



Effect of service quality on students satisfaction in private universities

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Effect of service quality on students satisfaction in private universities

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ABSTRACT

This study aimed to determine the effect of service, reliability, responsiveness, empathy, assurance, and tangibles in increasing student satisfaction at private universities in the LLDikti-3 region. The data collection method employed a qualitative approach, involving the use of questionnaires to gather responses. Qualitative data was transformed into quantitative data using a Likert scale. In this study, data collection was carried out directly from the number of students at the Universitas Kristen Indonesia. Universitas Sahid and Universitas Tarumanegara. The methods were used: Library Research and. Field Research: This method conducts research by conducting direct surveys to be object to be studied of three private universities in the LLDIKTI-3 region. The data analysis technique in this research is multiple linear regression analysis, where this analysis is used to determine how much influence the change in a variable has on other variables. In this study where the independent variables are reliability, responsiveness, empathy, assurance, and tangible, and the dependent variable. The results of the study stated that the quality of service provided by the three private universities in the LLDIKTI-3 region has a significant influence on student satisfaction. Dimensions of service quality play an important role in shaping student perceptions of university services.



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Introduction

Universitas Kristen Indonesia consists of 8 faculties and 1 postgraduate program, offering 32 study programs and serving 5,664 actively registered students. Meanwhile, Universitas Sahid consists of 2,354 students, and Universitas Tarumanegara consists of 9,129 students. This research will be conducted at the three private universities in the Jakarta LLDIKTI-3 working area, which have a large enough population and strata from diploma to postgraduate levels.

The transition from fulfilling basic needs to prioritizing customer satisfaction has expanded consumer choices while raising expectations. Consequently, student satisfaction—as long-term customers—holds greater significance for businesses and universities than sheer sales numbers (Lemon

& Verhoef, 2022). With the rapid advancement of technology and the emergence of formal and informal educational institutions, the education pattern at the 3 private universities must anticipate changes that are happening, especially in terms of service. To the 3 private universities, several important things need to be improved or changed to enhance the quality of their services to become excellent or extraordinary. Establishing long-term relationships with students allows institutions to better understand their needs and expectations (Allo, 2025; Allo, Y.R., 2017). Companies will face complex problems if their services fail to meet customer expectations (Sianturi, Malau, & Hutapea, 2021). Dissatisfied customers will usually tell others about their bad experiences; this is a big loss for customers. Therefore, every service company must plan, organize, implement, and monitor a quality system to ensure that its services can satisfy customers (Allo, 2020; Soeta, Sembel, & Malau, 2023; Malau, 2020). Service quality can be measured by five dimensions: direct evidence, trust, responsiveness, empathy, assurance, and loyalty. This study aims to determine how much influence service components have on student satisfaction at the 3 private universities. Service factors include direct evidence, trust, responsiveness, empathy, and reliability (Kotler, P., Kartajaya, H., & Setiawan, I., 2021). The focus of this study is to provide evidence for the idea that service quality factors can affect the level of customer satisfaction (Malau, Sihite, Sumanti, Desrianty, & Hutahaeau, 2024). Therefore, institutions like this university must conduct periodic and continuous service evaluations to assess student satisfaction. Such information is essential for informing university policies aimed at improving student services in the future.

Service quality consists of things like conformity, suitability, continuous improvement, freedom from damage and defects, meeting customer needs from the beginning and at all times, and appropriate actions that make customers happy (Yapy et al., 2023; Wijaya et al., 2023). Thus, service providers can enhance customer satisfaction by eliminating negative experiences (Damanik et al., 2024). Furthermore, Sihombing et al. (2023) and Rangkuti et al. (2023) define service quality as an individual or organizational effort to provide customer satisfaction. This service achieves customer satisfaction through direct interaction (Murti et al., 2022).

Service quality is defined as the level of expected excellence and control over that level of excellence to meet customer expectations (Brunnera, et al., 2025). Therefore, the two main components that influence service quality are the quality expected by customers and the quality ultimately felt by customers (Hanggara et al., 2022). According to Supertini et al. (2020) and Macau, Anggraini, & Malau (2021), good service is fast, honest, and attentive. Customers expect efficiency in service processes, fair treatment, and equal treatment without favoritism. Four principles of rational choice are used to build a theory of consumer behavior related to their behavior to maximize satisfaction: 1) Completeness. This principle states that everyone can always determine which state is preferred by the other. 2) Transitivity is a principle that explains how someone is consistent in determining and deciding their choice when faced with several alternative product choices. 3). Continuity is a principle that explains that if someone says "product A is preferred to product B". 4). The benefits of having quality service can be measured by five dimensions, according to Alves, H., & Raposo, M. (2021): tangibles, reliability, response, assurance, and empathy.

Kaengke et al. (2022) and Asawawibul et al. (2025) stated that customer satisfaction can be measured by looking at the relationship between the actual performance they feel after use and the previous level of importance. Customer satisfaction is influenced by five factors: physical evidence, trust, empathy, responsiveness, and assurance. In addition, customer satisfaction is influenced simultaneously by these five factors.

Reliability

According to Kotler and Keller (2009), reliability is associated with an organization's ability to provide promised services confidently and accurately. Timely, as-promised, and responsible service for customer problems are examples of this reliability. According to research conducted by Ali, F. (2023). and Alves, H., & Raposo, M. (2021), standards increase customer satisfaction.

Responsiveness

The ability of company employees to provide services quickly and responsively is known as responsiveness. This dimension shows the attention and speed of employees in handling customer

complaints, questions, and requests. Customers will feel dissatisfied if the service is not responsive (Kurniasari and Sugiyanto, 2020).

Empathy

Kurniasari and Sugiyanto (2020) found that caring or empathy affects customer satisfaction. The more care a company gives to customers, the higher the customer satisfaction will be.

Assurance

Assurance is the knowledge and behavior of employees that fosters customer trust in the provided services. If the company provides security guarantees to customers, they will feel safe and will not hesitate to use their goods and services (Kurniasari and Sugiyanto, 2020).

Tangibles

Customer expectations are higher when there is good physical evidence. This allows us to meet customer needs and make them satisfied. Pansari, A., & Kumar, V. (2020). Also stated that customer satisfaction increases with physical evidence.

Sugiyono (2020) stated that the hypothesis serves as a temporary way to solve the problems faced by the research. The formulation of the research problem is written in the form of a sentence statement. Partial hypothesis between 5 (five) independent variables, against the dependent variable Y = service (1) H₀₁: Reliability (X1), there is no significant influence on the dependent variable (Y) of service, H_{a1}: Reliability (X1) has a significant influence on the dependent variable (Y) of service; (2) H₀₂: Responsiveness (X2), there is no significant influence on the level of service, H_{a2}: Responsiveness (X2) has a significant influence on the dependent variable (Y) of service; (3) H₀₃: Empathy (X3), there is no significant influence on the dependent variable (Y) of service, H_{a3}: Empathy (X4) has a significant influence on the dependent variable (Y) of service; (4) H₀₄: Assurance (X4), there is no significant, H_{a4}: Assurance (X4) has a significant influence on the dependent variable (Y) of service; (5) H₀₅: Tangible (X5), there is no significant influence on the dependent variable (Y) of service, H_{a5}: Tangible (X5) has a; (6) H₀₆: Reliability, Responsiveness, Empathy, Assurance, Tangible (X1, X2, X3, X4, X5), there is no significant influence on the dependent variable (Y) service, H_{a6}: Reliability, Responsiveness, Empathy, Assurance, Tangible (X1, X2, X3, X4, X5) significant influence on the dependent variable (Y) service

Method

According to Hardani et al. (2020), a research method is a scientific approach used to obtain data or information in its current form with certain goals and benefits. Service quality data on satisfaction is the subject of qualitative research used in this study. Reality (X1), Responsiveness (X2), Empathy (X3), Confidence (X4), Agility (X5), and Student Satisfaction () using a Likert scale.

According to Sujarweni (2014), quantitative research is a type of research that produces results using statistical techniques or quantification (measurement) methods. Sugiyono (2020) explains that quantitative research is a research method based on positivism and is used to investigate certain populations or samples. In Figure 1, the research model is depicted as follows:

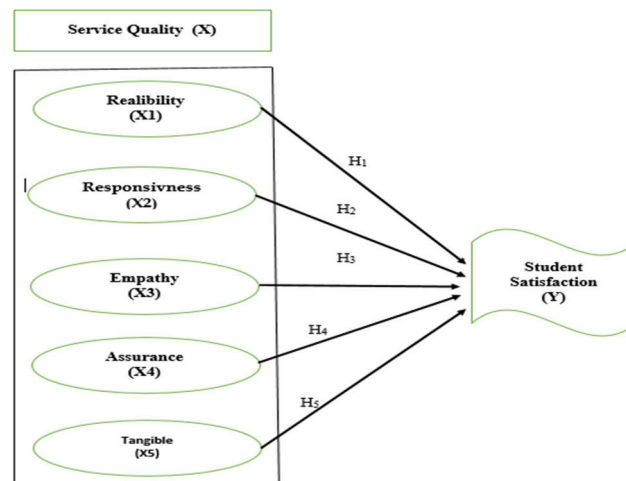


Figure 1. Research Model

Figure 1 Research Model

This study employs descriptive and verification methods. The descriptive approach is used to determine the existence of independent variables. The research object serves as a scientific target for data collection, ensuring the findings are objective, valid, and reliable concerning the variables under study. This study uses the analysis unit from the results of the questionnaire given by the Universitas Kristen Indonesia, Universitas Sahid, and Universitas Tarumanegara campuses.

Operational Variables

The operational variables that will be used in this study are the independent variables are, reliability (X1), responsiveness (X2), empathy (X3), assurance (X4), and tangible (X5), and the dependent variable (Y). Independent Variables (Variables X1, X2, X3, X4, and X5), Sugiyono (2020) states that variables that influence or change other variables are called dependent variables.

Data Sources and Data Collection Techniques

Secondary data sources consist of data collected from various sources, such as books, magazines, notes, government reports, articles, theory books, magazines, and so on. Rust, R. T. (2021) states that the primary data collection method involves searching or collecting quantitative data. Meanwhile, the secondary data collection method uses documentation methods through print or electronic media. To collect information, this study utilizes Data Documentation Techniques, Library Research, and Internet Studies.

Population, Research Sample, and Place and Time of Research

Kumar, V., & Reinartz, W. (2022) stated that the population is the total number of objects or subjects in an area that meet the requirements related to the researcher's problem. Sugiyono (2020) stated that the sample and population are characteristic components. In research, a sample is a portion of the population selected for observation. This study adopts a probability sampling technique, ensuring that each member of the population has an equal chance of being selected. The research was conducted by the Universitas Kristen Indonesia, Universitas Sahid and Universitas Tarumanegara.

Data Collection Methods

This study sent questionnaires to respondents. The research tool used to collect data from respondents was a questionnaire, which is usually referred to as a written interview. The questionnaire consists of a series of questions given to participants either directly or indirectly, either by telephone, computer, face-to-face, or post. The method of collecting data through questionnaires is generally used because it is considered efficient, fast, and cheap.

Determination Analysis

To find out how much influence the independent variable (X) has on the dependent variable (Y), which is represented in percentage, the coefficient of determination (KD) analysis is used:

$$KD = r^2 \times 100\%$$

(1)

(1)

Where:

KD = How far the change in variable Y is used by variable X

X R = Square of the correlation coefficient.

Type of Research

Quantitative methods are used in this study. This method includes multiple linear regression analysis. The Likert scale is used to measure the scale of attitudes and opinions in research and is used to convert qualitative data into quantitative data. This scale is usually found in questionnaires when conducting certain surveys on the subject to be studied. The questions used in research are usually referred to as research variables and are specifically determined. A questionnaire was distributed to students at the Universitas Kristen Indonesia, Universitas Sahid, and Universitas Tarumanegara campuses. These locations were selected because of their diverse student population, which facilitated a more representative sample collection.

Data Collection Methods

According to Sugiyono (2020), triangulation techniques were used to validate the data for this study. This means that researchers collect data while testing its credibility using various data sources and various data collection methods.

Research Design and Methodology

Data must be accurate and relevant to obtain information or data to analyze problems and solve problems. The following methods are used: 1. Library Research: This method involves collecting data from books, lecture materials, and literature and theories related to the problems to be discussed. 2. Field Research: This method entails conducting direct surveys with students of Universitas Kristen Indonesia, Universitas Sahid, and Universitas Tarumanegara to gather firsthand data. The data analysis technique used in this study is Multiple Linear Regression analysis, which determines the extent to which changes in independent variables affect the dependent variable. In this study, the independent variables are Reliability (X1), Responsiveness (X2), Empathy (X3), Assurance (X4), Tangible (X5), and the Dependent Variable (Variable Y).

Results and Discussions

Improving the quality of service in higher education is one of the important aspects that contribute to the success of academic institutions. Universitas Kristen Indonesia (UKI), Sahid University, and Tarumanegara University are private universities in the Jakarta LLDikti-3 area, which organize education levels from Diploma, Undergraduate, and Postgraduate strata. These three universities continue to strive to provide optimal services for the entire academic community. The sample in this study was active students from three private universities, totaling 305 students or 5.38% of the total students, with the following classification. Based on the distribution of respondents from each faculty at Universitas Kristen Indonesia, the following classification: 1. The faculty with the highest number of respondents is the Faculty of Economics and Business, with 88 people (28.86%). This shows the dominance of student participation from this faculty, which is most likely related to the larger number of active students or enthusiasm for participation in research; 2. The Faculty of Vocational Studies is in second place, with 52 respondents (17.05%). This figure stands out compared to other faculties, indicating that vocational students are quite representative in this study; 3. Other faculties that also have quite high participation are: Faculty of Law: 37 people (12.13%), Faculty of Literature and Languages: 27 people (8.86%), Faculty of Engineering and Faculty of Social and Political Sciences, each with 26 people (8.52%) 4. Faculties with a smaller number of participants, but still significant, are: Faculty of Medicine (S.Ked & Profesi): 24 people (7.87%), Faculty of Teacher Training and Education: 19 people (6.22%) 5. Postgraduate student participation was very small, with only 6 respondents (1.97%), reflecting a more limited number of active postgraduate students 6. There was no participation from the Student Exchange category (0.00%), possibly due to the absence of active exchange programs during the research period.

Work with Graphic

Table 1. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,545 ^a	,519	,009	,162

a. Predictors: (Constant), Tangible, Empathy, Reliability, Assurance, Responsiveness

b. Dependent Variable: Satisfaction

The results of the study can be described as follows: 1. R-value (Correlation Coefficient): R-value = 0.545 indicates that there is a strong relationship between the independent variables and the dependent variables in the model. 2. R Square value (Coefficient of Determination): R² value = 0.519 indicates that the independent variables in the model are responsible for about 51.9% of the variation in the dependent variable. The last 48.9% is explained by variables not included in this model.

Coefficients

The results derived from the regression analysis reveal that multiple dimensions of service quality exert a statistically significant influence on student satisfaction within private higher education institutions. The reliability dimension is associated with a regression coefficient of 0.089 ($p = 0.043$), indicating that an increment of one unit in reliability corresponds to an enhancement of 0.089 in student satisfaction, presuming the constancy of other variables. Likewise, the dimensions of empathy and assurance exhibit positive and statistically significant associations, with coefficients of 0.109 ($p = 0.002$) and 0.211 ($p = 0.000$), respectively. This suggests that an increase in personal attention, coupled with a heightened sense of trust and confidence emanating from the institution, significantly contributes to the enhancement of student satisfaction. Notably, the variable concerning responsiveness displays a coefficient of 0.054 with a p-value of 0.039.

Table 2. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5,128	2,002		12,553	,000
Reliability	,089	,044	,517	2,032	,043
Responsiveness	,054	,039	,514	1,388	,039
Empathy	,109	,036	,188	3,068	,002
Assurance	,211	,044	,291	4,772	,000
Tangible	,140	,051	,204	,866	,007

However, its influence is negative, implying that heightened perceptions of responsiveness may paradoxically lead to a reduction in student satisfaction. This phenomenon may reflect a discrepancy between student expectations and the responses provided by the institution. In addition, although the tangible variable possesses a positive coefficient of 0.140, its relatively low t-value (0.866) and p-value of 0.007 raise questions regarding the robustness of its statistical significance, suggesting that tangible elements may lack a substantial effect on student satisfaction. In summation, the findings underscore the pivotal importance of assurance, empathy, and reliability in enhancing students' perceptions of service quality within private universities.

Tolerance and VIF

Table 3. Tolerance and VIF

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
Reliability	,462	1,121
Responsiveness	,644	1,553
Empathy	,585	1,274
Assurance	,393	1,261
Tangible	,471	1,030

Regression

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,545	,521	,0093	,16296

Overall Conclusion Weak Relationship: The R-value of 0.545 indicates a weak relationship between the independent and dependent variables; 2. Limited Explained Variation: The R-Square of 52.10% indicates that the model only explains most of the variation in the dependent variable.

Normal Distribution Chart

The results of the study are presented with the frequency level, with the standardised residual histogram graph of the regression using Satisfaction as the dependent variable. The following is the interpretation:

Histogram shape: This histogram shows the distribution of standardised residuals from the regression model, and in general, the shape of the histogram resembles a normal distribution (bell-shaped curve), which is consistent with the linear regression assumption that residuals should be normally distributed; N (Number of Samples): There are 305 observations in this analysis, which is a large enough sample size to support the validity of the normality assumption; Normality of Residuals: The black line represents the theoretical normal distribution. Since the histogram (blue bars) follows the pattern of this curve, we can conclude that the residuals have a normal distribution and based on this graph, the assumption of normality in linear regression seems to be fulfilled. In other words, this regression model shows no violation of the normality of the residuals, so the results of the regression analysis can be considered valid in terms of this assumption.

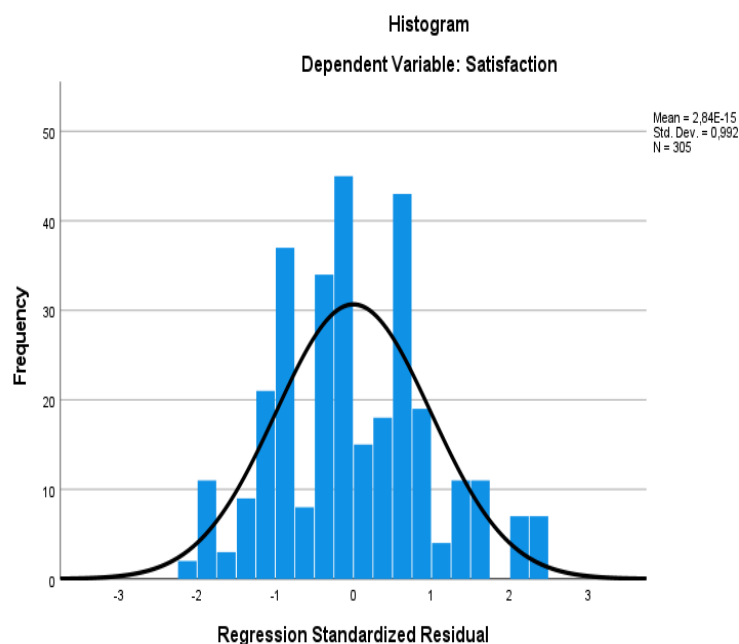


Figure 2 Normal Distribution

Standardized Coefficients

Significant Variables: All independent variables of Reliability, Responsiveness, Empathy, Assurance, and Tangible have a significant effect on the dependent variable ($p < 0.05$). This means that these variables are the main focus of the model; Predictions and residuals follow the assumption of regression normality, which strengthens the validity of the model. A small standard deviation indicates the accuracy and consistency of the model.

Table 5. Standardized Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1,248	,735		-1,700	,040

Realibility	,0860	,016	-,023	-,402	,029
Responsiveness	,061	,014	,000	-,003	,028
Empathy	,017	,013	-,080	-1,319	,018
Assurance	,109	,016	,402	6,706	,000
Tangible	,016	,019	-,047	-,871	,038

a. Dependent Variable: ABS_RES

Normality P Plot of regression standardised residuals

Based on this P-P Plot graph, the regression residuals appear to follow a normal distribution. This means that the regression analysis results meet the assumption of normality, which is one of the important requirements in linear regression. The graph shown is the Normal P-P Plot of the standardised residuals of the regression, with the dependent variable 'Satisfaction'. The following is the interpretation of this graph: (1) Purpose of the Graph: The Normal P-P Plot is used to check whether the residuals (prediction errors) in a regression analysis are normally distributed, and in this graph, the cumulative probability expected if the residuals are normally distributed is plotted against the observed cumulative probability based on the data; (2) Shape and Interpretation: If the residuals are normally distributed, the points on the graph will form a straight line along the diagonal (black line), and in this graph, the points are very close to the diagonal line, indicating that the residual distribution is close to a normal distribution; (3) Deviation: There are no major deviations from the diagonal line. This confirms that the assumption of normality of residuals in regression analysis is met.

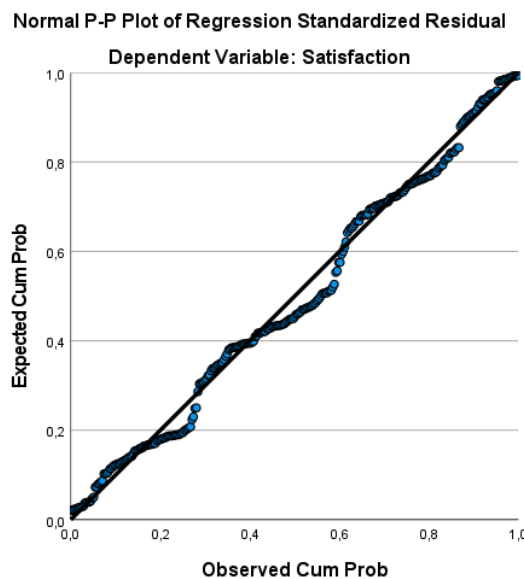


Figure 3 Normality P Plot of regression standardised residuals

Scatterplot graph between regression standardised residuals

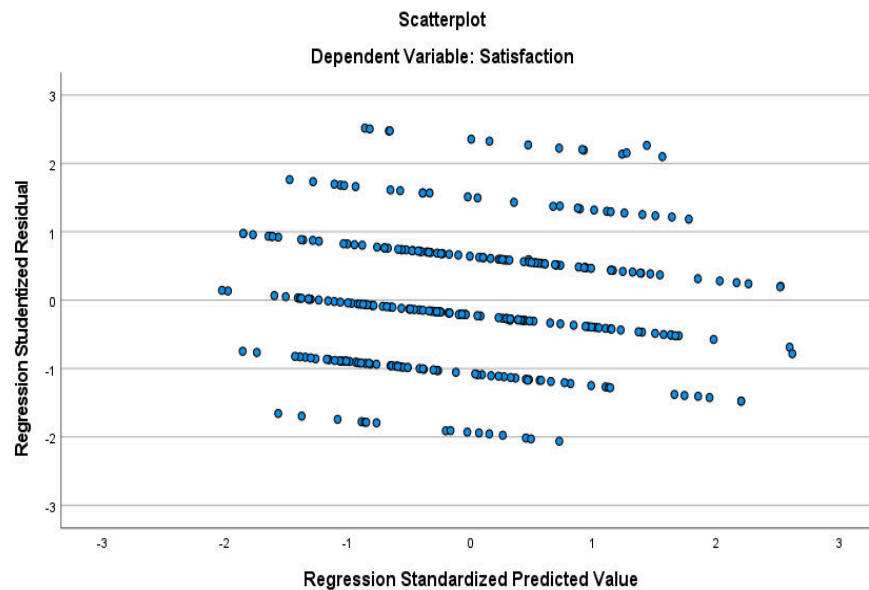


Figure 4 Scatterplot between regression standardised residuals

The graph shown is a scatterplot between the regression standardised residuals and the standardised predicted values. This graph is used to check regression assumptions, particularly homoscedasticity (equality of residual variances). The interpretation follows: (1) Residual Distribution Pattern (The dots in this scatterplot seem to be evenly spread around the zero horizontal line, and there is no particular pattern like fanning or curving, which means there is no strong indication of heteroscedasticity (inequality of residual variance); (2) Homoscedasticity (Homoscedasticity is the assumption that the variance of the residuals is constant across the range of predicted values, and from this graph, the residuals appear to have a relatively consistent variance across the standardised predicted values. Therefore, the assumption of homoscedasticity is fulfilled; (3) Residual Independence (This scatterplot also helps to check if any systematic patterns in the residuals could indicate a violation of the independence assumption, and there is no recurring or structured pattern in the graph, so it can be concluded that the residuals are independent).

Conclusions

The quality of service provided by several universities within the operational area of LLDIKTI-3 has a significant impact on student satisfaction. Service quality dimensions such as reliability, responsiveness, empathy, assurance, and tangibles play a crucial role in shaping students' perceptions of university services. These variables yielded the following results: Reliability: A consequence of $0.025 < 0.05$, meaning the relationship between the independent and dependent variables is considered statistically significant. Similarly, the variables responsiveness, empathy, assurance, and tangibles also showed $p < 0.05$ in statistical analysis, indicating a strong positive relationship between the independent and dependent variables.

References

- Allo, Y. (2020). *Strategi Meningkatkan Kualitas Layanan Melalui Digitalisasi Jasa Perbankan di PT. Bank Negara Indonesia (Persero), Tbk. Kantor Pusat, Jakarta Pusat*. Makasar: Ekonomika Journal, Lembaga Layanan Pendidikan Tinggi (LLDIKTI) Wilayah IX.
- Allo, Y.R. (2025). *Kualitas Layanan Perbankan di Era Teknologi 4.0*. Bandung: Widina Media Utama
- Ali, F., et al. (2023). Student Satisfaction and Loyalty in Higher Education: A Structural Equation Modeling Approach. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 32, 100-132
- Alves, H., & Raposo, M. (2021). The Influence of University Image on Student Behaviour and Satisfaction. *Studies in Higher Education*, 46(2), 318-334

- Asawawibul, S., Na-Nan, K., Pinkajay, K., Jaturat, N., Kittichotsatsawat, Y., & Hu, B. (2025). The Influence of Cost on Customer Satisfaction in E-Commerce Logistics: Mediating Roles of Service Quality, Technology Usage, Transportation Time, and Production Condition. *Journal of Open Innovation: Technology, Market, and Complexity*, 1-12.
- Brunnera, M., Tripathi, S., Gundolf, K., Bachmann, N., Thienemann, A., Tüzün, A., Jodlbauer, H. (2025). Enhancing Customer Satisfaction Through Digitalization: Past, Present, and Possible Future Approaches. *Procedia Computer Science*, 2929–2940.
- Damanik, Krisman., Sinaga, Magdalena., Sihombing, Sarinah., Hidajat, Masjraul., Prakoso, Otto. (2024). Pengaruh Kualitas Layanan, Kebijakan Publik, dan Kepuasan Pelanggan Terhadap Loyalitas Pelanggan. *Jurnal Manajemen Pendidikan dan Ilmu Sosial (JMPIS)*, 76-85.
- Ghozali, Imam. (2021). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 26*. Edisi 10. Semarang: Penerbit Universitas Diponegoro
- Hanggara, F.D., Elba Ridha, A., & Dermawan, A.A. (2022). Analisis Pengaruh Kualitas Pelayanan Dan Kebijakan Harga Terhadap Loyalitas. *Jurnal Rekayasa Sistem Industri*, 7(2), 52–59. <https://doi.org/10.33884/jrsi.v7i2.4537>
- Hardani, Andriani, H., Ustiawaty, J., Utami, E., Istiqomah, R., Fardani, R., Sukmana, D., Auliya, N. (2020). *Metode Penelitian Kualitatif & Kuantitatif*. Yogyakarta: CV. Pustaka Ilmu Grup
- Kaengke, B. L., Tumbel, T. M., & Walangitan, O. (2022). Pengaruh Bukti Fisik, Kehandalan, Daya Tanggap, Jaminan, dan Empati terhadap Kepuasan Nasabah PT. Bank Rakyat Indonesia (BRI) Unit Tateli. *Productivity*, 3(3), 271–278.
- Kumar, V., & Reinartz, W. (2022). *Customer Relationship Management: Concept, Strategy, and Tools* (4th ed.). Springer.
- Kotler, P. & Keller, K.L. (2020). *Manajemen Pemasaran (Edisi 15, jilid 1)*. Jakarta: Penerbit Erlangga
- Kotler, P., Kartajaya, H., & Setiawan, I. (2021). *Marketing 5.0: Technology for Humanity*. USA: Wiley.
- Lemon, K. N., & Verhoef, P. C. (2022). Understanding Customer Experience Throughout the Customer Journey. *Journal of Marketing*, 86(1), 69-96
- Macau, M., Anggraini, N., & Malau, M. (2021). The Relationship Between Motivation and Work Discipline on Employee Productivity at PT Rifan Financindo Berjangka Jakarta. *Fundamental Management Journal*, 1-19.
- Malau, M. (2020). Norma Subjektif Manajer, Kepercayaan Normatif, Kepercayaan Kendali Perilaku, dan Pendidikan Manajer terhadap Laporan Keberlanjutan Perusahaan. *Jurnal IKRAITH-EKONOMIKA*, 45-54.
- Malau, M., Sihite, I., Sumanti, I., Desrianty, R., & Hutahaeen, Y. (2024). Perkembangan Artificial Intelligence dan Tantangan Generasi Muda di Era Super Digitalized. *Ikra-Ith Abdimas*, 251-257.
- Murti, R.T., Sembel, R., Malau, M. (2022). The Influence of Digital Literacy on Retail Garment Traders' Intention to Use and Actual Usage of Mobile Digital Application within Cipulir Thematic Market, Jakarta, Indonesia. *5th International CEO Communication, Economics, Organization & Social Sciences Congress*, 158-169.
- Nguyen, T. H., & Nguyen, H. T. (2022). Enhancing Student Satisfaction Through Digital Engagement in Higher Education. *International Journal of Educational Technology in Higher Education*, 19(1), 1-18
- Pansari, A., & Kumar, V. (2020). Customer Engagement: The Construct, Antecedents, and Consequences. *Journal of the Academy of Marketing Science*, 48(1), 1-26
- Rangkuti, R., Sembel, R., & Malau, M. (2023). The Impact of Environmental, Social, and Governance Performance on the Financial Health and Firm Value of the Publicly Listed Firms at the Indonesia Stock Exchange. *Contemporary Exploration of Social Sciences in the Post-Pandemic Era - 1*, 174-190. Jakarta: NCM Publishing House.
- Rust, R. T. (2021). The Feeling Economy: How Artificial Intelligence Is Creating the Era of Empathy. *Journal of Service Research*, 24(1), 3-8
- Sianturi, Y., Malau, M., & Hutapea, G. (2021). Pengaruh Pengungkapan Tanggung Jawab Sosial, Rasio Intensitas Modal, dan Rasio Intensitas Persediaan Terhadap Penghindaran Pajak. *Jurnal Informasi, Perpajakan, Akuntansi, dan Keuangan Publik*, 265-282.
- Sihombing, S., Manik, P., Ratu, L., Nurcahayati, D., Hidayat, M., & Utami Y. (2023). The Effect of Service Quality, Ticket Prices, and Ease of Transaction on Customer Satisfaction of Mass Rapid Transit Jakarta. *KnE Social Sciences*, 854-868. doi:<https://doi.org/10.18502/kss.v8i9.13398>

-
- Soeta, R., Sembel, R., & Malau, M. (2023). The Effect of Social Influence and Platform Reputation Toward Trust, Investment Intention, and Actual Investment on SMEs with Peer-to-Peer Lending Platform. *KEYNESIA International Journal of Economy and Business*, 1-12.
- Sugiyono. (2020). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: CV. Alfabeta.
- Supertini, N. P. S., Telagawati, N. L. W. S., & Yulianthini, N. N. (2020). Pengaruh Kepercayaan dan Kepuasan Pelanggan terhadap Loyalitas Pelanggan pada Pusaka Kebaya di Singaraja. *Prospek: Jurnal Manajemen dan Bisnis*, 2(1), 61. <https://doi.org/10.23887/pjmb.v2i1.26201>
- Wijaya, R., Sembel, R., & Malau, M. (2023). How Heuristics and Herding Behaviour Biases Impact Stock Investment Decisions with Financial Literacy as a Moderating Variable. *South East Asia Journal of Contemporary Business, Economics and Law*, 6-12.
- Yapy, A., Sembel, R., & Malau, M. (2023). The Impact of Users' Value and Behavior on Electronic Marketplace Quality with Trust and User Types as Moderating Variables: A 2021 Study in Greater Jakarta Area. *South East Asia Journal of Contemporary Business, Economics and Law*, 28(3), 89-98.