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Analysis of the Satisfaction Level of Gojek (GoFood) Application Users in Rawalumbu, Bekasi City Using the PIECES Framework During Pandemic Period

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Abstract

The problems studied arise from users regarding the facilities used and obtained from the Gojek application. Many aspects are taken into consideration by consumers in choosing and deciding which application to use. An important aspect that is considered by consumers is satisfaction with service quality in meeting consumer needs and desires, which are still uncertain. The data collection technique used by the researcher is a questionnaire. The population in this study are users of the Gojek application in Rawalumbu, Bekasi City, with a sample of 100 respondents using the Lemeshow formula. The PIECES Framework method provides tangible results on the effectiveness of the Gojek (GoFood) application system by analyzing the Performance, Information, Economics, Control & Security, Efficiency, and Service variables. Calculation of the results of the questionnaire using a Likert Scale to measure the respondent's perception or opinion of a condition is then made in the form of a percentage using the Customer Satisfaction Index. The percentage of satisfaction level for each variable, namely, the Performance variable gets an index value of 86.40%, the Information variable gets an index value of 85.80%, Economics gets an index value of 84.60%, the Control and Security variable gets an index value of 83.00%, the variable Efficiency gets an index value of 88.40%, and Service gets an index value of 86.40%. So the results of this study are the total average level of satisfaction from all domains, namely getting an index value of 85.76% (Very Satisfied).

Keywords: Gojek Application, Gofood, PIECES Framework, Customer Satisfaction Index

INTRODUCTION

In this era of very sophisticated technology, the existence of smartphones is very supportive of community activities. The existence of technology and science that is rapidly growing can create innovation, namely the Gojek application. The Gojek application is a place for interaction between drivers and consumers in meeting consumer needs and desires that can be done practically. The Gojek application offers various products in the fields of COVID-19 Resources, Food Delivery & Shopping, Transportation & Logistics, Payments, Daily Needs, News & Entertainment, Environmental Products, and many service features in it by focusing on the food delivery service feature, namely GoFood. The GoFood feature is needed during this pandemic. People just stay at home, not free to buy food directly on the spot. With the GoFood feature, consumer needs can be

easily met. Research on the Gojek application in Rawalumbu, Bekasi City, has never analyzed the level of user satisfaction, nor has the measurement of variables on user satisfaction in the Gojek application been carried out, so it cannot be ascertained whether the application meets user satisfaction.

The emergence of problems from users related to the facilities used and obtained from the Gojek application as well as problems with the needs and desires of users, especially during the Covid-19 pandemic. In this case, the purpose of this study is to analyze the level of user satisfaction of the Gojek application on the GoFood feature in Rawalumbu, Bekasi City, and find out the real results of user satisfaction based on the indexation of customer satisfaction (Trinoto & Zamakhsari, 2021) on the GoFood feature by analyzing variables from the PIECES framework.

LITERATURE REVIEW

Analysis

The analysis is research that, from the beginning, goes into the field, interacting with the background and people (subjects) in the context of collecting data (Wulandari et al., 2020). Based on the opinion above, it is concluded that analysis is an activity carried out by researchers to obtain data from people (subjects) who will be the object of research by interacting directly.

User satisfaction

Consumer satisfaction can be created through quality, Service, and value (Setyaningsih et al., 2020). User satisfaction describes the alignment between one's expectations and the results obtained by the existence of a system in which the person participates in the development of information systems (Lokapitasari Belluano et al., 2019). From this opinion, it can be concluded that user satisfaction is a person's feeling of pleasure towards the performance and quality of a product or Service obtained following the wishes or expectations, which is then given an assessment or testimony.

Gojek App

The Gojek application can be downloaded on smartphones that have an iOS or Android operating system. The Gojek company is an original startup created by the nation's children, introduced by Nadiem Makarim on October 12, 2010 (Vandogi et al., 2021). The Gojek application provides many services in various fields, which are divided into features, one of which is GoFood, which can take your food from anywhere.

GoFood

GoFood is a food delivery service that features delivery orders in a variety of cuisines. By using a smartphone and running the GoFood feature in the Gojek application, buyers can order food from restaurants that collaborate with Gojek. Food will be ordered and delivered directly by Gojek (Cahya et al., 2021)

PIECES Framework

The PIECES framework is a framework used to classify problems, opportunities, and directives contained in the scope definition section of system analysis and design. In PIECES, there are six analytic variables, namely: Performance, Information, Economics, Control and Security, Efficiency, and Service (Ramadhani & Kusuma, 2018).

Rawalumbu, City of Bekasi

Rawalumbu is a sub-district in the City of Bekasi, West Java Province, Indonesia ("Wikipedia," 2021). The District of Rawalumbu is part of the City of Bekasi, which is located in the southern region of the City of Bekasi ("Kecamatan Rawalumbu," 2017). Rawalumbu area is a bit far from the city area, which is a residential area with 13 bridges.

RESEARCH METHODS

This study uses a quantitative descriptive approach, which aims to describe various situations and conditions or variables that arise, to conduct research based on respondents' perceptions to become the object of research (Hadisaputro, Wandi, et al., 2019). Meanwhile, the population and samples used by the researcher are all users of the Gojek application in Rawalumbu, Bekasi City, with a total of 100 respondents using the Lemeshow formula as described below.

Sampling Technique

The sampling technique used is the incidental sampling method (Bouta & S.P., M.M., 2020), which was taken randomly based on the area in the population. Respondents who became the research subject were Gojek Rawalumbu consumers in Bekasi City who met the criteria in Table 1 below.

Table 1: Sample Criteria

Sample	Criteria
Gojek Rawalumbu Application User, Bekasi City	Using the Gojek application (GoFood) at least once
	Domiciliary in Rawalumbu, Bekasi City
	Understand and understand how to use the Gojek application (Gofood)

Researchers took samples using the Lemeshow formula (Lemeshow et al., 1997).

$$n = \frac{Z^2 x\ P(1-P)}{d^2}$$

Information:

n= number of samples

Z= Z score at 95% confidence = 1.96

P= maximum estimate = 0.5

d = alpha (0.10) or sampling error = 10%

The population of Gojek (GoFood) users in Rawalumbu, Bekasi City, is unknown. In terms of an error tolerance of 10%, the number of samples obtained from the total population is:

$$n = \frac{Z^2 \, x \, P(1-P)}{d^2}$$

$$n = \frac{1{,}96^2 \, x \, 0{,}5(1-0{,}5)}{0{,}1^2}$$

$$n = \frac{3{,}8416 \, x \, 0{,}25}{0{,}01}$$

$$n = \frac{133}{1 + 0{,}3325}$$

$$n = \frac{0{,}96}{0{,}01}$$

$$n = 96{,}04 => 100$$

Research Instruments

The research instrument used a questionnaire to obtain data and explore Information about the satisfaction level of the Gojek application for users. Because now, during the pandemic, you have to keep your distance, so most of what researchers do in distributing questionnaires is asking respondents for these statements and filling in answers from respondents. The questionnaire consists of 6 PIECES Framework variables contained in Table 3, which have been distributed to respondents to be processed and tested for validity and reliability tests using SPSS 25, and then measured respondents' perceptions of a condition with a Likert scale (Hadisaputro, Setyaningsih, et al., 2019) contained in Table 2.

Table 2: Likert scale

Answer Options	Abbreviation	Score
Strongly agree	ST	5
Setuju	S	4
Neutral	N	3
Do not agree	TS	2
Strongly Disagree	STS	1

Table 3: List of Questionnaire Statements

NUM	STATEMENT
Performance	
1	Unique GoFood interface or appearance
2	Menu options and navigation on GoFood are easy to use & interactive
3	Offers quick loading times when accessed
4	Responding to a cancellation order or request is done quickly
Information	
1	GoFood makes it easy to find the food dan drink you're looking for

2	Understand the Information contained in GoFood concisely and accurately
3	GoFood provides a list of real food/drinks available on the service list
4	GoFood does not disseminate personal information to other parties
Economics	
1	payment on GoFood based on the application
2	The prices of food and beverages on GoFood are reasonable.
3	The food and beverage services on GoFood are reasonably priced.
4	The quality of the purchasing services on GoFood is worth the price
Control and Security	
1	GoFood keeps its promises about order delivery
2	GoFood protects the privacy of its customers' personal Information
3	Protect your payment instrument information on GoFood
4	The system used now makes it easier for users in terms of cost and time
Efficiency	
1	Smartphones with poor specifications are an impediment to ordering
2	Accelerate the process of completing food purchases on GoFood
3	Save money compared to buying your food
4	Have results that match what was ordered (price and estimated time)
Service	
1	Gojek provides excellent Service through the features provided
2	So far, the features can provide you with satisfaction
3	Overall, it can make ordering and purchasing food easier for me
4	Customer service is quick to respond to serve you

Results

Researchers get the results of data processing in the form of calculation values along with the discussion as follows:

Analysis System

The Gojek application provides services in various features, as shown in Figure 2, where the researcher focuses on the GoFood feature. These features are like the search system for various kinds of dishes contained in Figure 3. The following is the main view of the Gojek application in Figure 1 and the recommendation display of the selected dishes in Figure 4.

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Figure 1: Gojek Application Display

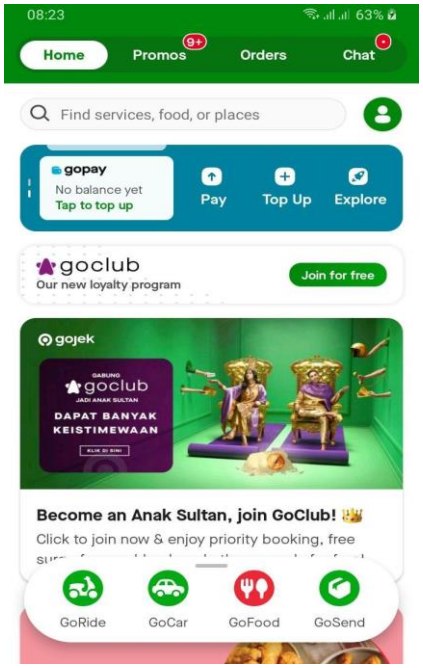


Figure 2: Gojek features

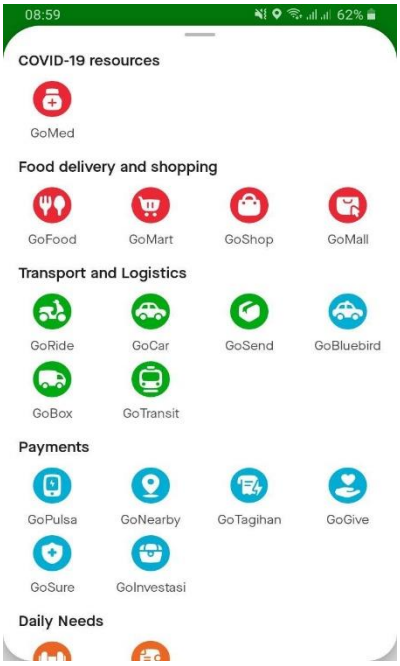
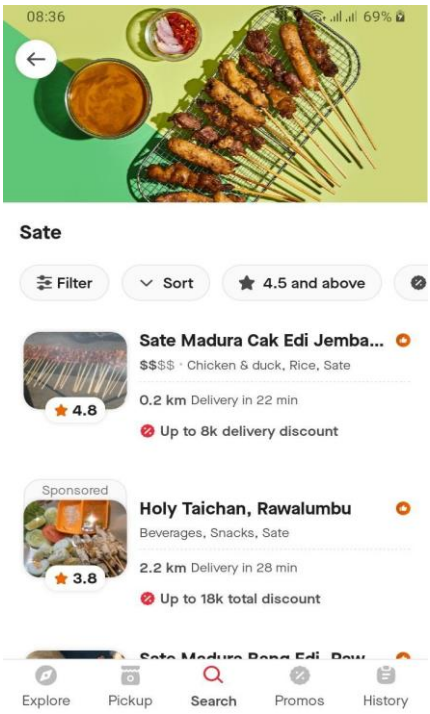


Figure 3: Search for food

Figure 4: Recommended dishes



Validity Check

The test of the statement items is the value of the correlation coefficient $r_{count} > r_{table,}$ then it is declared valid (Wulandari et al., 2020). The value of the r_{table} is determined in advance with a significant level of 5% so that the value of the r_{table} of N = 30 is 0.361. The following are the results of the validity of each variable in the table below.

Table 4: The results of the validity of the Performance variable

No	Statement	rcount	rtable 5%	result
1	P1	0.552	0,361	Valid
2	P2	0.597	0,361	Valid
3	P3	0.590	0,361	Valid
4	P4	0.721	0,361	Valid

Table 5: The results of the validity of the information variables

No	Statement	rcount	rtable5 %	result
1	P1	0.472	0,361	Valid
2	P2	0.432	0,361	Valid
3	P3	0.688	0,361	Valid
4	P4	0.498	0,361	Valid

Table 6: The results of the validity of the Economic variable

No	Statement	rcount	rtable5%	result
1	P1	0.552	0,361	Valid
2	P2	0.546	0,361	Valid
3	P3	0.521	0,361	Valid
4	P4	0.707	0,361	Valid

Table 7: The results of the validity of the Control & Security variable

No	Statement	rcount	rtable5 %	result
1	P1	0.477	0,361	Valid
2	P2	0.588	0,361	Valid
3	P3	0.641	0,361	Valid
4	P4	0.609	0,361	Valid

Table 8: The results of the validity of the Efficiency variable

No	Statement	rcount	rtable5 %	result
1	P1	0.532	0,361	Valid
2	P2	0.496	0,361	Valid
3	P3	0.693	0,361	Valid
4	P4	0.593	0,361	Valid

Table 9: The results of the validity of the Service variable

No	Statement	rcount	rtable5 %	result
1	P1	0.568	0,361	Valid
2	P2	0.573	0,361	Valid
3	P3	0.468	0,361	Valid
4	P4	0.633	0,361	Valid

The test results of Table 5 to Table 10 variables all statement items are valid because the value of $r_{count} > r_{table}$ (0.361).

Reliability Test

Measurement of reliability was measured using Cronbach's Alpha. A statement variable with a Cronbach's Alpha value > .500 is declared reliable, whereas if the Cronbach's Alpha value is < .500, then it is declared unreliable. The value of r product moment is obtained by using a significant level of 5% N=30. The following are the results of the reliability test for all variables in Table 10.

Table 10: The results of the reliability of the variable performance

Reliability Statistics

Cronbach's Alpha	N of Items
.567	4

Table 11: The results of the reliability of the variable Information

Reliability Statistics

Cronbach's Alpha	N of Items
.622	4

Table 12: The results of the reliability of the variable Economic

Reliability Statistics

Cronbach's Alpha	N of Items
.783	4

Table 13: The results of the reliability of the variable Control & Security

Reliability Statistics

Cronbach's Alpha	N of Items
.725	4

Table 14: The results of the reliability of the variable Efficiency

Reliability Statistics

Cronbach's Alpha	N of Items
.725	4

Table 15: The results of the reliability of the variable Service

Reliability Statistics

Cronbach's Alpha	N of Items
.725	4

The results of the reliability test of all variables for each question item Cronbach's Alpha value > .500, it is concluded that the questionnaire is reliable.

Characteristics of Respondents

The number of respondents who filled out the questionnaire was 100 people. As many as 46% of respondents are female, and 54% are male. All users are users in Rawalumbu, Bekasi City, who have or are currently using the Gojek application. It can be seen clearly in Figure 5. At the age of 37-46 years as much as 37%, the age of the respondents 27-36 as much as 30%, the age of the respondents 16-26 as much as 20%, the age of the respondents 47-56 as much as 9% where a small percentage of those who use the application, the age of the respondents <15 2 % where there are still a few who understand and use the application and 56 > as much as 2% where most of the age does not understand using the application. It is seen in Figure 6.

Figure 5: Gender of Respondents

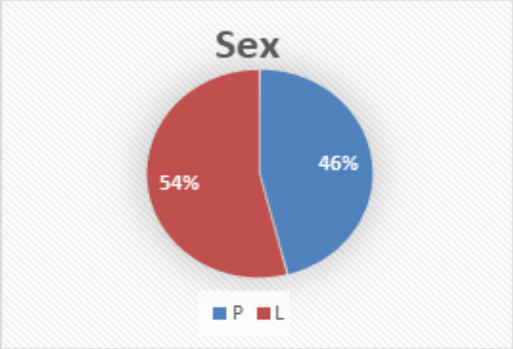


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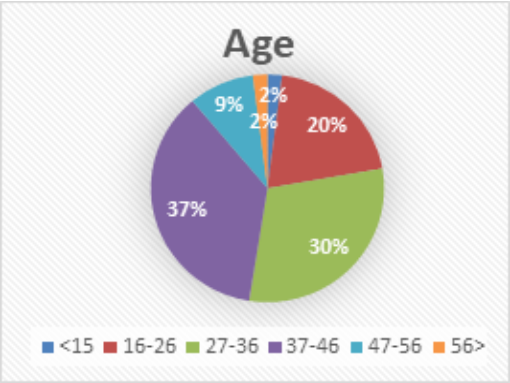
Figure 6: Age of Respondents



The respondent's occupations are 60% private employees, 15% housewives, 8% self-employed, 7% students, 6% students, 2% civil servants, and 2% workers. The education level of respondents in SMA is 59%, S1 24%, SMP 11%, SD 5%, and D2 1%. It can be seen in the image below.

Figure 7: Respondent's Occupation

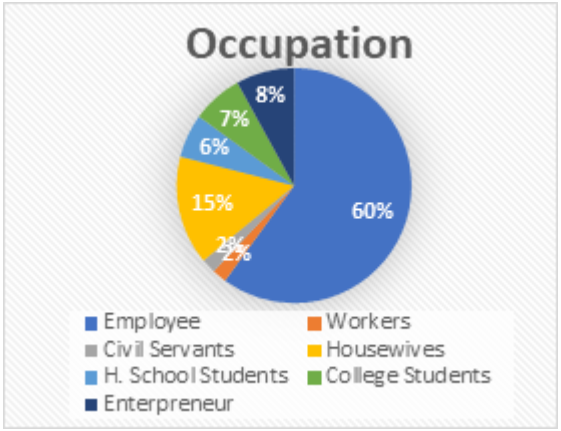
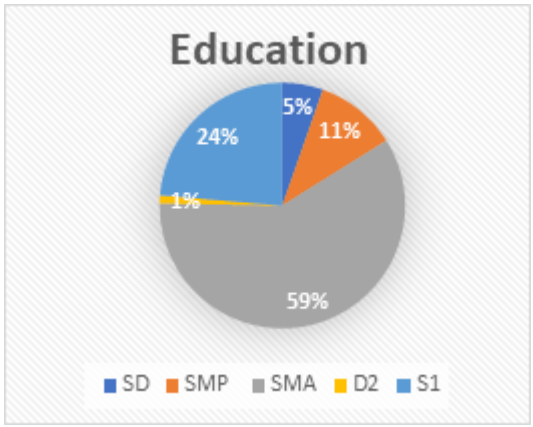


Figure 8: Education Level of Respondent



Questionnaire Results

The results of the questionnaire are based on statements that have been made regarding the level of user satisfaction with the service quality of the Gojek application using the PIECES Framework method and processed using a Likert scale. Then the average value of the level of satisfaction based on the domain (Performance, Information and data, Economics, Control and Security, Efficiency, and Service) is obtained using the formula:

$$RK = JSK / JK$$

RK = Average Satisfaction
JSK = Total Questionnaire Score
JK = Number of Questionnaires

To determine the level of satisfaction, the level model was used (Fitriana et al., 2014) in Table 16.

Table 16: Customer Satisfaction Index (CSI) Scale

Index Value	Satisfaction Predicate
81% - 100%	Very satisfied
66% - 80,99%	Satisfied
51% - 65,99%	Quite satisfied
35% - 50,99%	Not satisfied
0% - 34,99%	Very Dissatisfied

Table 17: Questionnaire Calculation Results

Response/Score	Performance	Information	Economic	Control	Efficiency	Service
R1	16	20	18	15	13	17
R2	16	19	16	16	20	19
R3	16	12	14	10	17	17
R4	15	17	16	18	17	17
R5	16	14	17	17	14	17
R6	20	20	20	20	20	20
R7	16	16	16	16	16	16
R8	16	20	16	20	20	12
R9	20	16	12	16	20	20
R10	20	20	20	20	20	20
R11	20	20	20	20	20	20
R12	18	18	18	19	18	18
R13	18	18	18	18	18	18
R14	17	16	15	17	16	16
R15	16	16	16	16	17	16
R16	17	18	18	18	18	18
R17	18	18	18	18	18	18
R18	18	18	18	18	18	18
R19	16	20	16	18	18	18
R20	18	18	14	14	18	18
R21	18	18	18	18	18	18
R22	18	19	18	18	17	17
R23	18	18	18	18	18	18
R24	17	16	15	17	16	16
R25	18	16	16	16	16	18
R26	18	16	14	18	18	18
R27	17	18	16	16	18	18
R28	17	18	17	17	20	16
R29	16	20	16	20	18	18
R30	16	18	14	18	16	16

R31	16	20	16	19	18	19
R32	18	18	18	18	18	18
R33	18	18	18	18	17	17
R34	18	18	18	18	19	16
R35	17	18	18	18	18	18
R36	16	16	16	16	16	16
R37	16	16	12	16	20	16
R38	20	20	20	20	20	20
R39	20	20	20	20	20	20
R40	20	20	20	20	20	20
R41	20	20	20	20	20	20
R42	18	18	19	14	18	19
R43	16	14	16	13	11	15
R44	18	18	20	17	17	18
R45	20	20	18	17	20	19
R46	20	18	17	16	18	18
R47	15	15	16	13	13	16
R48	20	19	20	17	18	18
R49	18	16	16	16	18	18
R50	16	17	17	14	16	17
R51	18	15	16	16	18	16
R52	16	13	15	14	15	16
R53	16	15	16	13	16	16
R54	16	15	20	12	15	16
R55	14	15	16	13	13	15
R56	20	19	20	17	20	19
R57	16	19	17	16	15	16
R58	18	18	17	18	18	17
R59	17	16	15	14	13	16
R60	20	19	20	17	20	19
R61	16	14	16	14	16	16
R62	12	12	12	12	12	15
R63	18	18	19	15	16	17
R64	16	19	20	16	20	20
R65	18	15	16	17	17	17
R66	16	16	15	16	17	17
R67	20	18	20	17	20	19
R68	16	15	20	16	18	18
R69	14	15	13	12	15	16
R70	16	15	16	14	15	17
R71	20	19	20	16	18	19
R72	13	16	15	16	15	16
R73	16	16	16	16	16	16
R74	16	15	17	16	20	19
R75	19	19	14	16	16	17
R76	17	15	16	16	18	16
R77	17	17	16	17	16	16
R78	16	18	16	20	17	18
R79	17	17	17	19	18	18
R80	18	16	16	18	20	16
R81	20	16	16	20	20	16
R82	16	20	16	12	6	16
R83	16	20	16	16	20	16
R84	16	16	16	16	16	16
R85	16	16	16	16	16	16
R86	20	16	20	16	20	16

R87	20	16	20	16	16	16
R88	12	16	16	16	20	16
R89	20	16	20	16	20	16
R90	12	16	16	16	20	16
R91	20	16	16	20	16	16
R92	16	16	16	16	20	16
R93	12	16	16	16	20	20
R94	20	16	20	16	20	16
R95	20	16	16	16	20	16
R96	17	20	16	16	20	20
R97	17	20	16	16	20	20
R98	20	20	20	20	20	20
R99	20	16	16	20	20	16
R100	16	16	16	16	16	16
JSK	**1728**	**1719**	**1695**	**1661**	**1755**	**1729**
JK	**400**	**400**	**400**	**400**	**397**	**400**
RK	**4,32**	**4,29**	**4,23**	**4,15**	**4,42**	**4,32**

In the Performance variable, the JSK value is 1728, the Information variable JSK is 1719, the Economic variable is 1695, the Control & Security variable is 1661, the Security variable is 1729, and the JK value of these variables is 400. While the Efficiency variable, the JSK value is 1755, and the JK value is 397.

Then the RK value for the performance variable is 4.32, or in the Customer Satisfaction Index (CSI) of 86.40%, the RK value for the Information variable is 4.29, or in the CSI it is 85.80%, the RK value for the Economic variable is 4.23 or 84.60% in the CSI, the RK value for the Control & Security variable is 4.15, or in the CSI 83.00%, the RK value for the Efficiency variable is 4.42 or in the CSI 88.40%, and The RK for the Service variable is 4.32, or in CSI it is 86.40%. The final results of satisfaction are presented in Table 18 below.

Table 18: Percentage of User Satisfaction with the GoFood feature

Domain	CSI	Category
Performance	86,40%	Very satisfied
Information	85,80%	Very satisfied
Economics	84,60%	Very satisfied
Control & Security	83,00%	Very satisfied
Efficiency	88,40%	Very satisfied
Service	86,40%	Very satisfied
Satisfaction Level	85,76%	Very satisfied

CONCLUSION

Based on the analysis and descriptions carried out in the previous chapter with the PIECES Framework, the results of this study were obtained as follows:

1. Based on the validity test, each statement item given to 100 respondents on the PIECES variable was declared valid with a value of $r_{count} > r_{table}$ (0.361). And the results of the PIECES variable reliability test with Cronbach's Alpha value > .500 then the questionnaire is reliable (reliable).

2. In all statements contained in the questionnaire, the results of data processing on the assessment of the Gojek application on the GoFood feature found the percentage level of

satisfaction of each variable, namely, Performance variable 86.40%, Information variable 85.80%, Economic variable 84.60 %, Control, and Security variable 83.00%, Efficiency variable 88.40%, Service 86.40%, all variables are categorized as Very Satisfied with an average percentage of 85.76%. So it can be said that the GoFood feature on the Gojek application provides convenience to users and plays a very good role in service quality.

Recommendation

This study aims to analyze and determine the level of satisfaction of Gojek application users on the GoFood feature, the suggestions proposed by researchers in this study are as follows:

1. It is recommended that the cuisine menu on the Gofood feature is more varied, interesting, and useful, which can be added to a traditional menu or traditional snacks and also a baby food or snack menu.
2. The results from Table 18 control & security variables have a smaller percentage than other variables. Thus, it is recommended for the Gojek Application Company (GoFood) to evaluate and be able to further improve the quality of Security by protecting user data and increasing application stability.
3. The results from Table 18, the Efficiency variable has a greater percentage than the other variables. Efficiency, Performance, Information, and Service variables are expected the company can maintain quality.

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