

# Analysis of the Level of Public Satisfaction of the Use of Online Food Delivery Based on Public Status and IP-ICT Cluster Region

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**Abstract:** *Electronic Commerce (E-commerce) is buying and selling activity that is carried out electronically or online. Some e-commerce in Indonesia that provide online food delivery services include Shopee, Gojek and Grab. However, until now some people in certain regions are still experiencing problems in using food delivery applications. The obstacle that occurs is the uneven level of progress of Information and Communication Technology (ICT) so that the food delivery application cannot run optimally in some regions. The data source to be studied is primary data collected by online survey method or questionnaire. The conditions set to become respondents in this study are people who live in accordance with Cluster I, Cluster II, and Cluster III of the ICT Development Index area who use the Online Food Delivery application. This study aims to determine the level of consumer satisfaction with online food delivery application based on public status and IP-ICT cluster region. The result of this study can be taken into consideration for Online Food Delivery companies to increase public satisfaction by improving aspects that are still considered less than optimal.*

**Keywords—** Online food delivery, ICT cluster region, E-commerce

## 1. INTRODUCTION

Today, the development of science and technology become a major key in a country's economic development and become a major force in world competition. The presence of digital economy is a real form of world changing process in digital era of globalization. The development of digital economy has also become a trend in Indonesia. In fact, the country that is predicted to have the largest digital economy in Southeast Asia is Indonesia. Based on the Ernst and Young analysis, it can be seen that the growth of value in online business sales is increasing 40% every year. The analysis is supported by data from Indonesian Internet Service Provider Association which mentioned that Indonesia has a population of 256,2 million people in 2016 and 132,7 million people of them are active internet users which means these users access the internet for business needs, buying and selling to searching related goods or products to be purchased.

Electronic Commerce (E-commerce) is buying and selling activity that is carried out electronically or online. According to the Public Relations of the Cabinet Secretariat of the Republic of Indonesia (2017), E-commerce activities in Indonesia are growing rapidly after the government issued an e-commerce roadmap package. This package is useful to help e-commerce business people because it can facilitate the process of buying and selling online. With e-commerce, people will get convenience in shopping online without having to leave the house

Some e-commerce in Indonesia that provide online food delivery services include Shopee, Gojek and Grab. Shopee Food is a food delivery service in the Shopee

application. Go-Food is a food delivery service feature of the Gojek application. Meanwhile, Grab Food is also not much different from Go-Food or Shopee Food which are both food delivery services, but what distinguishes Grab Food and Go-Food is the operational time. Grab-Food only operates from 10.00-23.59, while Go-Food provides a 24-hour food delivery service. Go-Food services in the Gojek application have received a positive response from culinary entrepreneurs. This Go-Food service has collaborated with 15 thousand places to eat in the Jabodetabek area. The Go-Food promo is valid for millions of Go-Food customers in 11 cities in Indonesia, namely Surabaya, Medan, Yogyakarta and others. This is supported by research conducted by Arif (2017), Dianti (2017) and Hartatik (2017), that promotion, price, and service quality have a significant positive influence on customer satisfaction.

However, until now some people in certain regions are still experiencing problems in using food delivery applications. The obstacle that occurs is the uneven level of progress of Information and Communication Technology (ICT) so that the food delivery application cannot run optimally in some regions. To measure the rate of ICT progress in an area can be demonstrated through the Technology, Information and Communication Development Index (IP-ICT). According to research conducted by Suharni (2020), the results of clustering using K-Means based on IP-ICT are divided into 3 clusters. Cluster 1 consists of Riau Islands, DKI Jakarta, West Java, DIY, Banten, Bali, East Kalimantan and North Kalimantan. Cluster 2 consists of East Nusa Tenggara, West Sulawesi, North Maluku and Papua. While cluster 3 consists of Aceh, North Sumatra, West Sumatra, Riau, Jambi, south Sumatra, Bengkulu, Lampung,

Kep. Bangka Belitung, Central Java, East Java, Central Kalimantan, South Kalimantan, West Kalimantan, North Sulawesi, South Sulawesi, Southeast Sulawesi, Gorontalo, Central Sulawesi, West Nusa Tenggara, West Papua and Maluku. Cluster 1 is a cluster with high IP-ICT. Cluster 2 is a cluster with low IP-ICT. While cluster 3 is a cluster with intermediate IP-ICT.

In addition to the different levels of ICT progress in each region, the status of the community also affects satisfaction with the use of the OFD application because each customer has an age, income, occupation, style Different lives and personalities so that it will certainly influence these customers in responding to certain food delivery applications. In 2019, data released by Statista (2020) 36% of people in early adulthood (25-34 years) were the most OFD users. In second place, there are 35-44 years old with 25%. In third place, there are 22% at the age of 18-24 years and 17% at the age of over 45 years. Based on the data above, it can be seen that the first to third positions show that people with an early adult age (20-40 years) do the most OFD because at this age many no longer live with their parents to work, continue their education or live alone (Papalia et al., 2009). Therefore, this paper discusses the level of public satisfaction with the use of OFD applications based on the IP-ICT regional cluster and community status.

## 2. LITERATURE REVIEW

### 2.1 Satisfaction Level

Satisfaction is the level of a person's feelings after comparing their perceived performance/results with their expectations. Whereas according to Kotler (2002), satisfaction is a person's feeling of pleasure or disappointment that arises after comparing between their perceptions/impressions of the performance (or results) of the product and its expectations. So, the level of satisfaction is a function of the difference between perceived performance and expectations. If the performance is below expectations, then customers will be disappointed. When the performance matches expectations, customers will be satisfied. Meanwhile, if the performance exceeds expectations, customers will be very satisfied. Customer expectations can be shaped by past experiences, comments from his relatives as well as the promises and information of marketers and rivals. Satisfied customers will stay loyal longer, be less sensitive to prices and give good comments about the company. To create customer satisfaction, companies must create and manage a system to acquire more customers and the ability to maintain its customers.

In evaluating satisfaction with a particular product, service, or company, consumers generally refer to various factors or dimensions. meanwhile, in evaluating services that are intangible, consumers

generally use the following attributes or factors (Berry, et al., 1985):

1. Tangible evidence, including physical facilities, equipment, employees and communication facilities.
2. Reliability, which is the ability to provide the promised service immediately, accurately, and satisfactorily.
3. Responsiveness, which is the desire of staff and employees to help customers and provide responsive waiters.
4. Assurance includes knowledge, ability, courtesy, and trustworthiness of staff, free from danger, risk or doubt.
5. Empathy, including ease of relationships, good communication, personal attention, and understanding the needs of customers

### 2.2 Online Food Delivery Application

The development of technology and communication that is increasingly advanced every day, can be seen with the emergence of various applications, for example the Online Food Delivery application. With this application, it makes it easy for consumers to be able to order from anywhere and anytime. Not only convenience for customers, but also convenience for business actors who make optimal use of technology. Some of the online food delivery applications that are currently popular, namely:

#### 2.2.1 GoFood

GoFood is part of the Gojek application which is the first Online Food Delivery application. Since its operation until 2022, GoFood has generated millions of online food-buying and selling transactions. It is noted that there are already more than one million GoFood partners who sell food in this application. Later, customers will get their online food orders from Gojek drivers. The payment method is easy, customers can use GoPay (an electronic payment instrument from Gojek) or pay on the spot when the food arrives.

#### 2.2.2 GrabFood

Grabfood is part of Grab that has been used by millions of users in Indonesia and several Southeast Asian countries. Because the main service is online motorcycle taxis, the GrabFood feature is also integrated with drivers to deliver customer food orders.

This application also offers a variety of attractive promos in a practical payment way, such as making payments on the spot or *online* through OVO.

### 2.2.3 Shopee Food

Shopee Food is an online food delivery service available in the Shopee application. There are many merchants that customers can choose to get their favorite food and drinks. The Shopee Food application is an application that has just arrived in Indonesia, but is able to attract many consumers. This is due to the many promos that can be used practically at a cheaper price.

## 2.3 Community Status

Status or position is as a person's place or position in a social group, with respect to others in that group, or a group's place with respect to other groups within an even larger group. The position, place or position of a person in a group can be a position that is double or has a status (position) in society. Status or position related to position or occupation can be categorized as status that is objective in nature with rights and obligations independent of the individual. While education and wealth can be categorized as a status of a subjective nature or a status that shows the results of the judgment of others.

Socioeconomic status is specifically a position occupied by an individual or family with respect to the generally applicable normative standard on cultural ownership, income effective, ownership of goods and participation in group activities of its community. Soekanto stated factors that affect socioeconomic status, namely; employment, education, income, number of dependents, ownership, and type of residence.

Sudarsono put forward general standards as an objective and subjective indicator of socioeconomic status, as follows;

- Education
- Position level that uses scores
- Income for those who work in the form of salary or wages
- Possession of valuables that can be immediately seen by others that are suspected to be a symbol or sign of social status that has received recognition from the community or around its environment.
- The existence of recognition from the community or its environment as a subjective indicator

## 2.4 IP-ICT Region Clusters

According to Suharni (2020), IP-ICT is a composite index compiled by three sub-indexes where each sub-index consists of indicators that make up the sub-index. The three sub-indexes that make up IP-ICT are the access and infrastructure sub-index, the usage sub-index, and the expertise sub-index. The access and infrastructure sub-index describe ICT readiness as measured on the access and infrastructure side of ICT. The usage sub-index

describes ICT intensity as measured by ICT usage. The skill sub-index is a required skill in ICT Skill.

Based on a survey conducted by the Central Statistics Agency in 2019, IP-ICT data consisting of 34 provinces in Indonesia was obtained. Such data are presented in the following table

**Table 1:** IP-ICT Data Based on 34 Provinces in Indonesia

Number	Province	X1	X2	X3
1	Aceh	5.33	3.54	6.71
2	North Sumatera	5.64	4.21	6.24
3	West Sumatera	5.78	4.11	6.41
4	Riau	5.79	4.45	6.15
5	Jambi	5.71	4.3	5.8
6	South Sumatera	5.64	3.84	5.55
7	Bengkulu	5.73	4.13	6.29
8	Lampung	5.28	4	5.52
9	Bangka Belitung Island	5.85	4.65	5.19
10	Riau Island	7.03	5.91	6.08
11	DKI Jakarta	8.03	6.99	6.53
12	West Java	6.52	5.34	5.57
13	Central Java	6.18	4.83	5.46
14	DI Yogyakarta	7.86	5.67	7.49
15	East Java	6	4.86	5.73
16	Banten	6.38	5.43	5.85
17	Bali	6.94	5.52	6.26
18	West Nusa Tenggara	5.28	3.88	5.84
19	East Nusa Tenggara	4.89	2.67	5.65
20	West Kalimantan	5.47	3.71	5.31
21	Central Kalimantan	5.64	4.55	5.65
22	South Kalimantan	5.77	4.91	5.51
23	East Kalimantan	6.87	5.52	6.53
24	North Kalimantan	6.06	5.63	6.1
25	North Sulawesi	5.69	4.58	6.2
26	Central Sulawesi	5.38	3.45	6.22
27	South Sulawesi	5.68	4.28	6.17
28	Southeast Sulawesi	5.64	4.04	6.43
29	Gorontalo	5.45	4.07	5.78
30	West Sulawesi	5.08	3.02	5.61
31	Maluku	5.25	3.23	6.89
32	North Maluku	4.79	2.79	5.51
33	West Papua	5.6	4.17	6.41
34	Papua	3.82	2.1	4.79

Based on table 1 above, it can be seen that there are three clusters that divide 34 provinces in Indonesia. Suharni (2020) processed secondary data from the 2019 BPS survey based on the three sub-index attributes with the *RapidMiner* 9.8 series software. Suharni (2020) uses the *K-means* algorithm so that a division is obtained into three clusters, namely high, medium, and low. The division of the cluster is as follows:

1. Cluster\_0 contains 8 provinces, namely Riau Island, DKI Jakarta, West Java, DI Yogyakarta, Banten, Bali, East Kalimantan and North Kalimantan.
2. Cluster\_1 contains 4 provinces namely East Nusa Tenggara, West Sulawesi, North Maluku, and Papua
3. Cluster\_2 contains 22 provinces namely Aceh, North Sumatra, West Sumatra, Riau, Jambi, south Sumatra, Bengkulu, Lampung, Bangka Belitung Island, Central Java, East Java, Central Kalimantan, South Kalimantan, West Kalimantan, North Sulawesi, South Sulawesi, Southeast Sulawesi, Gorontalo, Central Sulawesi, West Nusa Tenggara, West Papua, and Maluku

**Table 2:** Output Centroid Table

Attribute	Cluster_0	Cluster_1	Cluster_3
Access and infrastructure	6.961	4.645	5.626
Usage	5.751	2.645	4.172
Skill	6.301	5.390	5.975

Based on the Table 2, it can be known that:

1. Cluster\_0 is a high IP-ICT cluster.
2. Cluster\_1 is a low IP-ICT cluster.
3. Cluster\_2 is a medium IP-ICT cluster.

### 3. RESEARCH METHODS

#### 3.1 Place and Time of Search

All stages in this research were conducted online and offline in both group discussions and consultations. The sampling process was conducted online using an online questionnaire, Google Form. The length of time needed to carry out this research is one month with a timeline that is the first week used as planning, the next two weeks as data collection and data processing, and the last week as completion and revision of the paper.

#### 3.2 Data Source

The data source to be studied is primary data collected by online survey method or questionnaire. The conditions set to become respondents in this study are people who live in accordance with Cluster I, Cluster II, and Cluster III of the ICT Development Index area who use the Online Food Delivery application. The sample selection technique used was purposive random sampling because the researcher set criteria considerations on the sample of this study as previously mentioned, namely the domicile of the respondent in accordance with the division of the ICT Development Index area cluster and the status of students (junior high school, senior high school, and college students) and the general public (workers / not).

#### 3.3 Research Population and Sample

The data source to be studied is primary data collected by online survey method or questionnaire. The conditions set to become respondents in this study are people who live in accordance with Cluster I, Cluster II, and Cluster III of the ICT Development Index area who use the Online Food Delivery application. The sample selection technique used was purposive random sampling because the researcher set criteria considerations on the sample of this study as previously mentioned, namely the domicile of the respondent in accordance with the division of the ICT Development Index area cluster and the status of students (junior high school, senior high school, and college students) and the general public (workers / not).

#### 3.4 Data Collection Methods

This research uses Google Form services as a data collection technique. The first part of the respondent is asked to fill in identities such as name, status, and domicile according to the ICT Development Index regional cluster. The second section contains the level of frequency of respondents using the Online Food Delivery application, what Online Food Delivery applications are used, and the level of respondent satisfaction while using the Online Food Delivery application. The last section is a closing that contains conclusions and suggestions

#### 3.5 Data Analysis Technique

The data obtained were analyzed using the Freedom Test method. This test is used to test the relationship between two categorical variables (qualitative data). It can also be said to check the freedom or independence of two categorical variables. According to Supranto (1989), the grouping of observations from a population has no dependence on other population categories. In this test, a contingency table with many rows  $b$  and many columns  $k$  is used. This analysis method begins by conducting statistical analysis of categorical data to determine the characteristics of perceptions regarding the level of satisfaction using the Online Food Delivery application which includes status variables and ICT Development Index domicile clusters.

#### 3.6 Analysis Steps

One of the stages in the research process is the data analysis stage. According to Qomari (2009), the data analysis stage is an important stage, where data collected using various data collection techniques (e.g. observation, interviews, questionnaires, or other data collection techniques), are processed, and presented to help researchers answer the problems they are researching.

The steps used in analyzing data are collecting data, reducing data, displaying data, and concluding data. Data



collection is the first step in a study. This research collects data using an online questionnaire, namely Google Form. Data reduction is a step to summarize, choose the main things, focus on the important things, look for the theme of the pattern. Thus, the data that has been reduced will provide a clearer picture, and make it easier for researchers to collect data. Data presentation is the next step in analyzing data so that it can be understood and analyzed in accordance with the desired objectives. The final step is inference. According to Sugiyono (2017) the initial conclusions put forward are temporary so that they will change if no stronger evidence is found that supports the next data collection stage. The conclusion is the answer to the problem formulation stated in the previous chapter.

### 3.7 Contingency Table

Satisfaction Level	Students (Junior high school, senior high school, college)			General Public (Worker/not)		
	Cluster 1	Cluster 2	Cluster 3	Cluster 1	Cluster 2	Cluster 3
Not Satisfied						
Satisfied						
Very Satisfied						

**Table.3.** Contingency table

Based on Table 3 above, it can be seen that there are two X variables, namely students and the general public with three sub-variables each, namely cluster 1, cluster 2, and cluster 3. Besides that there are 3 variable levels of satisfaction or variable Y, namely dissatisfaction, satisfied, and very satisfied

## 4. RESULTS AND DISCUSSION

### 4.1 Components of the Research Questionnaire

This research questionnaire has been distributed and contains 10 main questions that are indicators of public satisfaction with the use of Online Food Delivery (OFD), that is:

1. Ordering food online can save time
2. Order cost including shipping cost is appropriate
3. Ordering food online saves energy
4. Satisfied with the driver's service during the Online Food Delivery (OFD) application
5. Satisfied with the variety of food available in the application is very diverse
6. Food applications will always be needed in certain circumstances
7. While using the food ordering application never any problems
8. Satisfied with the payment system on the booking application which is complete and practical

9. Help service in the food ordering application is useful and helpful
10. There are many promos provided by food ordering applications

Each component of the questionnaire consists of three answer choices, namely disagree (1), agree (2) and strongly agree (3). Each of these answers will be converted into three levels of satisfaction, namely dissatisfied, satisfied and very satisfied based on the score of the answers from the respondents.

### 4.2 Categorization Results

In analyzing the level of public satisfaction in using Online Food Delivery (OFD), it is necessary to know in advance the interval score of public satisfaction with the use of the OFD application. There are three intervals of community satisfaction used in this study, namely dissatisfied, satisfied, and very satisfied.

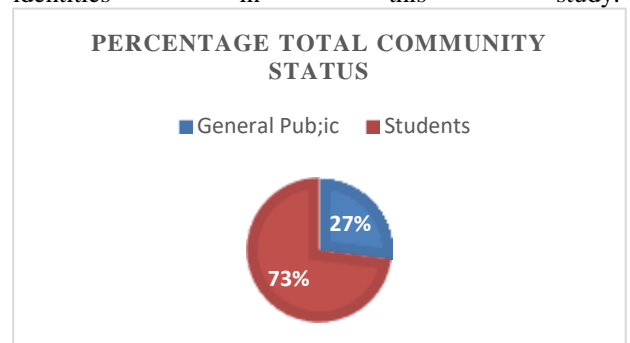
**Table 4:** Interval Score of Community Satisfaction Level

Score Interval	Category
17-21	Not Satisfied
22-26	Satisfied
27-30	Very Satisfied

Based on Table 4, it can be seen that a score of 17-21 is categorized as not satisfied, 22-26 is categorized satisfied, and 27-30 is categorized very satisfied.

### 4.3 Respondent Identity

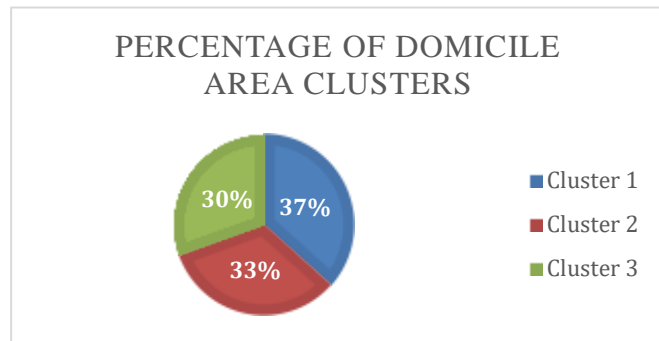
Respondents in this study are people who use the Online Food Delivery (OFD) application with student status and people who work and don't work. The respondents were categorized into three clusters based on the Indonesian ICT Development Index region. The following is a graph of the distribution of respondents' identities in this study.



**Fig.1.** Percentage of Respondents Based on Community Status

Based on Fig 1 above, it can be seen that the percentage of people, both workers and non-workers

who filled out the questionnaire in this study amounted to 27% of the total number of respondents. Meanwhile, the percentage of students from junior high school, high school and college students who filled out the questionnaire in this study amounted to 73% of the total respondents. Thus, it can be concluded that the respondents in this study predominantly came from students.



**Fig.2.** Percentage of Respondents by Domicile Area

Based on Fig 2 above, it can be seen that the percentage of respondents from cluster 1 who filled out the questionnaire in this study was 37% of the total respondents. Meanwhile, the percentage of respondents from cluster 2 who filled out the questionnaire in this study amounted to 33% of the total respondents. Meanwhile, the percentage of respondents from cluster 3 who filled out the questionnaire in this study was 30%. So, it can be concluded that the respondents in this study predominantly came from the domicile area of cluster 1, namely Riau Islands, DKI Jakarta, West Java, DI Yogyakarta, Banten, Bali, East Kalimantan and North Kalimantan.

#### 4.4 Validity Test

After conducting the validity test using SPSS software, the next step is to determine the test hypothesis. The hypothesis used in the validity test is as follows.  
 $H_0$  : The measuring instrument (questions in the questionnaire) used is not valid or invalid  
 $H_1$  : The measuring instrument (questions in the questionnaire) used is valid or reliable  
Rejection area  $H_0$  if the total correlation coefficient of each item  $> r_{table} = 0.5494$  or  $p - value < \alpha = 0.05$

**Table 5:** Validity Test Analysis Results

No	Description	Correlation Coefficient	P-Value	Decision	Conclusion
1.	Q1	0.688**	0.000	Reject $H_0$	Valid
2.	Q2	0.587**	0.000	Reject $H_0$	Valid
3.	Q3	0.604**	0.000	Reject $H_0$	Valid
4.	Q4	0.655**	0.000	Reject $H_0$	Valid
5.	Q5	0.609**	0.000	Reject $H_0$	Valid
6.	Q6	0.583**	0.000	Reject $H_0$	Valid
7.	Q7	0.666**	0.000	Reject $H_0$	Valid
8.	Q8	0.580**	0.000	Reject $H_0$	Valid
9.	Q9	0.723**	0.000	Reject $H_0$	Valid
10.	Q10	0.631**	0.000	Reject $H_0$	Valid

Based on the Table 5 above, it can be concluded that the decision obtained is  $H_0$  rejected because each question is significant to the total score which is worth  $0.000 < 0.05$  and the correlation coefficient value  $> 0.5494$  so that the measuring instrument (questions in the questionnaire) used is valid or valid. Besides that, it can also be seen that the correlation value of each question has a sign (\*\*) which means that the question is significant at a significance level of 0,01.

#### 4.5 Reliability Test

The results of the analysis of the reliability test are expressed by the reliability coefficient value whose numbers are in the range -1 to 1. The higher the reliability coefficient approaches 1, the higher the reliability. Conversely, the reliability coefficient gets lower when it approaches -1. The following are the reliability coefficient categories.

**Table 6:** Reliability Coefficient Categories

Reliability Coefficient Value	Category
$0.8 < r_{11} \leq 1.0$	Very high reliability
$0.6 < r_{11} \leq 0.8$	High reliability
$0.4 < r_{11} \leq 0.6$	Medium reliability
$0.2 < r_{11} \leq 0.4$	Low reliability
$-1 < r_{11} \leq 0.2$	Very low reliability

Based on Table 6, it can be seen that a Reliability Coefficient Value of  $0.8 < r_{11} < 1.0$  is categorized as very high reliability,  $0.6 < r_{11} \leq 0.8$  is categorized High

reliability,  $0.4 < r_{11} \leq 0.6$  is categorized Medium reliability,  $0.2 < r_{11} \leq 0.4$  is categorized Low reliability, and  $-1 < r_{11} \leq 0.2$  categorized very low reliability.

**Table 7:** Reliability Test Analysis Results

Dimension	Cronbach's Alpha	Conclusion
Community Satisfaction Level	0.817	Very high reliability

Based on the Table 7 of reliability test analysis results above, it can be concluded that *Cronbach's Alpha* is 0.817 which is in the range of  $0.8 < r_{11} \leq 1.0$  so that it can be concluded that the measuring instrument (questions in the questionnaire) used has high reliability.

#### 4.6 Chi-square Test of Independence

Satisfaction Level	Students (Junior high school, senior high school, college)			General Public (Worker/not)		
	Cluster 1	Cluster 2	Cluster 3	Cluster 1	Cluster 2	Cluster 3
Not Satisfied	7	2	4	13	8	13
Satisfied	16	17	18	6	5	6
Very Satisfied	20	24	11	3	4	6

**Table 7.** Contingency Table of Community Satisfaction Level Part 1

Based on Table 7 above, testing the contingency table for three variables, namely row variable (B) with three categories (dissatisfied, satisfied, and very satisfied), column variable (K) with two categories (students and the general public), and layer variable (L) with three categories (cluster 1, cluster 2, and cluster 3).

##### Hypothesis:

$H_0$  : The three variables are independent of each other (independent)

$H_1$  : There are variables that are not independent of each other (dependent)

##### Critical areas:

$H_0$  is reject if  $X^2 > X^2_{\alpha;v}$

##### Test Statistics:

$$X^2 = \sum_{p=1}^b \sum_{q=1}^k \sum_{r=1}^l \frac{(n_{pqr} - E_{pqr})^2}{E_{pqr}}, \text{ with } E_{pqr} = \frac{n_{p..} \cdot n_{.q} \cdot n_{..r}}{n_{...}^2}$$

##### Description:

$n_{pqr}$  : Frequency of observation in  $p$ -th row,  $q$ th column and  $r$ -th layer

$E_{pqr}$  : Expected or expected frequency at  $p$ -th row,  $q$ th column and  $r$ -th layer

Level Satisfaction	Students (Junior high school, high school, college)				General Public (Worker/not)				Total
	Cluster 1	Cluster 2	Cluster 3	Total	Cluster 1	Cluster 2	Cluster 3	Total	
Not Satisfied	7	2	4	13	13	8	13	34	47
Satisfied	16	17	18	51	6	5	6	17	68
Very Satisfied	20	24	11	55	3	4	6	13	68
Total	43				22				
		43				17			
			33				25		
				119				64	183

**Table 8 :** Contingency Table of Community Satisfaction Level Part 2

Based on the Table 8 above, the values of the observed frequency and expected frequency in the  $p$ th row,  $q$ th column and  $r$ th layer can be obtained as follows as well as the test statistics for the case study above.

$$n_{1..} = 47, n_{2..} = 68, n_{3..} = 68$$

$$n_{.1} = 119, n_{.2} = 64$$

$$n_{..1} = 65, n_{..2} = 60, n_{..3} = 58$$

$$E_{111} = 10.8556541, E_{112} = 10.02060378, E_{113} = 9.686583654$$

$$E_{121} = 5.838334976, E_{122} = 5.389232285, E_{123} = 5.209591209$$

$$E_{211} = 15.70605273, E_{212} = 14.49789483, E_{213} = 14.01463167$$

$$E_{221} = 8.446952731, E_{222} = 7.797187136, E_{223} = 7.537280898$$

$$E_{311} = 15.70605273, E_{312} = 14.49789483, E_{313} = 14.01463167$$

$$E_{321} = 8.446952731, E_{322} = 7.797187136, E_{323} = 7.537280898$$

$$X^2 = 1.369430932 + 6.419781324 + 3.338352799 + 8.784944018 + 1.2647642 + 11.64975652 + 0.005501382 + 0.431823403 + 1.133327018 + 0.708844699 + 1.003471603 + 0.313539139 + 1.173941247 + 6.227800911 + 0.648465427 + 3.512425723 + 1.849209195 + 0.313539139$$

$$X^2 = 50.14891867.$$

With the value of  $\alpha = 0.05$ ,  $v = bkl - b - k - l + 2 = 12$  and  $X^2_{\alpha;v} = 21.026$  then the decision can be obtained to reject  $H_0$  because  $X^2 > X^2_{\alpha;v}$  so that it can be concluded that there are mutually dependent variables.

#### 4.7 Test of Effect Variable

##### 4.7.1 Test the Influence of Community Status Variables

**Table 9 :** Contingency Table of Levels of Satisfaction with Community Status

Satisfaction Level	Status	
	Student	General Public
Not satisfied	13	34
Satisfied	51	17
Very satisfied	55	13

Based on Table 9, there are 13 students & 34 general public who rated them as not satisfied, 51 students & 17 general public who rated them as satisfied, and 55 students & 13 general public who rated them as very satisfied.

**Hypothesis:**

$H_0$  : Status with the classification of students and the general public has no effect on the level of satisfaction.

$H_1$  : Status with the classification of students and the general public has an effect on the level of satisfaction.

**Critical Area:**

Rejected  $H_0$  if value of *Asymptotic Significance (2-sided)*  $< \alpha$  (0,05).

Based on the table of the results of the analysis of the variable effect test above, it can be seen that Asymptotic Significance (2-sided) has value 0,000 then the decision obtained is to reject  $H_0$  because the value of Asymptotic Significance (2-sided)  $0,000 < 0,05$  so it can be concluded that status with the classification of students and the general public affects the level of satisfaction.

#### 4.7.2 Test of the Influence of ICT Development Index Region Cluster Variables

**Table 10 :** Contingency Table of Satisfaction Level with ICT Development Index Region Clusters

Satisfaction Level	Cluster		
	1	2	3
Not satisfied	20	10	17
Satisfied	22	22	24
Very satisfied	23	28	17

**Hypothesis:**

$H_0$  : Clusters with cluster 1, cluster 2, and cluster 3 classifications have no effect on satisfaction levels.

$H_1$  : Clusters with cluster 1, cluster 2, and cluster 3 classifications affect the level of satisfaction

**Critical Area:**

Rejected  $H_0$  if value of *Asymptotic Significance (2-sided)*  $< \alpha$  (0,05).

Based on the Table 10 of variable effect test analysis results above, it can be seen that *Asymptotic Significance (2-sided)* with value 0,214 then the decision obtained is to fail to reject  $H_0$  or accept  $H_0$  because  $0,214 > 0,05$  so it can be concluded that clusters with cluster 1, cluster 2, and cluster 3 classifications have no effect on satisfaction levels.

## 5. Conclusion

Based on the results of the research that has been carried out, it can be concluded as follows.

1. Based on the validity and reliability tests, the questions in the questionnaire analyzing the level of public satisfaction with the use of online food delivery (OFD) applications based on community status and ICT Development Index regional clusters are valid / correct and reliable / trustworthy questions.
2. Based on descriptive statistical analysis, community analysis data based on community status and ICT Development Index regional clusters are satisfied with the Online Food Delivery (OFD) application that has been used so far.
3. Based on the Chi-square freedom test with a significance level of 5%, it shows that the data analysis of the level of public satisfaction with the use of online food delivery (OFD) applications based on community status and ICT Development Index area clusters is that at least one of the three variables, namely the satisfaction level variable (dissatisfied, satisfied, and very satisfied), the community status variable (students and the general public) and the ICT Development Index area cluster variable (cluster 1, cluster 2, and cluster 3) are not independent of each other.
4. Based on the variable influence test with a significance level of 5%, it can be seen that the status with the classification of students and the general public has an effect on the level of satisfaction with the use of OFD while the cluster with the classification of cluster 1, cluster 2 and cluster 3 has no effect on the level of satisfaction with the use of OFD.

## 5.1 Suggestions

Suggestions that can be given to the Online Food Delivery (OFD) application company regarding public satisfaction with the use of the OFD application are as follows.



1. OFD companies must always increase public satisfaction by improving aspects that are still considered less than optimal.
2. OFD companies should strive to maintain the service achievements that have been made.
3. OFD companies should always ask for feedback from the community so that they can evaluate and respond to criticisms given to the use of OFD applications.

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