve the Quality of Online Transportation Services

Insan Zaenul Muttaqin¹, Muhammad Ali Akbar², Bintang Nidia Kusuma³

^{1,2,3}*Sekolah Tinggi Teknologi Wastukencana, Purwakarta, Indonesia*

Email: insanzaenulmuttaqin@gmail.com

Copyright @ 2026 Insan Zaenul Muttaqin et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract. The growth of online transportation services has intensified competition among providers while generating various user complaints, making service quality evaluation increasingly important, particularly in developing regions such as Purwakarta Regency, where user characteristics differ from those in major cities. This study aims to analyze customer satisfaction and determine service improvement priorities for online transportation through the integration of the Service Quality (SERVQUAL) Gap 5 method and the Kano Model. A quantitative approach was employed using primary data from 100 respondents selected through purposive sampling. The instrument was a structured questionnaire measuring 15 service attributes across five SERVQUAL dimensions, and it was proven valid and reliable. The SERVQUAL analysis yielded an average perception score of 3.40 and an expectation score of 3.44, with a total gap of -0.05, indicating that service performance remains slightly below customer expectations. Of the 15 attributes, 8 showed negative gaps, with the largest found in pickup punctuality (-0.22), local route mastery (-0.19), and fare transparency (-0.14); at the dimensional level, the largest gap occurred in the Reliability dimension (-0.11). Integration with the Kano Model identified two Must-be attributes as the top improvement priorities, pickup punctuality and drivers' mastery of local routes, while six other Indifferent attributes only need to be maintained and monitored. This study confirms that integrating SERVQUAL and the Kano Model can not only identify problematic attributes but also determine improvement priorities more strategically.

Keywords: Customer Satisfaction, Service Quality, SERVQUAL, Kano Model, Online Transportation.

A. INTRODUCTION

The development of information and communication technology has brought significant changes to various industrial sectors, including the transportation sector. The use of digital technology through online transportation applications has transformed people's mobility patterns by providing more practical, fast, transparent, and accessible services (Cai et al., 2024; M.-C. Chen et al., 2019; Fauziyah et al., 2019; Thuy et al., 2026). The presence of various platforms such as Gojek, Grab, Maxim, InDriver, and ELD provides transportation alternatives that can meet people's mobility needs more efficiently. In this environment, service quality is a key factor determining customer satisfaction levels and the competitiveness of online transportation service providers (Nadila et al., 2025; Suryawardani et al., 2022).

The increasing number of online transportation users has led to increasingly fierce competition among service providers. Every company is required to provide services that meet or even exceed customer expectations to maintain user loyalty (Wahyuni et al., 2019). Conversely, if the service provided falls below customer expectations, dissatisfaction will arise, potentially leading to customer switching to other service providers. According to Nugraha (2022), service quality is the comparison between customer perceptions of the service received and their expectations. Improving service quality is a crucial strategy for maintaining customer satisfaction in the service industry (Caesaron et al., 2021; Maudzoh & Rengganis, 2020; Salsabila et al., 2026).

In practice, online transportation users still face various problems, such as late driver arrivals, unilateral order cancellations, inconsistent travel time estimates, incorrect pickup locations due to GPS systems, app disruptions, difficulty contacting drivers, and slow handling of customer complaints. These conditions indicate a gap between the service expected and the service received by customers, necessitating a comprehensive evaluation of service quality (Kusumahadi, 2022; Pamungkas & Paramita, 2025).

One widely used method for measuring service quality is Service Quality (SERVQUAL). The SERVQUAL method measures service quality by comparing customer perceptions and expectations, thus identifying service attributes with the largest gaps (Leończuk, 2016). In this study, the measurement focused on Gap 5 (Customer Gap), which is the gap between expected service and perceived service, as this gap directly reflects customer satisfaction levels (Basfirinci & Mitra, 2015).

Although SERVQUAL is capable of identifying service attributes with the largest gaps, this method has limitations because it assumes all service attributes have the same influence on customer satisfaction (Idzni & Ekawati, 2021; Kohli & Singh, 2021; Mansur et al., 2019). Each attribute has a different level of importance in influencing satisfaction, integration with the Kano Model, which can group service attributes into Must-Be, One-Dimensional, Attractive, Indifferent, and Reverse categories, is necessary to determine improvement priorities more precisely (Dewi, 2019).

Several previous studies have shown that integrating SERVQUAL and the Kano Model can produce more effective service quality improvement recommendations than using SERVQUAL alone. Research by (Y. H. Chen et al., 2018; Ummi et al., 2021) shows that combining these two methods can determine which service attributes should be prioritized based on the level of gap and their impact on customer satisfaction. Research on the integration of SERVQUAL and the Kano Model in online transportation services in Purwakarta Regency is still very limited, even though user characteristics in this region differ from those in large cities due to factors such as traffic conditions, the number of driver partners, and the level of community dependence on online transportation services.

Based on these conditions, this study aims to analyze the level of satisfaction of online transportation customers in Purwakarta Regency by measuring service quality gaps using the SERVQUAL method and grouping service attributes using the Kano Model. The results of this study are expected to provide recommendations for more effective service improvement priorities, thereby increasing service quality and customer satisfaction of online transportation in Purwakarta Regency.

B. METHOD

This research uses a quantitative approach with the aim of analyzing the level of customer satisfaction with the quality of online transportation services by measuring the gap between customer perceptions and expectations as well as determining service improvement priorities using the integration of the SERVQUAL method and the Kano Model (Sugiyono, 2022).

The research object is the quality of online transportation services which includes five dimensions of SERVQUAL, namely tangibles, reliability, responsiveness, assurance, and empathy. The research subjects were users of online transportation services in Purwakarta Regency who had used the Gojek, Grab, Maxim, InDriver and ELD applications. Respondents were selected using a purposive sampling technique with the criteria of residing in Purwakarta Regency, being at least 17 years old, having used online transportation services at least twice in the last three months, and being willing to fill out the research questionnaire completely.

The sample size was determined using the Lemeshow formula because the population of online transportation users is not known with certainty (infinite population). Based on a 95% confidence level, a minimum sample size of 96 respondents was obtained and rounded up to 100 respondents to be able to represent the characteristics of the population of online transportation users in Purwakarta Regency.

Data collection was carried out through distributing questionnaires directly or online using Google Form. The research instrument consists of three parts, namely the respondent characteristics questionnaire, the SERVQUAL questionnaire to measure the level of customer perception and expectations using a five-point Likert scale, and the Kano Model questionnaire which consists of functional and dysfunctional questions for each service attribute.

Before the analysis was carried out, the research instrument was tested for validity and reliability using IBM SPSS Statistics version 26 software. The validity test was carried out using the Pearson Product Moment correlation, while the reliability of the instrument was tested using the Cronbach's Alpha coefficient. The instrument is declared valid if the calculated r value is greater than the table r , while the instrument is declared reliable if the Cronbach's Alpha value is ≥ 0.60 (Sugiyono, 2022).

Data analysis was carried out through the integration of the SERVQUAL method and the Kano Model. The first stage is to calculate the SERVQUAL gap value by subtracting the expected service score from the perceived service score for each service attribute. A negative gap value indicates that service quality has not met customer expectations so that this attribute requires improvement (Tontini & Zanchett, 2021; Rahardjo et al., 2025).

The next stage is to classify each service attribute using the Kano Model based on a combination of functional and dysfunctional answers. Each attribute is grouped into Must-be, One-dimensional, Attractive, Indifferent, or Reverse categories to determine the level of influence of this attribute on customer satisfaction (Zainah et al., 2023; Rahmah et al., 2025).

Integration of the results of the SERVQUAL analysis and the Kano Model is carried out to determine service improvement priorities. Attributes that have a negative gap value and are in the Must-be category are designated as top priority, followed by attributes in the One-dimensional category as high priority, while attributes in the Attractive category are the priority for service development. This integration approach produces more effective recommendations for improvement because it considers the size of the service gap as well as the level of influence of each attribute on customer satisfaction (Aghniya & Artanto, 2025; Zainah et al., 2023; Saputri & Mulyanto, 2024).

C. RESULT AND DISCUSSION

Respondent characteristics based on gender were analyzed to determine the composition of online transportation service users who participated in this study. Information regarding respondent gender provides an overview of the distribution of the study sample, allowing us to identify the dominant respondent groups in completing the questionnaire. The results of the distribution of respondents by gender are presented in the following table.

Table 1. Respondent Characteristics

No.	Gender	Frequency (Respondents)	Percentage (%)	Cumulative (%)
1	Male	42	42.0%	42.0%
2	Female	58	58.0%	100.0%
Total		100	100.0%	

Source: Data Proceed

Based on the table above, it is known that of the total 100 respondents, 42 (42.0%) were male, while 58 (58.0%) were female. These results indicate that female respondents comprise a larger proportion than male respondents. Therefore, the majority of the research data was obtained from female online transportation users. Nevertheless, the distribution of respondents across both genders still provides a fairly representative picture of the characteristics of online transportation users in Purwakarta Regency, the research object.

Respondent characteristics by age group were analyzed to determine the age distribution of online transportation users in this study. Age grouping was carried out because age differences can influence customer needs, preferences, and perceptions of service quality provided by online transportation providers. The distribution of respondents by age group is presented in Table 2.

Table 2. Distribution of Respondents by Age

No.	Age Group	Frequency (Respondents)	Percentage (%)	Cumulative (%)
1	17–25 Years	65	65.0	65.0
2	26–35 Years	23	23.0	88.0
3	36–45 Years	9	9.0	97.0
4	>45 Years	3	3.0	100.0
Total		100	100.0	

Source: Data Proceed

Based on Table 2, the majority of respondents were in the 17–25 age group, totaling 65 people (65.0%). Furthermore, the 26–35 age group comprised 23 people (23.0%), the 36–45 age group comprised 9 people (9.0%), and the age group above 45 had the smallest number of respondents, at 3.0%. These results indicate that online transportation users who participated in this study were predominantly in the 17–25 age group. This indicates that young people are the most active online transportation users due to their high mobility and greater familiarity with utilizing digital technology to meet their daily transportation needs. The distribution of respondents by age suggests that the study results more closely reflect the perceptions of customers from the productive age group, who are the primary users of online transportation services in Purwakarta Regency.

Respondent characteristics based on the most frequently used online transportation platforms were analyzed to determine the distribution of usage of each application among respondents. This information provides an overview of the platforms most widely used by residents in Purwakarta Regency, thus providing a basis for interpreting customer perceptions of the quality of online transportation services. The distribution of respondents based on the platform or application used is presented in Table 3.

Table 3. Distribution of Respondents Based on the Platform or Application Used

No.	Platform/Application	Frequency (Respondents)	Percentage (%)	Cumulative (%)
1	Gojek	35	35.0	35.0
2	Grab	30	30.0	65.0
3	Maxim	22	22.0	87.0
4	In Drive/ELD Purwakarta/Others	13	13.0	100.0
Total		100	100.0	

Source: Data Proceed

Based on Table 3, Gojek was the most frequently used online transportation app by respondents, with 35 respondents (35.0%). Furthermore, Grab was used by 30 respondents (30.0%), Maxim was used by 22 respondents (22.0%), and InDriver, ELD Purwakarta, and other apps were used by 13 respondents (13.0%). These results indicate that Gojek remains the most dominant online transportation platform used by respondents in this study, followed by Grab and Maxim. Use of InDriver, ELD Purwakarta, and other online transportation apps remains relatively low. This variation in platform usage indicates that respondents have experience using various online transportation services, so the assessment of service quality provided in this study is expected to provide a more comprehensive picture of the condition of online transportation services in Purwakarta Regency.

Before using the questionnaire as a research instrument, a validity test was conducted to determine the ability of each statement item to measure the variables studied. Validity tests were conducted on all statement items using IBM SPSS Statistics 26 software using the Pearson Product Moment correlation technique. A statement item is declared valid if the calculated r value is greater than the table r value at a significance level of 5% ($\alpha = 0.05$). In this study, the table r value was 0.196, so each item with a calculated r value > 0.196 was declared valid and suitable for use in the research data collection process. The results of the research instrument validity test are presented in Table 4.

Table 4. Validity Test Results

Variable	Statement Item	Calculated r	r Table	Interpretation
Tangibles	Ease of understanding and responsiveness of the application's user interface.	0.627	0.196	Valid
	Cleanliness, physical condition, and comfort of the driver's vehicle.	0.704	0.196	Valid
	Completeness of the driver's official attributes (jacket, helmet, ID card).	0.716	0.196	Valid
Reliability	Timeliness of driver pickup according to the estimated time shown in the application.	0.680	0.196	Valid
	Accuracy of synchronization between pickup/destination locations and the GPS mapping system.	0.656	0.196	Valid
	Transparency of the automatic fare calculation system without hidden charges.	0.725	0.196	Valid
Responsiveness	Speed of order confirmation and the driver's responsiveness via chat or phone.	0.720	0.196	Valid
	Waiting time required by the system to match passengers with the nearest driver.	0.662	0.196	Valid
	Speed and accuracy of complaint handling by	0.707	0.196	Valid

	Customer Support.			
Assurance	Security of customer personal data protection and payment gateway encryption.	0.702	0.196	Valid
	Driver compliance with traffic regulations and safe driving practices.	0.679	0.196	Valid
	Driver familiarity with local routes in the Purwakarta area.	0.699	0.196	Valid
Empathy	Driver friendliness, courtesy, and politeness in communication.	0.699	0.196	Valid
	Driver concern for passenger comfort (e.g., air conditioning and route preferences).	0.717	0.196	Valid
	Willingness to offer an apology or moral compensation in the event of a service error.	0.720	0	

Source: Data Proceed

Based on Table 4, it is known that all statement items in the service quality variable, consisting of the dimensions of Tangibles, Reliability, Responsiveness, Assurance, and Empathy, have a calculated r value greater than the table r of 0.196. The calculated r values ranged from 0.627 to 0.725, indicating that all statement items are valid. These results indicate that each indicator accurately measures the construct it represents and has a strong relationship with the research variables. Therefore, all 15 statement items in the research instrument meet validity requirements and can be used in subsequent data collection and analysis without the need for deletion or revision. The results of this validity test also indicate that the research instrument has a good level of accuracy in measuring customer perceptions and expectations of online transportation service quality in Purwakarta Regency.

After all statement items are declared valid, the next step is to conduct a reliability test to determine the level of consistency of the research instrument in measuring the variables studied. The reliability test was conducted using the Cronbach's Alpha method with the help of IBM SPSS Statistics 26 software. A research instrument is declared reliable if it has a Cronbach's Alpha value greater than 0.60. The results of the reliability test on all statement items in the service quality variable are presented in Table 5.

Table 5. Reliability Test Results
 Reliability Statistics

Cronbach's Alpha	N of Items
0.962	15

Source: Data Proceed

Based on Table 5, a Cronbach's Alpha value of 0.962 was obtained for 15 items. This value far exceeds the minimum acceptance threshold of 0.60, thus declaring the research instrument highly reliable. These results indicate that all items have a very high level of internal consistency in measuring the quality of online transportation services. Therefore, the research instrument is capable of producing consistent data when used under the same conditions and is suitable for use as a data collection tool in this study. The high reliability value also indicates that each indicator has a good correlation in measuring the service quality construct based on

the five dimensions of SERVQUAL, so the measurement results can be trusted and used in subsequent analysis stages.

After calculating the gap value between customer perceptions and expectations using the SERVQUAL method, the next step is to rank the service attributes based on the obtained gap value. The gap value indicates the difference between the service received by customers and their expectations. The greater the negative gap value, the greater the gap in service quality perceived by customers, making that attribute a priority for improvement. The results of the attribute ranking based on the negative gap value are presented in Table 6.

Table 6. Attribute Ranking Results Based on Negative Gap Values

Rank	Item No.	Dimension	Attribute	Gap
1	4	Reliability	Timeliness of driver pickup according to the estimated time shown in the application.	-0.22
2	12	Assurance	Driver familiarity with local routes in the Purwakarta area.	-0.19
3	6	Reliability	Transparency of the automatic fare calculation system without hidden charges.	-0.14
4	14	Empathy	Driver concern for passenger comfort (e.g., air conditioning and route preferences).	-0.14
5	10	Assurance	Security of customer personal data protection and payment gateway encryption.	-0.09
6	3	Tangibles	Completeness of the driver's official attributes (jacket, helmet, ID card).	-0.06
7	13	Empathy	Driver friendliness, courtesy, and politeness in communication.	-0.06
8	15	Empathy	Willingness to offer an apology or moral compensation in the event of a service error.	-0.04

Source: Data Proceed

Based on Table 6, there are eight service attributes that have negative gap values, indicating that the service received by customers is still below their expectations. The attribute with the largest gap value is ranked first, namely the timeliness of fleet pickup according to the estimate in the application menu (Item 4) with a gap value of -0.22. These results indicate that timeliness of pickup remains the service aspect that requires the most attention and improvement. Furthermore, the attribute of mastery of local roads in the Purwakarta area by driver partners (Item 12) is ranked second with a gap value of -0.19, followed by the attribute of transparency of the automatic fare calculation system without hidden fees (Item 6) and the driver's concern for customer comfort (Item 14) which each have a gap value of -0.14. Other attributes that also show gaps are the security of consumer personal data protection, the completeness of the use of official attributes by drivers, the friendliness and politeness of drivers, and the willingness to provide compensation or apologize when technical errors occur. Overall, the ranking results indicate that reliability, assurance, and empathy remain priority dimensions for improvement to enhance the quality of online transportation services and meet customer expectations in Purwakarta Regency.

After obtaining the analysis results using the SERVQUAL method, this study continued by applying the Kano Model to identify the influence of each service attribute on customer

satisfaction levels. The Kano Model uses two types of questions: functional questions, which describe conditions when the service attribute is available, and dysfunctional questions, which describe conditions when the service attribute is not available. The combined answers to these two questions were then mapped into a Kano Evaluation Table to determine the category of each service attribute. The Kano evaluation table used in this study is presented in Table 7.

Table 7. Kano Evaluation Table

Functional/Dysfunctional	1. Like	2. Must-be	3. Neutral	4. Live With	5. Dislike
1. Like	Q	A	A	A	O
2. Must-be	R	I	I	I	M
3. Neutral	R	I	I	I	M
4. Live With	R	I	I	I	M
5. Dislike	R	R	R	R	Q

Based on Table 6, there are eight service attributes that have negative gap values, indicating that the service received by customers is still below their expectations. The attribute with the largest gap value is ranked first, namely the timeliness of fleet pickup according to the estimate in the application menu (Item 4) with a gap value of -0.22. These results indicate that timeliness of pickup remains the service aspect that requires the most attention and improvement. Furthermore, the attribute of mastery of local roads in the Purwakarta area by driver partners (Item 12) is ranked second with a gap value of -0.19, followed by the attribute of transparency of the automatic fare calculation system without hidden fees (Item 6) and the driver's concern for customer comfort (Item 14) which each have a gap value of -0.14. Other attributes that also show gaps are the security of consumer personal data protection, the completeness of the use of official attributes by drivers, the friendliness and politeness of drivers, and the willingness to provide compensation or apologize when technical errors occur. Overall, the ranking results indicate that reliability, assurance, and empathy remain priority dimensions for improvement to enhance the quality of online transportation services and meet customer expectations in Purwakarta Regency.

After obtaining the analysis results using the SERVQUAL method, this study continued by applying the Kano Model to identify the influence of each service attribute on customer satisfaction levels. The Kano Model uses two types of questions: functional questions, which describe conditions when the service attribute is available, and dysfunctional questions, which describe conditions when the service attribute is not available. The combined answers to these two questions were then mapped into a Kano Evaluation Table to determine the category of each service attribute. The Kano evaluation table used in this study is presented in Table 8.

Table 8. Service Attribute Classification Results

No.	Attribute	A	O	M	I	A + O + M	I	Category
1	Completeness of the driver's official attributes (jacket, helmet, ID card).	6	13	11	70	30	70	Indifferent (I)
2	Timeliness of driver pickup according to the estimated time shown in the application.	21	23	35	21	79	21	Must-be (M)
3	Transparency of the automatic fare calculation system without hidden charges.	25	20	24	31	69	31	Indifferent (I)
4	Security of customer personal data protection and payment gateway encryption.	10	11	11	68	32	68	Indifferent (I)

5	Driver familiarity with local routes in the Purwakarta area.	23	28	28	21	79	21	Must-be (M)
6	Driver friendliness, courtesy, and politeness in communication.	0	0	0	100	0	100	Indifferent (I)
7	Driver concern for passenger comfort (e.g., air conditioning and route preferences).	9	9	7	75	25	75	Indifferent (I)
8	Willingness to offer an apology or moral compensation in the event of a service error.	0	0	0	100	0	100	Indifferent (I)

Based on Table 8, the classification results show that of the eight service attributes analyzed, two fall into the Must-Be (M) category and six fall into the Indifferent (I) category. The attributes categorized as Must-Be (M) are on-time pickup of the vehicle according to the estimated time in the app menu and the driver-partner's familiarity with local roads in the Purwakarta area. This category indicates that these two attributes are basic customer needs that must be met by online transportation service providers. If these two attributes are not met, customers will experience significant dissatisfaction, while their fulfillment is considered merely a standard of service.

The other six attributes—complete use of official attributes by driver-partners, transparency of the automatic fare calculation system, security of customer personal data protection, driver friendliness and courtesy, driver concern for customer comfort, and willingness to provide compensation or apology in the event of technical errors—fall into the Indifferent (I) category (Dianawati et al., 2019; Hu & Salim, 2023; Zhou & Yao, 2023). This indicates that the presence or improvement of these attributes does not significantly impact customer satisfaction levels based on the perceptions of respondents in this study.

The results of the Kano Model analysis indicate that aspects related to service reliability, particularly on-time pickup and driver mastery of the route, are the most important attributes for online transportation service providers in Purwakarta Regency to fulfill. Therefore, these two attributes are the main focus that needs to be prioritized in the integration stage with the results of the SERVQUAL analysis in developing recommendations for improving service quality.

D. CONCLUSION

The analysis using the SERVQUAL method showed that several service attributes still had negative gap values, indicating that the service received by customers did not fully meet their expectations. The attribute with the largest gap value was the on-time delivery of the vehicle according to the estimate in the app menu, with a gap value of -0.22, followed by the driver-partner's mastery of local roads in the Purwakarta area (-0.19), the transparency of the automatic fare calculation system without hidden fees (-0.14), and the driver's concern for customer comfort (-0.14). These results indicate that aspects of reliability, assurance, and empathy still require special attention to improve customer satisfaction.

The analysis using the Kano Model showed that of the eight attributes analyzed, two fell into the Must-be (M) category: on-time delivery of the vehicle according to the estimate in the app menu and the driver-partner's mastery of local roads in the Purwakarta area. These two attributes are basic customer needs that must be met by online transportation service providers, as failure to meet them will lead to customer dissatisfaction. Meanwhile, the other six attributes were categorized as Indifferent (I), indicating that they did not significantly influence customer satisfaction levels based on respondents' perceptions.

The results of the integration of the SERVQUAL method and the Kano Model indicate that the top priority attributes for improvement are the on-time delivery of fleets according to estimates in the app menu and driver-partners' mastery of local routes in the Purwakarta area. Both attributes have high negative gap values and are categorized as Must-be (M), making them the most critical service aspects for immediate improvement. Improvements can be made through optimizing the driver search system (matching system), increasing the accuracy of pickup time estimates, training drivers on local route mastery, and utilizing a more accurate navigation system. Implementing improvements to these attributes is expected to improve service quality and customer satisfaction with online transportation services in Purwakarta Regency.

REFERENCES

- Basfirinci, C., & Mitra, A. (2015). A cross-cultural investigation of airlines service quality through integration of Servqual and the Kano model. *Journal of Air Transport Management*, 42, 239–248.
- Caesaron, D., Makapedua, J., & Lukodono, R. P. (2021). Evaluation of online-based ride-hailing services using service quality (Servqual) method, refined Kano Model, importance performance analysis (IPA), and quality function deployment (QFD): A case study of grab bike Indonesia. *ComTech: Computer, Mathematics and Engineering Applications*, 12(2), 75–88.
- Cai, L., Liu, Y., Lai, P.-L., Zhu, X., Yuen, K. F., & Wang, X. (2024). Assessing logistics service quality in omni-channel retailing through integrated SERVQUAL and Kano model. *Systems*, 12(11), 466.
- Chen, M.-C., Hsu, C.-L., & Lee, L.-H. (2019). Service quality and customer satisfaction in pharmaceutical logistics: An analysis based on Kano model and importance-satisfaction model. *International Journal of Environmental Research and Public Health*, 16(21), 4091.
- Chen, Y. H., Chou, Y. L., Tsai, C. L., & Chang, H. C. (2018). Evaluating car centre service quality with modified Kano model based on the first-time buyer's age. *Cogent Business & Management*, 5(1), 1441593.
- Dewi, S. K. (2019). Service quality assessment using servqual and Kano Models. *Jurnal Teknik Industri*, 20(1), 94–104.
- Dianawati, F., Hanif, H., & Maiciptaani, L. (2019). Strategy of service quality improvement for commuter line Jabodetabek train using integration methods of SERVQUAL and Kano Model into house of quality. *AIP Conference Proceedings*, 2194(1), 020021.
- Sugiyono. (2022). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.
- Fauziyah, R., Rohayati, Y., & Sagita, B. H. (2019). Integrating e-servqual and kano model to improve adorable projects website service quality. *J. Sist. Dan Manaj. Ind*, 3(2), 98.
- Hu, K.-C., & Salim, V. (2023). Combining Kano's model, IPA, and FMEA to evaluate service quality risk for bus service: case of Bangkok bus service. *Applied Sciences*, 13(10), 5960.
- Idzni, N., & Ekawati, A. D. (2021). Application of Kano Model Based on Servqual Dimension in Efforts to Improve the Service Quality of Jakarta Mass Rapid Transport. *Quality-Access to Success*, 22(182).
- Kohli, A., & Singh, R. (2021). An assessment of customers' satisfaction for emerging technologies in passenger cars using Kano model. *Vilakshan-XIMB Journal of Management*, 18(1), 76–88.
- Kusumahadi, K. (2022). E-ServiceQuality model and Kano model: an integration improvement on service quality in E-commerce services. *International Journal of*

- Entrepreneurship, Business and Creative Economy*, 2(1), 67-80
- Leończuk, D. (2016). Application of Kano model to the service quality measurement in road transport: a research concept. *Journal of System and Management Sciences*, 6(1), 39–53.
- Mansur, A., Farah, A. N., & Cahyo, W. N. (2019). Integration of Servqual, Kano Model, and QFD to Design Improvement on Public Service System. *IOP Conference Series: Materials Science and Engineering*, 598(1), 012101.
- Mauidzoh, U., & Rengganis, E. (2020). Analisis Kepuasan Pelanggan Dengan Integrasi Servqual Dan Model Kano Untuk Meningkatkan Mutu Pelayanan Transportasi Online. *Jurnal Rekayasa Industri (JRI)*, 2(1), 1–7.
- Nadila, H. R., Garside, A. K., Utama, D. M., & Rosiani, T. Y. (2025). Integration of Servqual, Kano Model, Kansei Engineering, and TRIZ for Service Quality Improvement in Courier Logistics. *Jurnal Teknologi Dan Manajemen*, 23(2), 25–36.
- Pamungkas, B. D., & Paramita, W. (2025). Application of the Kano Model to Investigate the Service Quality of Light Rail Transit (LRT) Jabodebek. *12th Gadjah Mada International Conference on Economics and Business (GAMAICEB 2024)*, 396–423.
- Salsabila, F. G., Wicaksono, A., & Wicaksono, A. D. (2026). Ride-Hailing Quality Gaps and Improvement Priorities: SERVQUAL-Kano Study in Mid-Sized Indonesian City. *Engineering Science Letter*, 5(02), 127–134.
- Suryawardani, B., Gusnadi, D., Wulandari, A., & Marcelino, D. (2022). Integration Kano Model and E-Servqual to Evaluate Online Travel Agent Services in Bandung 2022. *Jurnal Kawistara*, 12(3).
- Thuy, C. N. T., Khoi, N. H., Ngan, N. T. B., Hoang, L. V. H., & Van Hai, H. (2026). Integrating Fuzzy-Kano model with IPA analysis to evaluate the quality of last-mile delivery service in Vietnam. *The Asian Journal of Shipping and Logistics*.
- Ummi, N., Wahyuni, N., & Apriadi, I. (2021). Analysis of service quality on customer satisfaction through importance performance analysis and KANO model. *Journal Industrial Servicess*, 6(2), 174–183.
- Wahyuni, N., Gunawan, A., & Rahmawati, A. (2019). Measurement of e-service quality from user perceptions using the IPA-Kano integration model. *IOP Conference Series: Materials Science and Engineering*, 673(1), 012096.
- Zhou, K., & Yao, Z. (2023). Analysis of customer satisfaction in tourism services based on the Kano model. *Systems*, 11(7), 345.