INTEGRATING KANO MODEL MODEL TO e-TAILQ SERVICE EXCELLENCE DEVELOPMENT: A CASE STUDY OF SHOPEE MARKETPLACE

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During the Covid-19 pandemic, online retailers have begun to see shifting in shopping habits. Research showed approximately 20 million visitors increase in Indonesian online retail platforms in the earlier phase of the pandemic in Indonesia. Shopee is one of the favorite marketplaces. As of October 2021, Shopee has a total number of visits of 129.74 million visits. Despite being a favorite place for online shopping, Shopee still has negative reviews about the quality of the services provided. This paper proposes an approach to integrate Kano's categories to e-TailO, a specific method for measuring service quality in online retailer. This approach aims to help Shopee evaluates the service quality perceived by its customers and to guide improvements effort in strengthening their weak attributes. Kano's model categorizes the service attributes based on how well the attribute satisfy the customers. It, therefore, can help e-TailO to prioritize the improvement of Shoppes' weaknesses based on category of needs that can lead to highest customer satisfaction and accelerate the development of innovative services by embedding the attractive attribute to the future services. Data was collected from 100 shoppers to identify the perception of service quality. It showed that website design and security were two dimensions that rated highest for actual service perceived. Overall, the average of perceived quality of Shopee was 5.23 from the scale 1 to 7, which was considered high. The perceived quality of all attributes was rated above 5.0 except for "you get what you order" (4.77) and "the product represented accurately by the website" (4.97). "Variety of product sold" was rated the highest among other attributes (5.87). Kano's questionnaires were distributed to 100 shoppers to categorize the service quality attributes based on their relationship with the customer needs, i.e., must-be, one dimensional and attractive. The results showed that 12 out of 14 attributes (86%) categorized as one dimensional. Furthermore, two attributes, i.e, "website provides in-dept information" and "level personalization of this website" categorized as attractive. Improvements were focused on attributes that rated low perceived quality and categorized as one dimensional. Finally, attributes that classified as attractive could be utilized as an input for innovativeness.

Keywords: e-Tailq, kano model, service quality

1. Introduction

The development of the marketplace in Indonesia can be judged to be growing very rapidly, especially during this COVID-19 pandemic. These developments cannot be separated from changes in consumer behavior in shopping. Since the Indonesian government implemented the PSBB to PPKM policies, many activities cannot be carried out as freely as before the pandemic, one of which is shopping activities. This encourages customers to shop online through the existing marketplace. The ease of transactions and the ease of choosing products without having to make direct contact with the seller makes most customers choose to shop online.

The feeling of satisfaction that can be felt by customers in shopping is very important for companies so that these customers are loyal. Judging from the statistical data above, Shopee Indonesia is one of the top three marketplaces and has a high number of visits. However, Shopee Indonesia has not been able to replace Tokopedia, which ranks first as a marketplace that is widely used by Indonesian people. Therefore, the researcher wants to know whether the services from Shopee Indonesia have fulfilled the wants and needs of its customers by using the eTailQ method as a tool to measure the services of online retailers. eTailQ itself is a service measurement model that

 is used to measure the quality of services at online retail through measuring consumer perceptions of services from online retail (Wolfinbarger & Gilly, 2003).

Shopee itself is included in online retail because Shopee offers products as well as services. The attributes in eTailQ are appropriate to be used in measuring services from Shopee Indonesia. The results from eTailQ are found which have good and bad attribute performance. However, this is not enough to conclude which attributes are the priority for improvement. Therefore, the Kano Model is used to see whether these attributes fall into the must-be, one-dimensional, attractive category (Berger dkk., 1993). From the results of the categorization, it can be seen which attributes need to be improved. Improved attributes are attributes that are one-dimensional and attractive.

Previous research will be used as a reference and source of information for researchers in conducting research. The existence of previous studies also prevents similarities between one study and another and shows the authenticity or originality of this study. The results of research from Hartono, et al. (2021) with the research title "Human-side Emotional Service Design for Experience-Centric Amusement Park" is a study that applies the SERVQUAL method and Kano Model with Kansei Engineering to get suggestions for improvement. The purpose of this study is to propose an applicative framework of the customer experience center through the human-side emotional design of amusement parks.

Research Tsavandho, et al. (2019) with the research title "Integration of SERVQUAL, Kano, and Kansei Engineering to Improve Service Quality at Subco Spazio Working Space Surabaya" is a study that applies the SERVQUAL method to assess service quality, Kano to categorize service attributes and Kansei Engineering to propose improvements. The purpose of this study is to measure service quality and provide improvement solutions to improve service quality by using the Kansei Engineering, SERVQUAL, and Kano Model integration methods.

The research by Tan and Pawitra (2003) with the research title "Integrating SERVQUAL and Kano's Model into QFD for Service Excellence Development" is a research used for the development of quality services. The purpose of the research is to measure service quality and provide improvement solutions to help organizations evaluate customer satisfaction, guide improvement efforts in strengthening their weak attributes, and accelerate the development of innovative services through identifying attractive attributes and incorporating them into future services.

Based on the three previous studies described above, it can be concluded that most of these studies have similarities in the method used, namely using the SERVQUAL method and the Kano Model. Another similarity is that these studies have a research objective, namely improving the quality of services. These studies have differences, namely in the location, time, and object of research. The selection of the Kano Model method has the aim of being able to categorize service attributes and can improve service attribute weaknesses that can affect customer satisfaction. The use of the Kano Model is intended to categorize service attributes into the must-be, one-dimensional, and attractive categories. From the use of this method, it can also be seen that the attributes that have a significant effect on customer satisfaction are still not maximized.

2. Methodology

This research was conducted on Shopee Indonesia's customers and platforms so that measurements can be made of the services that have been provided by Shopee Indonesia to its customers. By measuring service quality using the eTailQ method, we can see the service dimension rankings from Shopee Indonesia, then categorize the attributes into the Kano Model to see which attributes are must-be, one-dimensional, and attractive.

2.1 Research Location

This research was conducted through the Google Form platform, a platform that can be used to collect information from many respondents for research needs.

2.2 Research Stages

This research will be carried out in several stages. The stages that must be carried out are the

preparation stage, the data collection stage, the data processing stage, the analysis and discussion stage, and the closing stage. An explanation of these stages is explained as follows:

1. Preparation Stage

At this stage, initial observations are made about services at Shopee Indonesia. Then a literature study was conducted to assist in identifying the problem. The literature study used is literature such as journals, books, and articles that discuss customer satisfaction, eTailQ, and Kano Model. After the problem is identified, the formulation of the problem is carried out. Then the research objectives were determined to answer the formulated problems. After that, a more in-depth literature study was carried out on the theory used to help researchers analyze and answer the problems that occurred.

2. Data Collection Stage

The types of data collected are primary data and secondary data. At the primary data collection stage, the data collection method was purposive sampling, in which respondents must be in the age range of 20-29 years and at least shopped at Shopee Indonesia at least 3 times in the last 3 months. The selection of this type of sampling technique aims to find out about the phenomenon under study from the various characteristics of the respondents. The number of respondents or samples from this study used the Lemeshow formula. The reason for using the Lemeshow formula in determining the number of respondents is because there are too many respondents and the exact number is unknown. The following is the Lemeshow formula (Riyanto and Hatmawan, 2020):

 $n = Z\alpha^2$. P. QL^2

Description:

N = number of samples

 $Z\alpha$ = standar value of distribution α = 5% =1,96

P = population proportion estimate

O = interval and deviation

L = level of accuracy

Based on the Lemeshow formula above, the number of respondents in this study is: $a_1 = (1,96)^2$, $a_2 = 0.05$, $a_3 = 0.05$

Based on the results of the calculation of the Lemeshow formula above, the number of samples taken in this study was 96 respondents who were rounded up to 100 respondents.

Then after obtaining the number and criteria of respondents for this study, data was collected using a questionnaire technique. Respondents or samples in this study are attempted to be the same so that the results obtained can be valid. The questionnaire that will be distributed to the respondents consists of two kinds of questionnaires. The first part of the questionnaire contains an assessment of Shopee's service quality when viewed from the dimensions of eTailQ. The choice of answers to these attributes is adjusted to the Likert scale (numbers 1-7). Then the second part of the questionnaire contains dysfunctional and functional questions that are adjusted to the dimensions in eTailQ. Then for secondary data collection, researchers will collect information about the values that apply in the company, namely Shopee. Not only company values, but company profile information is also collected at this stage.

3. Data Processing Stage

The first step in data processing is to calculate the value of customer satisfaction on service attributes. The value of customer satisfaction can be declared low or customers are not satisfied with the service attributes if the value of customer satisfaction is negative and needs to be improved. If the value of customer satisfaction is positive, it can be interpreted that customers are satisfied with the services provided and these attributes must be maintained or improved.

The next step is processing the Kano Model data which is the second part of the questionnaire. The attribute variables for Kano Model are the same as for eTailQ, only that

they are made into dysfunctional and functional questions. After the answers from the respondents or samples have been sorted, each service attribute is categorized using the Kano Model analysis method with a better and worse analysis approach. After being analyzed with a better and worse analysis approach, it is analyzed whether these attributes are classified as must-be, one-dimensional, attractive, or indifferent.

In the one-dimensional category, the attributes that fall into this category if fulfilled will increase customer satisfaction. However, if these service attributes are not met, the customer will feel disappointed, and this can reduce customer satisfaction (Berger, et al., 1993). Attributes that fall into the one-dimensional category need special attention because if the customer is not satisfied with this service, then improvements must be made. Not only the one-dimensional category, but the attributes that fall into the attractive category also need to be considered because they can significantly increase customer satisfaction.

Next is the integration of the eTailQ questionnaire and the Kano Model questionnaire. Integration at this stage is carried out to determine service attributes that have negative satisfaction values and high importance with one-dimensional and attractive categories which are the main focus because these two categories are categories that have a major influence in increasing customer satisfaction.

4. Analysis and Discussion Stage

a. Service Quality Analysis

At this stage, a comprehensive and per-dimensional analysis of service quality is carried out. The analysis was carried out by calculating the average results from the questionnaire that the respondents had filled out regarding the service quality from Shopee as a whole, namely the answers to all the questions in the questionnaire part one, then calculating the average results from the questionnaire per dimension. After obtaining the average of the results as a whole and per dimension, it will be possible to see the service quality figures from Shopee as a whole and which dimension has the lowest value.

b. Kano Model Category Analysis

The next analysis step is to analyze the service attribute categories that have been plotted on the Kano Model diagram. Later, service attributes that fall into the one-dimensional and attractive category and have negative values will be followed up for improvement. These attributes will be a reference for improvement regarding what needs to be improved on Shopee Indonesia's services.

c. Improvement Proposal

In this section, an improvement analysis will be carried out to explain the proposals that will be given to Shopee.

5. Closing Stage

At this stage, conclusions are drawn from the data analysis that has been carried out based on the research objectives that have been made. In addition to the conclusion, in the closing stage, suggestions for the place or object of research are expected to be input and help the place or object.

3. Analysis

Characteristics of respondents based on gender are divided into two groups: female and male respondents. The following are the results of data analysis regarding the characteristics of respondents based on gender obtained from the percentage of respondents' questionnaires regarding gender.

 Table 3.1
 Respondent gender

No.	Gender	Total			
1.	Female	77			
2.	Male 23				
Total	100				

The following is a *pie chart* of the gender of the respondents in this study.

RESPONDENT GENDER GRAPHIC

23%

Perempuan

Laki-laki

Picture 4.1 Respondent gender pie chart

From the tables and charts above, it can be concluded that the respondents in this study were mostly female respondents with a percentage of 77% (77 people) and men as many as 23% (23 people) of the total 100 respondents.

Respondents regarding age. In this study, respondents who can fill out the questionnaire are 20-29 years. The reason why respondents are only limited from the age of 20-29 years is that the range of most Shopee users is in the age range of 20-29 years, with statistical data that has been included in Chapter I. The following is a table of respondents' characteristics based on the respondents' age obtained from the questionnaire results.

 No.
 Age Range
 Total

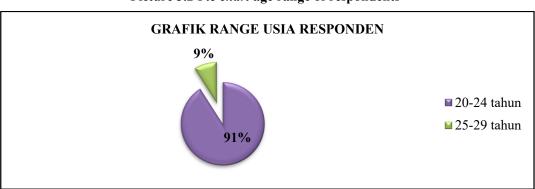
 1.
 20 - 24
 91

 2.
 25 - 29
 9

 Total
 100

Tabel 3.2 Respondent age range

The following is a *pie chart* of *range* of the respondents in this study.



Picture 3.2 *Pie chart* age range of respondents

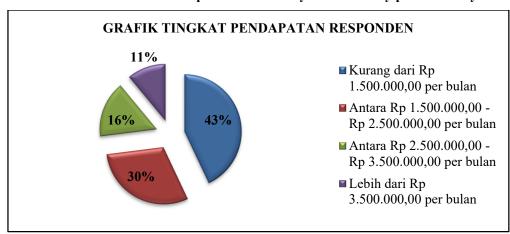
From the table and chart above, it can be concluded that the respondents in this study were mostly filled by respondents who had an age range of 20-24 years, as many as 91% (91 people) followed by respondents who were in the age range of 25-29 years as many as 9% (9 people).

The classification of income levels is based on data from the BPS in Rakasiwi and Kautsar (2021). The following are the characteristics of the respondents based on their monthly income/salary/pocket money.

No.	Income/salary/pocket per month	Total
1.	Kurang dari Rp 1.500.000,00 per month	43
2.	Antara Rp 1.500.000,00 - Rp 2.500.000,00 per	
	month	30
3.	Antara Rp 2.500.000,00 - Rp 3.500.000,00 per	
	month	16
4.	Lebih dari Rp 3.500.000,00 per month	11
	Total	100

Table 3.3 Respondent's monthly income/salary/pocket

According to BPS in Rakasiwi and Kautsar (2021), the income group of the population is divided into four groups, namely the very high-income group with an average of more than IDR 3,500,000 per month, the high-income group with an average of IDR 2,500,000 – IDR 3,500. 000 per month, the medium-income group with an average of IDR 1,500,000 – IDR 2,500,000 per month, and the low-income group with an average of less than IDR 1,500,000 per month. The following is a pie chart of the income level of the respondents in this study.



Picture 3.3 *Pie chart* of respondent's monthly income/salary/pocket money

From the tables and charts above, it can be concluded that the respondents in this study, on average, have an income level of less than Rp. 1,500,000 per month as much as 43% (43 people). As many as 30% (30 people) of respondents have incomes between Rp. 1,500,000 – Rp. 2,500,000 per month, than respondents who have incomes between Rp. 2,500,000 to Rp. 3,500,000 per month are 16% (16 people). Finally, respondents with an income of more than IDR 3,500,000 per month are 11% (11 people).

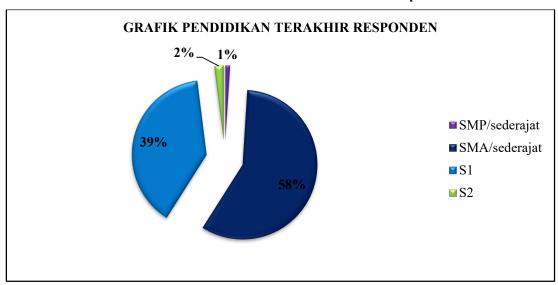
The following are the characteristics of the respondents based on their last education of the respondents.

Table 3.4 Respondent's last education

No.	Occupation	Total
1	Mahasiswa	69
2	Wiraswasta	1
3	Wirausaha	1
4	Karyawan swasta	8
5	Jobseeker	1
6	Freelancer	3
7	Assistant Product Specialist	1
8	Admin Office	1
9	Rahasia	1
10	Pegawai magang di rumah sakit	1
11	IRT (Ibu Rumah Tangga)	1
12	Pekerja kantor	1
13	Karyawan	3
14	Pegawai	1
15	Legal Consultant	1
16	Hakim	1
17	Belum bekerja	3
17	- (Tidak ada keterangan)	2
	Total	100

The following is a *pie chart* of the last education of the respondents in this study.

Picture 3.4 *Pie chart* last education of respondents



Lewis and Booms (1983), quoted by Tjiptono (2011), said that service quality is a measure of how well the level of service provided is able to match consumer expectations. Based on this definition, service quality is determined by the company's ability to meet consumer needs and desires in accordance with consumer expectations. In this study, an assessment of the service

quality of Shopee was assessed. The number of respondents collected is 100 people aged 20-24 years and 25-29 years who have shopped at Shopee at least three times. The following are the results of a comprehensive and per-dimensional analysis of service quality.

Based on observations that have been made by distributing questionnaires containing 14 (fourteen) questions regarding the quality of Shopee's services, it was found that from the questions asked, the average respondents' answers were 4.886 from a Likert 1 to 7.

The average respondent's answer for the reliability dimension is 4,953 from a Likert 1 to 7. The average respondent's answer for the website is 5,024 from a Likert 1 to 7. The average respondent's answer to the security/privacy dimension is as much as 4,790 from a Likert 1 to 7. The average respondents' answers for the customer service dimension were 4,687 from a Likert 1 to 7. Among the four dimensions above, the dimension with the highest average value is the website, while the lowest average score is the customer service dimension. From these calculations, the dimension that needs to be improved is the customer service dimension, in this case, the Shopee customer service dimension.

The Evaluation Table is the first stage for questions that have been tested for validity and reliability to be processed in the Kano Model, and the answers are processed according to the provisions of the evaluation table. The following is a Kano Model evaluation table from the answers that have been collected.

Co	Consumer's need Disfunctional							
		Suka	Mengharap	Netral	Toleransi	Tidak		
						Suka		
ր	Suka	Q	A	A	A	O		
3uc	Mengharap	R	I	I	I	M		
cti	Netral	R	I	I	I	M		
Functional	Toleransi	R	I	I	I	M		
<u> </u>	Tidak Suka	R	R	R	R	Q		

Table 4.5 Evaluation table

Keterangan:

Q = Questionable; I = Indifferent; O = One Dimensional; M = Must Be; R = Reverse; A = Attractive.

Tabel 4.6 Tabulasi survei

		D-44-	Rata rata Kategori Preferensi						A +	I+		
Dimensi	Atribut	Rata-rata Presepsi	M	0	A	I	R	Q	O + M	Q+ R	Total	Kategori
Reliabilitas	Anda mendapatkan apa yang Anda pesan melalui situs ini.	5.433	11	39	28	20	3	4	78	27	105	О
	Produk diterima sesuai dengan waktu yang dijanjikan.	4.767	7	34	46	12	1	5	87	18	105	A
	Produk yang diterima sesuai dengan gambar yang ada di website.	4.967	13	54	22	7	2	7	89	16	105	О
	Website ini menyediakan informasi yang lengkap.	5.200	14	32	36	16	0	7	82	23	105	A
	Website ini tidak membuang- buang waktu saya.	4.967	15	36	26	22	2	4	77	28	105	O
	Transaksi di website ini cepat dan mudah diselesaikan.	5.600	10	54	26	6	3	6	90	15	105	0
Desain Website	Tingkat personalisasi di situs ini benar-benar sesuai harapan, tidak terlalu besar dan tidak terlampau kecil (Contoh personalisasi: menyebut nama akun saat memberi notifikasi mengenai promo dan lain sebagainya)	5.133	16	20	23	41	0	5	59	46	105	A

Tabel 4.6 Tabulasi survei

Dimensi	Atribut	Rata-rata Presepsi	Kategori Preferensi						A + O + M	I + Q + R	Total	Kategori
	Website ini menyediakan pilihan barang/produk yang bervariasi.	5.867	M 7	22	A 37	31	3	Q 5	66	39	105	A
	Saya merasa data pribadi saya dilindungi di website ini.	5.133	25	58	9	7	0	6	92	13	105	О
	Saya merasa aman dalam bertransaksi di website ini.	5.433	22	63	6	6	3	5	91	14	105	О
Keamanan	Website ini memiliki fitur keamanan yang memadai (contoh: meminta persetujuan pengguna akun saat ingin menampilkan nama username pengguna)	5.500	23	47	20	10	2	3	90	15	105	0
	Perusahaan bersedia dan siap merespon kebutuhan pelanggan.	5.200	23	46	14	16	0	6	83	22	105	O
Layanan Pelanggan	Ketika Anda mempunyai masalah, website secara tulus membantu dalam menyelesaikan masalahnya.	5.100	31	40	16	12	1	5	87	18	105	O
	Pertanyaan Anda dijawab dengan cepat.	4.900	13	34	32	20	1	5	79	26	105	О

From the results of the survey tabulation, it can be seen that the level of customer satisfaction is

- as follows.
- a. Dimensions of Reliability
- 1) You get what you order through this site One Dimensional.
- 2) Product received following the promised time. Attractive.
- 3) The product received follows the image on the One Dimensional website.
- b. Website Design Dimensions
- 1) This website provides Attractive complete information.
- 2) This website doesn't waste my time on One Dimensional.
- 3) Transactions on this website are fast and easy to complete One Dimensional.
- 4) The level of personalization on this site is as expected, not too high and small (Examples of personalization: mentioning account names when giving notifications about promos and so on). Attractive.
- 5) This website provides a wide selection of attractive goods/products.
- c. Security Dimension
- 1) I feel my data is protected on the One Dimensional website.
- 2) I feel safe transacting on this website, One Dimensional.
- 3) This website has adequate security features (example: asking for user account approval when you want to display the username) One Dimensional.
- d. Customer Service Dimensions
- 1) The company is willing and ready to respond to the needs of Dimensional customers.
- 2) The website sincerely helps solve the One Dimensional problem when you have a problem.
- 3) Your questions are answered quickly Dimensional.

Positioning an attribute is positioning an attribute into a diagram. The diagram used in positioning the attributes is a scatter. Before making a scatter, calculate the answers in the Survey Tab by multiplying the answers by 100% and then calculating the Extent of Satisfaction and Dissatisfaction.

Table 4.7 Extent of Satisfaction and Dissatisfaction

Atribut	A%	M%	Ο%	Ι%	Q%	R%	Total %	Satisfaction Index	Dissatisfaction Index
1	26.667	10.476	37.143	19.048	3.810	2.857	100	0.684	-0.510
2	43.810	6.667	32.381	11.429	4.762	0.952	100	0.808	-0.414
3	20.952	12.381	51.429	6.667	6.667	1.905	100	0.792	-0.698
4	34.286	13.333	30.476	15.238	6.667	0.000	100	0.694	-0.469
5	24.762	14.286	34.286	20.952	3.810	1.905	100	0.626	-0.515
6	24.762	9.524	51.429	5.714	5.714	2.857	100	0.833	-0.667
7	21.905	15.238	19.048	39.048	4.762	0.000	100	0.430	-0.360
8	35.238	6.667	20.952	29.524	4.762	2.857	100	0.608	-0.299
9	8.571	23.810	55.238	6.667	5.714	0.000	100	0.677	-0.838
10	5.714	20.952	60.000	5.714	4.762	2.857	100	0.711	-0.876
11	19.048	21.905	44.762	9.524	2.857	1.905	100	0.670	-0.700
12	13.333	21.905	43.810	15.238	5.714	0.000	100	0.606	-0.697
13	15.238	29.524	38.095	11.429	4.762	0.952	100	0.566	-0.717
14	30.476	12.381	32.381	19.048	4.762	0.952	100	0.667	-0.475

4. Conclusion

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