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What Are the Attributes that Marketplace Should Improve Based on the Customers Perspective?

Dirgahayu A. Lantara, Nurul Chairany, Irma Nur Afiah

Abstract – The development of technology makes internet technology users increase. It certainly affects the pattern of human life, including the pattern of buying and selling interactions via the internet (e-commerce). E-commerce, as an electronic business mechanism, uses the internet as a medium for exchanging goods or services. A company that implements e-commerce not only pays attention to its implementation of e-commerce but also to the quality of its services. Customer satisfaction is vital for service companies, so companies should be able to encourage creative motivation to create various smart innovations to provide customer satisfaction because improving service quality will be meaningful only if it is perceived well by customers. This study discusses precisely the quality of e-commerce services by using the Importance Performance Analysis (IPA) method. This study aims to identify service quality at the marketplace according to customer perceptions in Indonesia. This study uses a sampling method for data collection. The data has been collected by distributing online questionnaires to people who had shopped at the marketplace. The results have showed that: 1) according to customer perceptions in Indonesia, the quality of service at the marketplace still needs to be improved; 2) it is recommended that the marketplace improves the quality of its services, especially on the attributes considered necessary by customers. **Copyright © 2023 Praise Worthy Prize S.r.l. - All rights reserved.**

Keywords: Customer Satisfaction, E-Commerce, Importance Performance Analysis (IPA), Service Quality

Nomenclature

IPA	Important Performance Analysis
Tk_i	Conformity Level Respondent
X	Performance
X_i	Score performance assessment
Y	Importance

I. Introduction

The current development of e-commerce is significant when considering the massive digitalization occurring in society [1]-[24]. E-commerce is an electronic business mechanism that focuses on individual-based business transactions by using the internet to exchange goods or services between two institutions and consumers [3]. In addition, according to [4], a Company that implements e-commerce not only pays attention to the implementation of e-commerce but also to the quality of service from the company itself because good service quality will trigger customer satisfaction and company survival [5].

Therefore, it increases the number of loyal customers to continue using the service [6], [7]. The development of e-commerce in Indonesia has not increased significantly even in the era of the covid-19 pandemic and post-covid-19 pandemic. According to BPS-StatisticsIndonesia [8], in 2021, the e-commerce activities as of December 31st and June 30th were 25,25% and 25,92%, respectively.

Furthermore, the quality of services offered by business people is one of the important factors to get more customers [9]. Hence, it is necessary to improve the quality services to maintain and to increase the number of loyal customers. Moreover, a necessary strategy to attract customers is to promote products and services through the marketplace. Marketplace is a platform to facilitate safer and easier online transaction [10]. A company facilitates the customers to purchase all the products provided by simply accessing the Indonesian marketplace sites. The marketplace concept in Indonesia is the B2C (Business to Customer) concept [8]. Here, a marketplace can control the product quality and distribution from after-sales to customers although there are some numbers of customers who feel disappointed with the marketplace services. The problems that customers often experiences are the delay of delivery package [11], [12], the difference between the package and the picture shown in the catalog [13], and the defective condition of the package on the arrival [14], [15]. It is necessary to take appropriate steps in service delivery to measure and determine the relationship between customer perceptions and priorities for improving product/service quality. Understanding customer satisfaction requires techniques to detect and prioritize service/product improvements. One of the techniques is using the Importance Performance Analysis (IPA) method [16], [17]. The importance and the

performance of the service/product are visualized by a matrix that shows the discrepancies between customers' expectations and reality [18]. It indicates the level of customer satisfaction that able help the Company to improve their performance. IPA has been used in various sectors. IPA also has been used in e-commerce sectors.

Therefore, IPA can help company to identify critical attributes in order to improve service/product quality [17]. Customer satisfaction plays an important role for service provider companies. Therefore, companies should be able to encourage creative motivation to produce various intelligent innovations that can provide customer satisfaction because improving service quality will be meaningful only if it is considered good by customers. This study aims to identify the quality of services at Lazada according to customer perceptions in Indonesia. The contribution of this study is finding prioritized attributes based on customer perspective that marketplace need to improve their performances. The results of this study are expected to provide quality improvement recommendations for the marketplace. This study has aimed to add an essential discussion about what attributes Marketplace should focus on in order to improve customer satisfaction based on customer perspective. Marketplace service quality is assessed based on customer satisfaction. Therefore, customer driven determines the strategic direction of improving marketplace performance with customer focus goals although it is not affected by the product value [19]. The attributes have represented services and factors that company should provide to improve service quality. The selection of priority attributes using Importance Performance Analysis (IPA) which is known as a method to evaluate and to order the attributes based on how critic those attributes. This study has started the survey by exploring customer online shopping experience.

Importantly, customer needs and service priority have been identified by using IPA. Attribute identification and calculation of quadrant analysis have been also explained in this study. Finally, strategy improvements have been recommended as an answer the research question in this study.

II. Methodology

This study has used descriptive analysis with quantitative methods. The survey has been conducted to identify consumer needs and customer preferences [20].

Determination of the number of samples has been carried out by using the Slovin formula, which has obtained as many as 100 respondents. The data used in this study are primary data obtained directly from interviews and online questionnaires/Google Forms distribution to marketplace customers throughout Indonesia. After the data have been collected, they have been tested by using the product moment validity test, the Cronbach alpha reliability test, and the Kolmogorov-Smirnova normality test to prove whether the data obtained later is genuinely valid, reliable, and normal so

that it can be verified. Furthermore, the data that had passed the test have been processed by using the Importance Performance Analysis (IPA) method.

The stages of the research carried out are as follows:

1. *Attribute Identification Stage*: At this stage, the identification of variables used as benchmarks has been carried out. The indicator is known for its application and used as the basis for data processing;
2. *Data Collection Stage*: At this stage, data collection has been carried out by conducting interviews and distributing online questionnaires;
3. *Data Processing Stage*: At this stage, processing of the data that has been obtained from interviews and online questionnaires has been carried out. Data processing has used SPSS Software;
4. *Analysis of Data Processing Results*: At this stage, the results obtained from data collection and processing have been analyzed.

III. Result and Discussion

III.1. Attribute Identification in Questionnaire Statements

Attributes in research indicate the level of importance (expectations) and implementation (performance). The respondents have been asked to rank various service quality attributes based on the degree of importance of each attribute. In addition, the respondents have been also asked to rank how well the company performs in each of these attributes. These attributes are represented by questions that have been assigned to the respondents as shown in Table I.

TABLE I
ATTRIBUTES OF THE QUESTIONNAIRE

Attribute	Statements
1	Customers quickly find the desired product
2	It is easy for customers to access the marketplace anywhere
3	There is a special service for loyal customers
4	Information regarding ordering and payment is provided clearly and thoroughly (accompanied by pictures of the stages from ordering to payment)
5	The goods are delivered on time
6	The marketplace interface displays complete and clear features
7	Products from the marketplace are easy to find on search engines
8	Marketplace provides various payment options for customer convenience
9	There are links that facilitate the customers to access the platform
10	Marketplace customer service provides insurance coverage
11	Customer service marketplace is responsive to customer complaints
12	Marketplace provides the information needed
13	Marketplace is responsive to customer needs
14	Variety of shipping options is available to suit the customer needs
15	The stock is always available
16	The goods sent to customers arrive in a good condition
17	All the information listed on the marketplace is true
18	There is no change in the product price after the transaction
19	Marketplace provides online services (via WhatsApp, Facebook, Instagram, etc.)
20	Marketplace provides services by telephone

Source: Primary data collected in 2022

III.2. Calculation of Conformity Level Assessment

The method used to process the data, Importance Performance Analysis (IPA), has been carried out by calculating the total service performance score and customer interests. Two variables, X (Performance) and Y (Importance), are employed. The results of the assessment of the level of performance (X) and importance (Y) is carried out by using the formula:

$$Tk_i = \frac{X_i}{Y_i} \times 100\% \quad (1)$$

It has obtained the average percentage level of performance (X) of 326.05%, interest (Y) of 416.7% and the average correspondence with the results of 78.450 % of 20 attribute statements.

III.3. Quadrant Analysis Calculation

The results of the quadrant analysis are calculated by using the following formula [5]:

$$\bar{X} = \frac{\sum X_i}{n} \quad (2)$$

$$\bar{Y} = \frac{\sum Y_i}{n} \quad (3)$$

After using the above formula, the average performance (X) result is 0.652 and importance (Y) is 0.833 from 20 statement attributes.

III.4. Cartesian Diagram Calculations

The purpose of using a Cartesian diagram is to see in the attributes that need to be improved and the attributes that need to be maintained by the Marketplace more detail. In this case, the Cartesian diagram is divided into 4 quadrants, namely A, B, C, and D. The results from the Cartesian diagram are obtained by using the formula as follows. The results of the above formula have produced a total average of Performance (Performance) = 3.26 and total average of Importance (Importance) = 4.167. The results of the division of each attribute in each quadrant are shown in Figure 1. After calculating by using a Cartesian diagram, the results of the attributes that need to be repaired because these attributes are considered unsatisfactory to Marketplace customers have been obtained. The attributes that should be repaired are those that are in quadrant A. The attributes that should be repaired in quadrant A are shown in Table II. The attributes that the company should maintain after the calculation by using the Cartesian diagram are those in quadrant B because it is considered that the customers acquire what they want as shown in Table III. The attributes that should be maintained are also shown in Table III. Meanwhile, there are the attributes that have low rating because these attributes are not considered necessary by customers and the company does not provide special services or attention.

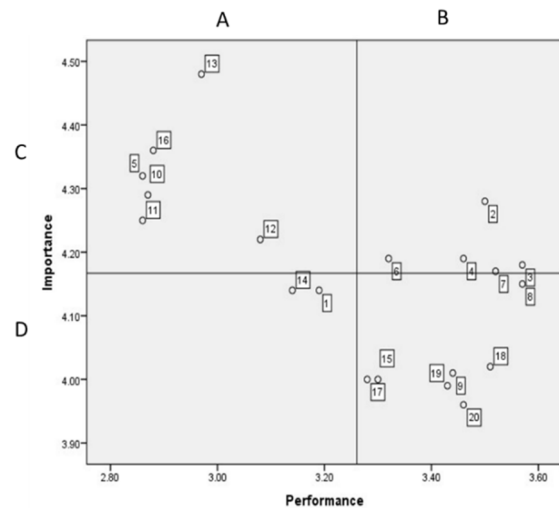


Fig. 1. Cartesian Diagram

TABLE II
QUADRANT A

No.	Attributes
5	The goods are delivered on time
10	Marketplace customer service provides insurance coverage
11	Customer service marketplace is responsive to customer complaints
12	Marketplace provides the information needed
13	Marketplace is responsive to customer needs
16	The goods sent to customers arrive in a good condition

Source: Primary data processed in 2022

TABLE III
QUADRANT B

No.	Attribute
2	It is easy for customers to access the marketplace anywhere
3	The marketplace interface displays complete and clear features
4	Information regarding ordering and payment is provided clearly and thoroughly (accompanied by pictures of the stages from ordering to payment)
6	It has full features and clear display
7	Products from the marketplace are easy to find on search engines

Source: Primary data processed in 2022

These attributes are considered not to have a significant impact on the company. The attributes in quadrant C are as shown in Table IV. Then, the attributes in quadrant D are not considered necessary for the customer, but the company provides excessive service, so these attributes are considered excessive. However, this attribute may also receive more attention from marketplace customers. The attributes in quadrant D are as shown in Table V. From the results of the Cartesian diagram, several attributes need to be improved. The attributes that need to be maintained by the company are divided into quadrants (A, B, C, and D). The division has been done according to the level of conformity between the customer interest and the company performance, which is 78.450.

TABLE IV
QUADRANT C

No.	Attribute
1	Customers quickly find the desired product
14	Variety of shipping options is available to suit the customer needs

Source: Primary data processed in 2022

TABLE V
QUADRANT D

No.	Attribute
8	Marketplace provides various payment options for customer convenience
9	There are links that facilitate the customers to access the platform
15	The stock is always available
17	All the information listed on the marketplace is true
18	There is no change in the product price after the transaction
19	Marketplace provides online services (via WhatsApp, Facebook, Instagram, etc.)
20	Marketplace provides services by telephone

Source: Primary data processed in 2022

The results of the mapping are as follows:

A. *Quadrant A*: Quadrant A is an area that contains attributes that are considered important by customers. However, in reality, these attributes still do not meet the expectation of the customer or still have a low level of satisfaction, so the company needs to make the best possible improvements to increase customer satisfaction for the customer. The attributes included in quadrant A are 5,10,11,12,13,16.

1. The first attribute considered unsatisfactory to the customer is the duration when the customer orders the products until the products arrive at the address set by the customer. Based on the calculations above, this attribute has a suitability level lower than the decision score obtained, namely 66.203%, which is considered unsatisfactory to the customer. It is necessary to make improvements and pay more attention to the product ordered by the customer to arrive at the specified time to provide a sense of security and comfort so that the Marketplace can retain its customers to keep shopping there. Therefore Marketplace should deploy a function in e-commerce platform that can track their order shipment to increase their trust [21].
2. Trust in e-commerce transaction is always considered as an issue. It is related to the second attributes in the Quadrant A. The second attribute is that the marketplace is responsive providing customer guarantees. Based on the calculations above, this attribute has a level of conformity smaller than the decision score obtained, which is 66.899%, still considered unsatisfactory to the customer. Therefore, improvements need to be made, increasing customer response to unsatisfactory product complaints. The Marketplace should convince their customers overcoming their problem by offering them guarantees that they require [22].
3. The marketplace's third attribute is resolving customers' complaints or problems quickly. Based on the calculation results above, this attribute has a level of conformity that smaller than the decision score obtained, which is 67.294%, which is considered unsatisfactory to the customer. Hence, improvements need to be made, namely improving their services further for complaints or

problems experienced by customers so that customers feel comfortable when shopping at the marketplace. Apart from the availability of guarantees, which is an issue in the second attribute, the customer service staff should be responsive and provide solutions in resolving customer complaints.

4. The fourth attribute of the marketplace is fast providing customer information. Based on the results of the calculations above, this attribute has a level of conformity that is smaller than the decision score obtained, 72.985%, which is still considered unsatisfactory to the customer. Hence, it is necessary to make improvements, namely to improve further service, especially the information provided to customers because the information is considered necessary for customers in ordering products.
 5. The fifth attribute of the Marketplace is always fast and precise in fulfilling customer desires. Based on the calculation results above, this attribute has a lower level of conformity than the decision score obtained, 66.294%, which is considered unsatisfactory to the customer. Therefore, it is necessary to make improvements. This attribute is crucial for customers because customers always want to be fast and precise in buying and selling transactions, and this should be carried out, further enhanced by Marketplace.
 6. The sixth attribute is that the goods the Marketplace sends to the customer are in good condition. Based on the results of the calculations above, this attribute has a level of conformity that is smaller than the decision score obtained, which is 66.055%, which is still considered unsatisfactory to the customer and needs to be repaired. The marketplace should improve its service because the customer will feel disadvantaged if the product arrives in a damaged/defective state.
- B. *Quadrant B*: Quadrant B is an area that contains attributes that are considered necessary by the customer, and these attributes are considered to be in line with the wishes of the customer. The level of customer satisfaction is relatively higher, so they need to be maintained by the company because it can provide services according to the wishes of the customer. As a result, the customer is satisfied. The attributes included in this quadrant are 2, 3, 4, 6, and 7. From the results of the calculation of suitability level, there are no attributes that need to be improved because the level of suitability of each attribute is still more significant than the decision-making score. The attributes are as follows:
1. The first attribute is that it is easy for customers to access the marketplace anywhere, which has a conformity rate of 81.775%, which means that the attribute is currently considered good and the Marketplace should be able to maintain it.

2. The second attribute is that the marketplace allows for complete and accurate transactions, which has a conformity level of 85.406%, which means that the attribute is currently considered good and the Marketplace should be able to maintain it.
 3. The third attribute refers to clearly conveyed information regarding orders and payments (accompanied by pictures that make it easier for customers to digest each stage properly), which has a conformity level of 82.577%. Since the attribute is currently considered good, the marketplace should be able to maintain it.
 4. The fourth attribute is that the marketplace service interface displays the complete and clear features, which has a conformity rate of 79.236%. Because the attribute is currently considered good, the marketplace should be able to maintain it.
 5. The fifth attribute is that the marketplace products are easy to find on search engines, which has a conformity rate of 84.412%. This attribute is currently considered good, so the marketplace should be able to maintain it.
- C. *Quadrant C*: Quadrant C is an area that contains attributes that are considered less important by customers and in fact, the company performance is considered unsatisfactory. However, it is possible that Quadrant C in the future will become an important concern for customers, so the marketplace should also consider this. The attributes included in this quadrant are 1 and 14:
1. The first attribute is that the customer has ease to find the desired product, which has a suitability level of 77.053%. One form of service that the marketplace can provide in improving the quality of service in the eyes of the customer is the ease of finding products that are considered less important and satisfying for the customer. Therefore, it should be a consideration for the company in making improvements.
 2. The second attribute is options for the delivery of goods that has been ordered by the customer, which has a conformity level of 75.985%, which is considered still less essential and satisfying for the customer. Therefore, it is necessary to improve the quality of service.
- D. *Quadrant D*: Quadrant D is an area that contains attributes considered less important by customers, but the company performance is perceived to be high, so the company does not need to make improvements. The attributes included in this quadrant are 8, 9, 15, 17, 18, 19, and 20.
1. The first attribute is that the marketplace provides several payment options according to the customer needs, which has a suitability rate of 86%. This is considered quite well by the customer. However, this attribute should be considered to be reduced so that it can save costs.
 2. The second attribute is that the links provided are easy to click (easy to connect to the link destination) with a conformity rate of 85.785%. Although it is considered quite well by customers, this attribute should be considered to be reduced so that it can save costs for the company.
 3. The third attribute is the stock of goods written on the marketplace is always ready with a conformity rate of 82.5%. This is considered quite well by the customer, but this attribute should be considered to be reduced so that it can save costs for the company.
 4. The fourth attribute is that all information on marketplace is correct with a conformity rate of 82%. This is considered quite well by the customer. This attribute, however, should be considered to be reduced so that it can save costs for the company.
 5. The fifth attribute is that there is no change in product prices when there has been a transaction of purchased goods, which has a conformity level of 87.313%. This is considered quite well by the customer, but this attribute should be considered to be reduced so that it can save costs for the company.
 6. The sixth attribute is that the marketplace provides online services (Facebook, Twitter, Blog, Chat, and many more) with a conformity rate of 85.964%. Although this is considered quite well by the customer, this attribute should be considered to be reduced so that it can save costs for the company.
 7. The seventh attribute is that the marketplace provides services by telephone, which has a conformity rate of 85.964%. This is considered quite good by the customer. However, this attribute should be considered to be reduced so that it can save costs for the company.

IV. Conclusion

In conclusion, the quality of service of the Indonesia marketplace according to customer perceptions still needs to be improved, especially in quadrant A where from the results of the Cartesian diagram, there are six attributes in quadrant A considered necessary by the customers. Most of attributes in Quadrant A is related to trust issue. The priority in Quadrant A is the speed of delivery time. However, these attributes still do not meet the expectation of the customers and they still have a low level of satisfaction. Moreover, attributes in Quadrant B also need strict attention as well as attributes in Quadrant A. Those attributes need to be maintained to satisfy the customer's requirements, for example, the easiness to access the marketplace service/product without location boundary. Therefore, the company needs to make the best possible improvement strategies to increase customer satisfaction according to these attributes.

Finally, the marketplace should improve the quality of its services, especially on the attributes that are

considered important by the customers that are shown in Quadrant A and Quadrant B. This research is very basic so the potential for development is still broad. This research only identifies important attributes for improving the quality of marketplace services. Therefore, there is the need to continue research by analyzing and planning strategies to improve service quality based on the results of this research.

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