

Development of Service Innovations and Literacy Regarding The Keretaku App to Enhance Customer Satisfaction for Honda Motorcycles at PT Cakra Adi Dharma

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Abstract

Almost all companies in marketing and their business, starting from sales and service, make consumer satisfaction as the main variable or key or priority weapon in practice, both in promotional and marketing practices that have an impact on increasing sales. The purpose of this study is to prove the partial and simultaneous influence between the variables of service innovation and literacy of the KERETAKU application on consumer satisfaction. The population in this study is all permanent customers registered with PT Cakra Adi Dharma Rantauprapat from January to May 2025 as many as 231 people and samples from the slovin formula were obtained 146 people. The data analysis tool used in this study is multiple linear regression, where this analysis tool is a statistical tool consisting of Validity and Reliability, Classical Assumption Test, Partial Test (t-Test), Simultaneous Test (F Test) and Coefficient of Determination (R²). From the results of the respondent profile research, most respondents who visited PT Cakra Adi Dharma Rantauprapat had used the KERETAKU application while others had not used it. Meanwhile, the results of the study partially show that the variable of Service Innovation is a variable that has a very good influence on consumer satisfaction. The literacy variable of the KERETA application partially has no effect on consumer satisfaction. However, simultaneously the variable of Service Innovation and the variable of KERETAKU Application Literacy have a good effect on consumer satisfaction.

INTRODUCTION

In the world of business and marketing, the term consumer satisfaction is a familiar thing in the development of important marketing research. Consumer satisfaction in the world of marketing research is The main performance indicator for national and global companies, this means that the concept of consumer satisfaction in any business in the world always prioritizes consumer satisfaction Weinstein, (2022). Consumer satisfaction is defined as a reflection or general attitude of a customer towards a service provider, or an emotional response to the difference between what the customer expects and what is received when a particular need, goal, or desire is met (Ginting, 2020; Oktariani & Ekadiansyah, 2020).

Almost all companies in marketing and their business, starting from sales and service, make consumer satisfaction as the main variable or key or priority weapon in practice, both in promotional and marketing practices that have an impact on increasing sales Pires et al., (2024). A company must provide a superior service experience to its customers so that they will make repeat purchases and be loyal to the company, meaning that the company is always striving to provide customer satisfaction in various ways Strenitzerová & Gaňa, (2018).

Companies that pay attention to consumer satisfaction are also companies that pay great attention to service innovation (Buhagiar et al., 2021; Cavalcante et al., 2020). According to Nguyen et al., (2024) iA company innovation can be defined as a new idea, practice, or object created by an individual or organization that is new to the company. Help companies develop effective business opportunities and enable companies to stay ahead in the digital age. In literature Ekeke & Uboegbulam, (2021) Service innovation serves as a basic tool of the company's strategy used in developing new products and services and improving existing processes, with the aim of penetrating the market and expanding market share (Meigounpoory et al., 2015).

Explanation of service innovation can affect consumer satisfaction as according to Kurtmollaiev et al., (2022) That innovations in marketing tend to shape perceptions based on their overall experience with the company rather than the specific characteristics of concrete products, this study is the first to investigate the prerequisites for the perception of a company's innovation from the perspective of value creation based on service logic. Therefore, service innovation in a company is important because in addition to having an impact on consumer satisfaction, it also has an impact on the company's image because it is able to provide innovation in service.

One of the companies that innovates services is PT Cakra Adi Dharma Rantauprapat is one of the specialized automotive companies that markets, sells and serves after-sales types of Honda brand motorcycles. The location of PT Cakra Adi Dharma Rantauprapat is on Jalan Jenderal Ahmad Yani No.51 which is located in the heart of Rantauprapat has been operating for almost 30 years. Through PT Cakra Adi Dharma Rantauprapat's experience in selling and marketing products and services until now, it still exists to provide service and customer satisfaction. PT Cakra Adi Dharma Rantauprapat's important efforts in winning the competition or leaders in this business since 2022 have been optimizing the use of the KERETA application.

The KERETAKU application is an innovation and development of digital-based services developed by PT Indako Trading Coy. The KERETAKU application offers booking services, finding AHAAS service locations, buying spare parts, and promos and raffles to consumers and prospective consumers of Honda motorcycles. Since its launch in 2022 to 2025, the use of the KERETAKU application at PT Cakra Adi Dharma Rantauprapat for consumers has not been carried out in accordance with the goal of providing digital services. This is the root of the problem that the use of the KERETA application for consumers in the city of Rantauprapat and its surroundings is still very low. This illustrates that consumers are still more comfortable with face-to-face services.

Table 1. Comparison of KERETAKU App Users in 2025

No.	Month	KERETAKU App Users (people)
1	January	40
2	February	32
3	March	43
4	April	50
5	May	27
6	June	39
Total		231

Source: PT Cakra Adi Dharma Rantauprapat internal records (2025)

Based on the data sources above, it shows that the comparison of users of the KERETAKU application PT Cakra Adi Dharma Rantauprapat as a digital-based service from January to June 2025 has fluctuated so that the data illustrates that the literacy of the use of the KERETAKU application for Honda motorcycles at PT Cakra Adi Dharma Rantauprapat in the city of Rantauprapat needs special attention, especially from the company as the person in charge of Honda motorcycle licenses namely PT Cakra Adi Dharma Rantauprapat. The use of the KERETA KERETA application can be downloaded for free from the Android smartphone Playstore.

Based on relevant information from various sources and experts as well as the phenomenon of research problems that have been described, the purpose of the research is to identify service innovation and literacy of the KERETAKU application to consumer satisfaction. As in the study Rita et al., (2019) Companies that innovate application-based services are an important catalyst for economic growth, progress, and competitive advantage in today's rapidly changing world. According to Vărzaru & Bocean, (2024) Digitalization is essential in optimizing production processes, improving communication between business partners, and reducing operational costs in today's global economy. According to Yang et al., (2018) Currently, companies around the world are competing to analyze the relationship between process-based service innovation practices and service innovation performance by applying an experiential perspective from adaptive theory.

Despite the growing emphasis on digital service innovation in the automotive industry, several gaps remain: most existing studies focus on e-commerce, banking, or hospitality sectors rather than automotive after-sales service in developing countries like Indonesia; there is limited empirical evidence on whether customer literacy and willingness to adopt applications translate into satisfaction where face-to-face service culture remains strong; and previous research has not systematically examined the simultaneous influence of service innovation and digital application literacy within a single framework. The novelty of this research lies in focusing on the automotive after-sales service sector in a developing country context (a Honda motorcycle dealership in Rantauprapat, Indonesia), introducing "application literacy" as a distinct variable separate from service innovation, employing a quantitative approach with primary data from actual customers, and identifying a critical mismatch between corporate digital innovation and customer satisfaction that challenges the assumption that digital service innovation automatically enhances satisfaction.

Based on these gaps and novelty, this study aims to analyze the partial influence of service innovation on customer satisfaction, analyze the partial influence of KERETAKU

application literacy on customer satisfaction, examine the simultaneous influence of both variables, and identify the root causes of low digital application adoption despite innovative services. Theoretically, this research enriches the literature on service innovation and customer satisfaction by introducing application literacy as a critical variable in the digital service context and contributes to understanding digital transformation challenges in emerging economies. Practically, the findings offer actionable insights for PT Cakra Adi Dharma Rantaupratat and other Honda dealerships to evaluate digital service strategies, highlighting the need for customer education and literacy programs alongside innovation, and guiding management in designing periodic evaluations and hybrid service models that combine digital efficiency with personal touch.

METHOD

This research employs a quantitative causal-associative research design to examine the relationship between service innovation, KERETAKU application literacy, and customer satisfaction. The causal-associative approach is chosen because the research aims to identify the influence of independent variables (service innovation and application literacy) on the dependent variable (customer satisfaction), both partially and simultaneously. In this study, the researcher used primary and secondary data. Sugiyono (2019) stated that primary data is a source of data obtained based on filling out questionnaires, questionnaires, or interview results from respondents. The likert scale is a scale that contains five levels of answers regarding respondents' agreement to questions or statements submitted with the option of answering through a questionnaire or questionnaire.

Population and Sample

The population in this study is all permanent customers registered with PT Cakra Adi Dharma Rantaupratat from January to May 2025 as many as 231 people. Thus, the population can be determined precisely, so to determine the sample size of a research-related population, a slovin formula with an error rate of 5% is used as follows

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{231}{1 + 231 \cdot 0,05^2}$$

$$n = \frac{231}{1 + 0,5775}$$

$$N = \frac{231}{1,5775}$$

$$= 146 \text{ People}$$

Remarks

n : Sample Size

- N : Population Size
- e : Standard Error (10%)

Based on the Slovin formula, a sample of 76 people was obtained. The sampling technique used is *non-probability sampling* with a *purposive sampling* technique, namely a sampling technique using a criterion or consideration approach, where the thing that is considered for research sampling is that the sample is a consumer who uses the KERETAKU application when visiting PT Cakra Adi Dharma Rantauprapat.

Validity Test

According to Lystia et al., (2022) stated that the validity test shows the extent to which a measuring device measures what it wants to measure. The criteria in determining the validity of a questionnaire are as follows:

- 1) If $r \text{ counts} \geq r$ of the table, then the statement is declared valid.
- 2) If $r \text{ counts} \leq r$ the table will be declared invalid.

Reliability Test

Reliability is an *index* that shows the extent to which a measuring device is reliable or reliable. Reliability tests are used to see if the measuring instrument used shows consistency in measuring the same symptoms. Statements that have been declared valid in the validity test, their reliability will be determined by the following criteria:

1. If $r \alpha$ (alpha) is positive or \geq of the r table then the *statement is reliable*.
2. If $r \alpha$ (alpha) is negative or \leq from r table then the statement is unreliable.

A construct or variable is said to be *reliable* if it gives a *Cronbach Alpha value of > 0.6*.

The data collection technique in this study is a technique of primary data where a questionnaire (google form) is used as a tool to collect research data through respondents while secondary data is supporting data such as reference sources from scientific articles, books, and important information obtained from the relevant internet used for research. The data analysis tool used in this study is multiple linear regression, where this analysis tool is a statistical tool consisting of Validity and Reliability, Classical Assumption Test, Partial Test (t-Test), Simultaneous Test (F Test) and Coefficient of Determination (R^2).

RESULTS AND DISCUSSION

Test Data Instruments

The purpose of the instrument test is to prove that the instrument meets the requirements for validity, validity, and reliability. The results of the instrument validity test are as follows:

Table 2. Test Data Validity Instrument

Indicator	Variabel	Validity Test
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		Calculated value	Table values	Interpretasi
Ability to innovate		.769	0,360	Valid
Access to information and services		.786	0,360	Valid
Company access to financing	Zhang et al., (2018)	.819	0,360	Valid
Regulatory system		.853	0,360	Valid
In-service policies		.797	0,360	Valid
App-integrated services		.728	0,360	Valid
Application success		.819	0,360	Valid
Ease of operation		.881	0,360	Valid
Application process	Ratri & Setyowati, (2024)	.663	0,360	Valid
Application goal success		.836	0,360	Valid
App satisfaction		.748		
Overall interface satisfaction	Saputra & Hidayat, (2023)	.844	0,360	Valid
Overall app satisfaction		.834	0,360	Valid
All-round satisfaction		.887	0,360	Valid

Source: Primary data processed using SPSS (2025)

Table 3. Test Data Reliability Instrument

Variable	Reliability Test		
	Cronbach's Alpha	Table r values	Interpretation
Service Innovation (X ₁)	.864	0,60	Reliable
KERETA KERETAKU Application Literacy (X ₂)	.754	0,60	Reliable
Consumer Satisfaction (Y)	.884	0,60	Reliable

Source: Primary data processed using SPSS (2025)

Based on Table 1 and Table 2 above, it is known that all indicators have a calculated value (Corrected Item-Total Correlation) > rtable of 0.360 so that it can be declared valid. Meanwhile, the reliability test results have a calculation value (Cronbach's Alpha) > rtable of 0.600 so that it can be declared reliable and used in research.

Respondent Profile

From the results of the online distribution of the questionnaire using the google form, the respondent profiles were obtained as follows:

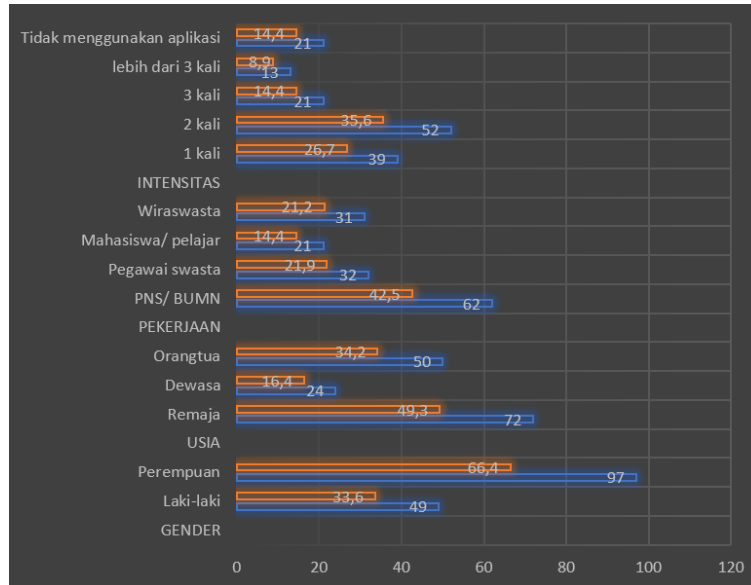


Figure 2. Respondent Profile Graph

Source: Primary Data processed, 2025

Based on the respondent profile graph above, it can be concluded that respondents based on gender or gender are dominated by women as many as 97 respondents, respondents based on age are dominated by teenagers and parents, respondents based on work are dominated by civil servants/SOEs by 62 respondents and the intensity of application use for services is dominated by 52 respondents and those who do not use applications as many as 21 respondents. From the results of the research on the profile of the respondents, it can be explained that most of the respondents who visited PT Cakra Adi Dharma Rantauprapat had used the KERETAKU application while others had not used it.

Classic Assumption Test

After the data instrument test is carried out, what is done is to conduct a classical assumption test consisting of a normality test, a multicollinearity test, and a heteroscedasticity test as follows:

- 1) Normality test

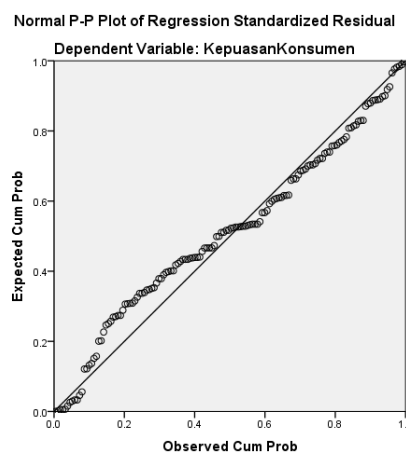


Figure 3. Data Normality Test

Source: Primary Data processed, 2025

The result of the image above shows that the distribution of points is along the diagonal line and follows the flow of the diagonal line. The data distribution test was carried out that the regression model was feasible because it met the normality requirements in the regression model.

Multicollinearity Test

Table 4. Multicollinearity Test Results

Coefficients ^a		
Model	Collinearity Statistics	
	Tolerance	LIVE
(Constant)		
1 InnovationService	.968	1.033
LiteracyApplicationMY CAR	.968	1.033

Source: Primary data processed using SPSS (2025)

Based on the output of the Tolerance value of the Service Innovation variable and the KERETAKU Application Literacy variable of $0.968 > 0.10$, it can be concluded that there are no symptoms of multicollinearity in the regression model.

3) Heteroscedasticity Test

Table 5. Glacier Test Results

Coefficients ^a		
Model	t	Sig.
(Constant)	6.374	.000
1 InnovationService	-5.752	.310
LiteracyApplicationMY CAR	.579	.564

Source: Primary data processed using SPSS (2025)

Based on the results of the heteroscedasticity test through the Glejser test in table 4, it can be seen that sig. in the variable of Service Innovation and Literacy of the KERETA application is greater than 0.05. Therefore, the regression model in this study did not occur symptoms of heteroscedasticity.

Multiple Linear Regression Analysis Test

The multiple linear equations in this study can be seen in the value column section Unstandardized Coefficients or precisely in column B (betha) as follows:

Table 6. Results of Multiple Linear Equation Analysis

Coefficients ^a			
Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	1.560	1.341	
1 InnovationService	.217	.025	.597
LiteracyApplicationMY CAR	-.006	.028	-.014

Source: Primary data processed using SPSS (2025)

From the results of the multiple linear regression calculation in table 5 above, it can be seen the relationship between independent variables and dependent variables formulated in the following equation:

$$Y = a + bX_1 + bX_2$$

$$Y = 1.560 + 0.217X_1 - 0.006X_2$$

Hypothesis Testing

The hypothesis test consists of a t-test, simultaneous test and a determination coefficient which will be described as follows:

Partial test (t test)

Partial test or t-test is a statistical method to test the influence of each independent variable (independent variable) on the dependent variable (bound variable). The decision-making policy is:

1. If $t\text{-calculation} > t\text{-table}$ and the significant value (sig) < 0.05 , then the independent variable has a significant effect on the dependent variable.
2. If $t\text{-calculation} < t\text{-table}$ and the significant value (sig) > 0.05 , then the independent variable has no significant effect on the dependent variable.

Before partial testing is carried out, the t-table value in the study must first be known using the formula:

$$df = (n - k - 1)$$

$$df = (146 - 2 - 1)$$

$df = (143 / \text{sig } 0.05)$, then the table t-value is 1.655.

The partial test results in this study are as follows:

Table 7. Model T Test Results
Coefficients^a

	Models	t	Sig.
	(Constant)	1.164	.247
1	Innovation Service	8.773	.000
	Literacy Application MY CAR	-.202	.840

Source: Primary data processed using SPSS (2025)

Based on the output data in Table 6, the results of the model t-test show that each independent variable has a t-value and significance which will be described as follows:

1. The Service Innovation variable partially has a calculation of 8.773 with a Sig value of 0.000.

Therefore, the basis of decision-making shows that:

The Service Innovation variable has a calculated value of $8.773 > a$ t-table value of 1.655 and has a calculated sig value of $0.000 < a$ table sig value of 0.05, it can be decided that the Service Innovation variable partially has a significant effect on the consumer satisfaction variable.

2. The KERETA Application Literacy variable partially has a calculation of -0.202 with a Sig value of 0.840.

Therefore, the basis of decision-making shows that:

The KERETAKU Application Literacy variable has a t-cal value of $-0.202 <$ a t-table value of 1.655 and has a calculated sig value of $0.840 >$ a table sig value of 0.05, it can be decided that the KERETAKU Application Literacy variable partially does not have a positive and significant effect on the consumer satisfaction variable.

Simultaneous Test (F test)

In the context of regression analysis, the f-test, better known as the simultaneous test, aims to test whether there is a significant influence of all independent (free) variables on the dependent (bound) variables together. The decision-making policy is:

1. If $f\text{-calculates} > f\text{-table}$ and the significant value (sig) < 0.05 , then together these independent variables have a significant effect on the dependent variables.
2. If $f\text{-calculates} < f\text{-table}$ and the significant value (sig) is > 0.05 , then together these independent variables have no significant effect on the dependent variables.

Before testing is carried out together, the value of the f-table in the study must first be known using the formula:

$$df = (k; n-k)$$

$$df = (2; 146-2)$$

$$df = (2; 144) \text{ sig } 0.05, \text{ then the value of the f-table is } 3.06$$

The results of the simultaneous tests in this study are as follows:

Table 8. Test F Results (Simultaneous)

ANOVA					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	300.769	2	150.384	40.107	.000b
Residual	536.190	143	3.750		
Total	836.959	145			

Source: Primary data processed using SPSS (2025)

Based on the results of data processing in Table 7, the results of the f test are known that the value of f is calculated for the independent variable of Service Innovation and the variable of KERETAKU Application Literacy as follows:

The value of f is calculated by $= 40,107$

The value of sig fcal is $= 0,000$

While the value f of the table:

The value f of the table is $= 3,06$

The value of sig ftable is $= 0,05$

Therefore, the basis for decision-making shows that the value of f calculated for the independent variable of Service Innovation and the variable of KERETAKU Application Literacy is $40.107 >$ the value of f of the table is 3.06 and has a value of $0.000 <$ the value of sig ftable of 0.05, then it can be decided together that the variable of Service Innovation and the variable of KERETAKU Application Literacy have a positive and significant effect on the variable of consumer satisfaction

Coefficient of Determination Test (R2)

The statistical test of the determination coefficient aims to find out how much influence or variation in the dependent variable (bound) can be explained by an independent variable or how well the regression model matches the observed data. The results of the determination coefficient test in this study are as follows:

Table 9. Determination Coefficient Result (R2)

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.599a	.359	.350	1.93638

Source: Primary data processed using SPSS (2025)

Based on the results of the above test, it is known that the value of the determination coefficient (R Square) in this study is 0.359 or 35.9%. It can be explained that the consumer satisfaction variable is influenced by the Service Innovation variable and the KERETAKU Application Literacy variable while the remaining 64.1% is influenced by other factors that are not included in this study such as price, product quality, brand image, location and promotion.

From the results of the hypothesis testing that has been described above, then the following research discussion is conducted:

H1: service innovation has an effect on consumer satisfaction.

From the results of partial hypothesis testing that variabel Service Innovation has a calculated value of 8.773 > a t-table value of 1.655 and has a calculated sig value of 0.000 < a table sig value of 0.05, then it can be decided that the Service Innovation variable partially has a significant effect on the consumer satisfaction variable. The results of the study strongly support the research (Kosasih et al., 2024) that Service innovation positively and significantly affects customer satisfaction. Marketing innovation improves customer satisfaction. In addition, the influence of service and marketing innovations on customer satisfaction is greater in a competitive environment. This means that the results of the research prove that service innovations are developed through indicators, among others, Ability to innovate, access to information and services, company access in financing, regulatory system, policies in services and integrated services Zhang et al., (2018) is an indicator in accordance with the subject of the research, namely PT Cakra Adi Dharma Rantauprapat is one of the Honda motorcycle companies that is able to implement good service innovations in the eyes of consumers apart from sales services and after-sales services such as service and complaints have mechanisms that are in accordance with the development and needs of consumers.

H2: KERETAKU application literacy has an effect on consumer satisfaction.

From the results of partial hypothesis testing that vAriabel KERETAKU Application Literacy has a teal value of -0.202 < The T-table value is 1.655 and has a calculated GIS value of 0.840 > the table GIS value of 0.05, then it can be decided that the variable KERETAKU Application Literacy partially does not have a positive and significant effect on the consumer satisfaction variable. The results of the research regarding the literacy of the KERETAKU application had no effect on consumer satisfaction because the results of the study found that in the respondent profile, as many as 21 respondents gave answers that they had never used the

KERETAKU application which can be downloaded through the android playstore. In addition, the factor that results in this is because respondents or customers still feel comfortable using the service face to face or face-to-face with the management PT Cakra Adi Dharma Rantauprapat. Respondents feel that services by communicating directly are still faster than through applications. The results of the study support the research (Kosasih et al., 2024) mAlthough service innovation does not directly affect satisfaction, it will significantly slowly increase ongoing customer loyalty.

H3: service innovation and literacy of the KERETA application have an effect on consumer satisfaction.

From the results of simultaneous hypothesis testing that variabel Service Innovation and KERETAKU Application Literacy Variables amounting to $40.107 >$ the f-value of the table is 3.06 and has a GIS fcal value of $0.000 <$ the GIS ftable value of 0.05 then can be decided together variables Service Innovation and KERETAKU Application Literacy Variables have a positive and significant effect on consumer satisfaction variables. The results of this study strongly support the research (Andranurviza et al., 2022) that the use of digital applications has a significant relationship and has a positive impact on customer experience and customer satisfaction. As according to (Díaz & Duque, 2021) that kThe concept of innovation for the improvement and differentiation of services is directly related to the concept of open innovation [6]. This space for collaboration of customer innovation with the hospitality sector is a source of competitive advantage, strengthening customer relationships and loyalty. This means that whatever policies are carried out by PT Cakra Adi Dharma Rantauprapat in satisfying customers through innovation and application development can slowly be accepted by consumers considering that currently the development and use of digitalization has entered all aspects of the industry, including service companies are one of the industries that are the fastest to adapt to application-based technology.

CONCLUSION

The conclusion in this study is that from the respondents' profiles, most of the respondents who visited PT Cakra Adi Dharma Rantauprapat had used the KERETAKU application while others had not used it. Meanwhile, the results of the study partially show that the variable of Service Innovation is a variable that has a very good influence on consumer satisfaction. The literacy variable of the KERETA application partially has no effect on consumer satisfaction. However, simultaneously the variable of Service Innovation and the variable of KERETAKU Application Literacy have a good effect on consumer satisfaction. Therefore, priority suggestions that can be of common concern both academics as research development and PT Cakra Adi Dharma Rantauprapat organizers and implementers who provide services to consumers can pay attention in detail to what aspects of application-based services can be evaluated periodically.

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