

# **Analysis of TIX ID Application User Satisfaction Reviewed from E-Service Quality Using Importance-Performance Analysis (IPA) Method**

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## **Abstract**

This research is a type of descriptive research with a quantitative approach. The purpose of this study is to determine the user satisfaction of TIX ID application in terms of e-service quality which consists of seven dimensions, namely efficiency, fulfillment, system availability, privacy, responsiveness, compensation, and contact which will be seen based on the level of importance and level of performance that has been given. The data analysis method used in this study is Importance-Performance Analysis (IPA). This study was conducted with all Indonesian citizens with a minimum age of 18 years old that have used or using the TIX ID application, with a total sample of 413 respondents. Based on the Cartesian Diagram of Importance-Performance Analysis (IPA), the TIX ID application does not have attributes that are in the main improvement priority (Quadrant I), seven attributes that must be maintained (Quadrant II), seven attributes with low priority (Quadrant III), seven attributes with low priority (Quadrant III), and two attributes with a level of performance that exceeds the level of importance (Quadrant IV). The satisfaction level of users of the TIX ID application based on e-service quality is 95.26%. Based on the result of descriptive analysis, it is shown that the value of the user expectations (importance) is greater with 88.67% compared to the value of perceptions/reality (performance) with a percentage of 84.58%. There are seven attributes that have the highest gaps that are included in Quadrant III. In addition, all 16 attributes on the dimensions of the e-service quality variable in this study all have negative value gaps, so that all attributes still do not fully meet user expectations.

## **Keywords:**

e-service quality, customer satisfaction, and Importance-Performance Analysis (IPA).

## **1. Introduction**

Apart from PCs, laptops, TVs, and others, the use of the internet is inseparable from the use of mobile (cellular). According to data from We Are Social, Hootsuite, cellular connections in Indonesia as of January 2021 have reached 345.3 million. The use of mobile connection is inseparable from using a mobile application. According to the data, people in Indonesia use their cellular connections to use various mobile applications, one of which is the entertainment and video apps category which occupies the third position with an acquisition of 86.2% of the most used mobile apps every month in Indonesia as of January 2021.

One of applications that is in the entertainment & video apps category is an application for booking cinema tickets and tickets to watch events. The existence of an online ticket booking application can make it easier for people who want to watch movies at the cinema by purchasing tickets anywhere and anytime practically, quickly, and efficiently without having to wait in line. In fact, quoted from [industri.kontan.co.id](http://industri.kontan.co.id) (2022), films have the support from the digital business. The acquisition of this segment until the third quarter of 2021 has increased to IDR 157 billion or grew by

279% compared to the third quarter of 2020 of around IDR 41 billion. Overall, film acquisitions from the digital business contributed 85.8% to the total revenue in the third quarter of 2021 of IDR 183 billion.

In Indonesia, there are several online booking ticketing apps for the purchase of cinema tickets & events, one of which is TIX ID. Compared to other cinema ticket booking applications & events such as Bookshop and Goers, TIX ID has proven to be superior in the number of downloaders and its high online rating based on its profile on Google Play Store. Even though it is superior to its competitor applications that are engaged in the same field, the author has observed based on research conducted by Nabila, A. (2021:7), on December 11, 2020, TIX ID app has online rating of 4.7, and then based on the author's observation on December 26, 2021, the TIX ID app's online rating decreased to 4.5. It indicates that the TIX ID application's online ranking has decreased on the Google Play Store by 0.2 or around 4.25%.

Various complaints related to e-service quality are also found in reviews on the Google Play Store and news articles. In addition, TIX ID entered the trending topic on Twitter related to problems with the system in its application which resulted in massive unilateral refunds and tickets refunds on the D-1 broadcast schedule (jakselnews-pikiran.rakyat.com, 2021). At that time, TIX ID was ranked sixth in trending topics on Twitter on December 14, 2021. This topic also got more than 5,000 tweets on Twitter (nextren.grid.id, 2021). Then, on May 5, 2022, at 18.16 WIB, TIX ID re-entered the trending topic on Twitter related to the problem of difficulty in purchasing tickets because it was often exposed to refunds and ticket purchases that felt like a concert ticket war. The topic earned more than 2,000 tweets on Twitter (cnnindonesia.com, 2022). Various problems regarding the TIX ID application were also found on Tiktok videos. One of them, on the @lipe.b.aja account, a video regarding the TIX ID problem related to unilateral mass refunds has received more than 1 million views and 52.1 thousand likes (tiktok.com, 2022).

To strengthen the background in this study, the author conducted a pre-survey on the variable e-service quality consisting of 16 attributes on the TIX ID application. Based on the pre-survey, as many as 54.8% of respondents or 17 people out of a total of 31 respondents expressed disapproval that the TIX ID application does not crash (a sudden failure that renders the system malfunctioning where the application stops itself or the application exits automatically) which indicates that most users are still not satisfied with the attributes in this dimension of system availability.

Given the large number of business competitors engaged in e-ticketing, in addition to typical applications for cinema booking tickets (such as matrix, CGV CINEMAS INDONESIA, Cinépolis Indonesia) and applications engaged in the same field as TIX ID in booking cinema tickets and events (such as Bookshop and Goers), unicorn startups such as Traveloka and Gojek through Go Tix, decacorn startups such as Grab, to Shopee e-commerce have penetrated into the business of selling cinema tickets and event tickets by online. Moreover, we can also buy cinema tickets through the BCA Mobile m-banking application. Therefore, it is important for TIX ID to determine which attributes that needs to be maintained and that needs to be improved, one of which is from the e-service quality variable using Importance-Performance Analysis (IPA) method.

## **1.1 Objectives**

With the identification of the problems described above, the objectives of this study are as follows:

- a. To determine the level of users' expectation of e-service quality in the TIX ID application.
- b. To determine the level of performance/users' perception of e-service quality on the TIX ID application.
- c. To determine the level of users' satisfaction based on the level of expectations and the level of performance/perception of e-service quality on the TIX ID application.
- d. To find out Importance-Performance Analysis (IPA) based on e-service quality on the TIX ID application.

## **2. Literature Review**

According to Kale, A., & Mente, R. (2018), mobile commerce is the buying and selling of goods and services using wireless mobile devices. Currently, the rapid growth of smartphones has given rise to mobile commerce, the e-commerce activities that is carried out through smartphones. E-SQ is broadly defined to cover all phases of customer interaction with a website: the extent to which a website enables efficient and effective shopping, purchasing, and delivery (Parasuraman, A., Zeithaml, V. A., & Malhotra, A., 2005). Parasuraman A. P., Zeithaml, V. A. & Malhotra, A. (2005) examined several dimensions used to measure e-service quality. The method studied is called E-S-QUAL,

which is a multi-item scale for evaluating the quality of electronic services (consisting of efficiency, fulfillment, system availability, and privacy) and E-Recs-Qual, which is a scale for measuring the quality of electronic service recovery (e-recovery) provided by the site (which consists of responsiveness, compensation, and contact). Then, Zeithaml, et al. (2018:92–93) divided e-service quality into seven important dimensions for core service evaluation (four dimensions) and service recovery evaluation (three dimensions). Hoffman, et al. (2010:321) declared that the service gap is the gap between a customer's expectation of the service and the perception of the service delivered. Implementing and evaluating service quality is difficult because perceptions of service quality tend to depend on repeated comparisons of customer expectations of a service. If a service, however good, repeatedly fails to meet customer expectations, the customer will consider the service to be of poor quality (Hoffman, K. D. & Bateson, J. E. G., 2010:321).

According to Wilson A., Zeithaml, V., Bitner, M. J., & Gremler, D. D. (2016:186), customer satisfaction is a broad perception influenced by product features and attributes as well as by customers' emotional responses, their attribution, and their perception of fairness. Customer satisfaction is identified as the level of one's feelings of pleasure or disappointment resulting from comparing the performance or results received in relation to personal expectations (Kotler, 2004) in (Wardhana, A., Kartawinata, B. R., & Syahputra, 2014).

### **3. Methods**

This research is a type of descriptive research with a quantitative approach. According to Robert Donmoyer in (Prajitno, S. B., 2013), quantitative research is an empirical research approach for collecting, analyzing, and presenting data numerically rather than narratively. The purpose of quantitative research method is to measure data and generalize the results from samples to populations (Suliyanto & MM, 2017). Mardianah, M. (2014) revealed that descriptive research is limited to trying to reveal a problem or situation or event as it is so that it is merely to reveal facts. According to Sumanto et al. (2014:179) in (Dewi, D. P., 2015), descriptive research attempts to describe and interpret what exists (it can be about existing conditions or relationships, growing opinions, ongoing processes, outcomes, or effects that occurring or emerging trends). Meanwhile, according to Hermawan, S., & Amirullah, A. (2016: 59), descriptive research takes samples from population elements at a certain point in a certain time as well. Sugiyono (2013:35) stated that in descriptive research, researchers do not make comparisons of variables in other samples and do not look for the relationship of one variable with another variable.

The sampling method used in this study is purposive sampling technique. According to Sugiyono (2013:85), purposive sampling is a sample determination technique with certain considerations. The characteristics of the sample used in this research are Indonesian citizens, with minimum age of 18 years old, and have used or are using the TIX ID application. The questionnaire data from respondents was collected by the author in April to June 2022. According to Wibowo, P. C., (2019:26), formula from Lemeshow, S. et al. (1990) is used because the intended population is large with arbitrary numbers. According to katadata.co.id (2020), TIX ID has more than 10 million registered users with 5 million monthly active users. Due to the population's numbers being not known for certain, researcher is unlikely to examine all of the population due to limited funds, time, and energy. Therefore, researcher took samples from the population for this study by determining the number of samples using the Lemeshow, S. et al. (1990:2) formula, namely:

$$n = \frac{z^2_{1-\alpha/2} P(1-P)}{d^2}$$

Information:

n = Number of samples

z = Standard value = 1.96

P = Maximum estimate = 50% = 0.5

d = alpha (0.05) or sampling error (large fault tolerance) = 5%

The researcher selects the level of accuracy or level of accuracy denoted by ( $\alpha$ ) = 5%, so that the value of z is obtained from the table z of the normal distribution = 1.96. According to Sambas (2007:103) in (Samsu, 2017:140), the degree of significance ( $\alpha$ ) indicates the probability or chance of error that the researcher sets in making the decision to reject or support the null hypothesis. In other words, a researcher's decision to reject or support the null hypothesis has a 5% error rate. The confidence level denoted by (P) used in this study is 95%. According to Sambas (2007:103) in (Samsu,

2017:139), the level of statistical certainty of the sample correctly estimating the population parameter is 95% or the confidence level to correctly reject or support the null hypothesis is 95%. Meanwhile, the probability of the questionnaires being right (accepted) or rejected (false) is 0.5 each because there is no known proportional value or comparison of the infinite population (Rizqiana, F., 2017:45). According to Lemeshow, S. et al. (1990:2), when the researcher does not know the level of P in the population, choosing 0.5 for P in the sample size formula will give sufficient observations, regardless of the actual value of the actual proportion. Therefore, the results obtained the minimum number of samples required in this study are 385 respondents. Formula of Lemeshow, S. et al. (1990) is used because the intended population is large with changing numbers (Wibowo, P. C., 2019:26).

The data processed based on the results of respondents' answers from the dissemination of research questionnaires on perceptions (performance) and user expectations (importance) to the quality of electronic services of the TIX ID application by summing the values of perception/performance/reality ( $\bar{X}$ ) and the value of user expectations (Y) of each attribute is then calculated on average ( $\bar{X}$ ) and ( $\bar{Y}$ ). The formula used is as follows (Pranitasari, D. & Sidqi, A. N., 2021):

$$\bar{X} = \frac{\sum X_i}{n} \quad \text{dan} \quad \bar{Y} = \frac{\sum Y_i}{n}$$

Information:

- $\bar{X}$  = Average value of perception/performance/reality level
- $\bar{Y}$  = Average value of expectation/importance level
- N = Number of samples (respondents)

#### **Indicator Gap Analysis**

Indicator gap is the difference between expectations and user perceptions of each indicator in each dimension of e-service quality. Before calculating the gap in e-service quality indicators, researcher must have data related to the value of user expectations and user perceptions of e-service quality attributes. The attributes gap is calculated using the following formula (Pranitasari, D. & Sidqi, A. N., 2021):

$$N_{si} = \bar{X}_i - \bar{Y}_i$$

Information:

- $N_{si}$  = Value of e-service quality gap of each attribute
- $\bar{X}_i$  = Average value of perception/performance/reality level
- $\bar{Y}_i$  = Average value of expectation/importance levels

#### **Dimension Gap Analysis**

Dimension gap is the difference between user expectations and user perceptions in each dimension in e-service quality. Before calculating the gap in e-service quality indicators, researcher must have data related to the value of user expectations and user perceptions of the dimensions of e-service quality. Dimension gap is calculated using the following formula (Pranitasari, D. & Sidqi, A. N., 2021):

$$\bar{N}_{Sij} = \frac{\sum N_{si}}{A}$$

Information:

- $\bar{N}_{Sij}$  = Average value of e-service quality gap per attribute of each dimension
- $N_{si}$  = Total of e-service quality gap each attribute
- A = Number of attributes of each dimension

In calculating the Importance-Performance Analysis (IPA) can be done with the following stages according to Supranto (2001) in (Hatta, H. & Rumahorbo, S. G. R., 2021): (Figure 1)

1. The first step is to calculate the degree of conformity between the level of importance and the level of performance to find out the level of user satisfaction with the existing service. The degree of conformity is also used to determine the order of priority of attributes that need to be corrected immediately because it affects customer satisfaction by using the following formula:

$$T_{ki} = \frac{X_i}{Y_i} \times 100\%$$

Information:

$T_{ki}$  = User suitability level

$X_i$  = Perception/performance/reality assessment score

$Y_i$  = User expectation/importance assessment score

The second step is to calculate the average performance level  $\bar{X}$  and the importance level  $\bar{Y}$  of all users (respondents) with the following formula:

$$\bar{X} = \frac{\sum X_i}{n}$$

$$\bar{Y} = \frac{\sum Y_i}{n}$$

Information:

$\bar{X}$  = Average value of perception/performance/reality score

$\bar{Y}$  = Average score of expectation/importance score

$\sum X_i$  = Number of perception/performance/reality level scores

$\sum Y_i$  = Number of user expectation/importance level scores

$N$  = Number of respondents (sample)

2. The last third step is to calculate the average performance level  $\bar{X}$  and the importance level  $\bar{Y}$  of all attributes that are the limit in the cartesian diagram with the following formula:

$$\bar{X} = \frac{\sum_{i=1}^N X_i}{k}$$

$$\bar{Y} = \frac{\sum_{i=1}^N Y_i}{k}$$

Information:

$\bar{X}$  = Average performance level score of the entire attributes

$\bar{Y}$  = Average importance level score of all attributes

$\sum_{i=0}^N X_i$  = Number of perception/performance/reality level scores

$\sum_{i=0}^N Y_i$  = Number of expectation/importance level scores

$k$  = Number of attributes

After obtaining the weights and results of the values of the level of performance and the level of importance, they are plotted into a cartesian diagram. The attributes divided into four parts in the Importance Performance Analysis (IPA) as presented by Martilla, J. A. & James, J. C. (January 1977: 77–79) in Kotler, P., & Keller, K. L. (2016:435). The Importance Performance Analysis (IPA) diagram is divided into four quadrants, namely:

- Quadrant A or I (Top Priority) indicate an important service that are not performed at the desired level. The company should concentrate on improving performance on the attributes that are in this quadrant. Zeithaml, V. A. *et al.* (2017:136) suggests that in this quadrant, there are attributes that need to be improved the most. The attributes present in this quadrant are important and can be improved in performance (Martilla, J. A. & James, J. C., January 1977:77).

- Quadrant B or II (Maintain Achievement) indicates an important service attribute that is being done well; companies need to maintain this high performance. According to Zeithaml, V. A. *et al.* (2017:136) the attributes in this quadrant must be maintained, those attributes perform well and are very important to the customer.
- Quadrant C or III (Low Priority) indicates minor attribute that does not require more attention from the customer. Customers do not consider the attribute presents in this quadrant to be very important (Martilla, J. A. & James, J. C., January 1977:77).
- Quadrant D or IV (Redundant) indicates that the company should reduce maintenance and make savings to improve performance on critical attribute. In this quadrant, the company is judged to do a good job in maintenance, but the customer only considers the attribute presents in this quadrant to be slightly important (Martilla, J. A. & James, J. C., January 1977:77).

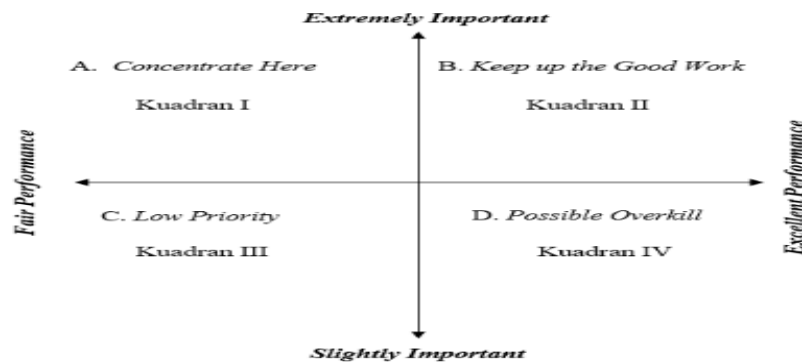
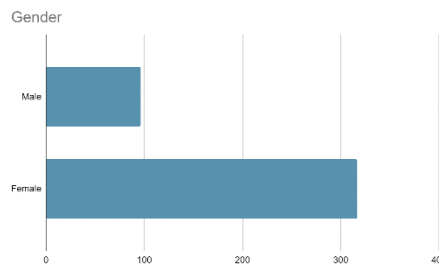


Figure 1 Importance-Performance Analysis (IPA) Cartesian Diagram  
Source: Kotler, P., & Keller, K. L. (2016:435)

## 4. Data Collection

### 4.1 Respondent Characteristics

The results of data collection using a questionnaire, the characteristics of the respondents can be known as follows:

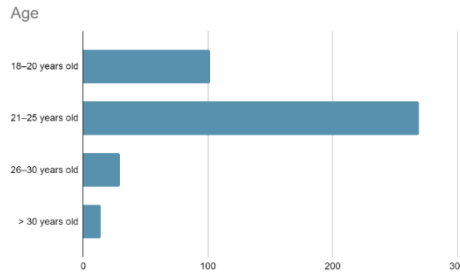


Source: Author's Google Spreadsheet Data Results (2022)

Figure 2 Gender Characteristics of Respondents

Figure 2 describes the percentages for each type of group, namely female and male. Of the 413 respondents, 76.8% consisted of women, and the remaining 23.2% consisted of male respondents. This research is dominated by female respondents. The percentage of respondents who are female is 77% with a total of 317 respondents. Respondents with male sex have a percentage of 23.2%. The number of male respondents in this study were 96 people.

This is in line with the results of a survey conducted by IDN Times in 2019 regarding interest in watching films in Indonesia, showing that female respondents have a larger percentage of 61.6% while male respondents are 38.4% of a total of 411 respondents (idntimes.com, 2019).

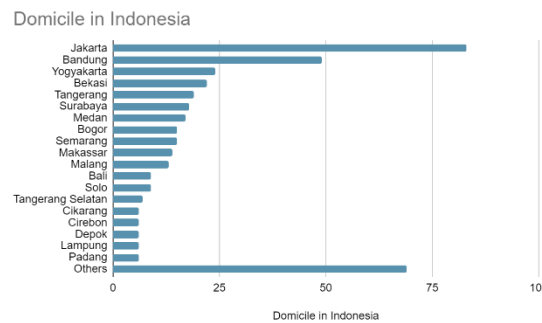


Source: Author's Google Spreadsheet Data Results (2022)

Figure 3 Characteristics of Respondents Age

Figure 3 describes the percentages for each age class of respondents. Of the 413 respondents, they were divided into four age classes, namely 18–20 years, 21–25 years, 26–30 years, and > 30 years. The percentage in the 18-20 years old class is 24.7% with a total of 102 respondents. Class 21–25 years is the class with the highest number of respondents, which is 64.9% with a total of 269 respondents. Class 26–30 years has a percentage of 7% with 29 respondents. While the class > 30 years is the class with the lowest number of respondents, which is 3.4% with a total of 14 respondents. It can be concluded that the respondents who dominated this study were aged 21–25 years and followed by the 18–20 years class group.

Generation Z is a group with an age group of 10–25 years who were born in 1997–2012 (baresfordresearch.com, 2022). According to BBC News, Alexis Abramson, an expert in generational grouping, said that the Gen Z age group is still young and has never known life without technology (kompas.com, 2021). This is in line with the results of a survey conducted by IDNTimes in 2019 regarding interest in watching films in Indonesia which showed that respondents were dominated by the age group 20–27 years with a percentage of 51.6% (idntimes.com, 2019). Generation Z tends to be technology literate and wants to take advantage of technology and internet usage, including buying cinema and event tickets.



Source: Author's Google Spreadsheet Data Results (2022)

Figure 4 Characteristics of Respondents Domicile in Indonesia

Figure 4 shows the percentage for each domicile group of respondents in Indonesia. From the acquisition of 413 respondents, the domicile of the respondents is dominated in the Jakarta area with a percentage of 20.1% with a total of 83 people. The next domicile is Bandung with a percentage of 11.9% with a total of 49 people. In the next position is Yogyakarta with a percentage of 5.8% with a total of 24 people. Then in the next position is occupied by Bekasi with a percentage of 5.3% with a total of 22 people. Then Tangerang occupies the next position with a percentage of 4.6% with a total of 19 people.

Next is Surabaya which occupies the next position with a percentage of 4.4% with 18 people each. Next is occupied by Medan with a percentage of 4.1% with a total of 17 people. Furthermore, Bogor and Semarang took the next position with a percentage of 3.6% each with 15 people each. Then Makassar occupies the next position with a

percentage of 3.4% with a total of 14 people. Then the next is occupied by Malang with a percentage of 3.1% with a total of 13 people. Then it was then occupied by Bali and Solo with a percentage of 2.2% each with a total of 9 people. In the next position is occupied by South Tangerang with a percentage of 1.7% with a total of 7 people. Then in the next position occupied by Cikarang, Cirebon, Depok, Lampung, and Padang with each percentage of 1.5% with a total of 6 people each. Then it is occupied by Batam and Sidoarjo with a total of 5 people each.

Then in the next position occupied by Karawang, Pekanbaru, Purwokerto, and Tegal each with a total of 4 people. Then Jambi, Madiun, Pontianak, Samarinda, and Serang took the next position with 3 people each. Furthermore Banjarmasin, Denpasar, Garut, Gorontalo, Kediri, and Palembang took the next position with a total of 2 people each. Then in the last position is occupied by Balikpapan, Batu, Baubau, Bengkulu, Blitar, Cilegon, Jember, Palangkaraya, Palu, Pangkal Pinang, Pekalongan, Ponorogo, Purwakarta, Tanjung Pinang, and Tasikmalaya with 1 person each.

This is in line with the fact that DKI Jakarta maintains its top position as the city with the most population and as the most populous city in Indonesia. With an area of 664.01 square kilometers, DKI Jakarta has a population of 10,562,088 people (idxchannel.com, 2022).

## 5. Results and Discussion

### 5.1 Validity and Reliability Test Result

By using the number of  $n = 30$  respondents in the questionnaire trial (pre-test) to determine whether the tested questionnaire is suitable for use in the study, then  $df$  (degree of freedom) =  $n - 2$ , then obtained  $30 - 2 = 28$ . Judging in the table  $r$  for  $df = 28$  and  $\alpha = 5\%$ , then the value of  $r$  of the  $r_{table}$  is 0.3610. The statement is declared valid if the calculated value of  $r \geq r_{table}$ . If the data is ordinal, the statistic used is Spearman Rank Correlation (Sugiyono, 2013:243). This formula is used when  $N$  is small and the data is in the form of ordinals (Yusuf, A. M., 2016). Because the respondents used in the pre-test (questionnaire trial) were 30 people and the data used an ordinal measurement scale, the Spearman Rank formula was used. The results of the validity test of the e-service quality variable from 30 respondents in this research showed valid results because the calculated  $r$  value above the table  $r$  value is 0.361 ( $r_{count} \geq r_{table}$ ) so that the statement is declared valid and could be used in this study.

### 5.2 Reliability Test

According to Hermawan, S., & Amirullah, A. (2016:164), the limit value of the acceptable level of reliability is  $\geq 0.7$ . The use of the Cronbach Alpha formula can give more careful results and can be close to the actual results (Putri, I. K. D. B., 2016:49–50). In addition, the technique of testing the reliability of the Cronbach's Alpha test questionnaire is a frequently used method and this method makes it easier to detect inconsistent indicators (Arif, I., & Santoso, B., 2016). Based on the reliability test carried out, the value of Cronbach's Alpha from each statement is greater than 0.7, so it can be concluded that the questionnaire in this study is reliable or consistent, that is, it can be trusted or relied upon so that it can be used as an instrument in research.

### 5.3 Descriptive Analysis

Descriptive Analysis Based on Importance & Performance

Table 1 Recapitulation of Descriptive Analysis of Importance & Performance per Dimension

Dimension	Importance	%	Category	Performance	%	Category
	Total Score			Total Score		
<i>Efficiency</i>	7.393	89,51%	Very Important	7.135	86,38%	Excellent
<i>Fulfillment</i>	3.705	89,71%	Very Important	3.600	87,18%	Excellent



<i>System Availability</i>	3.635	88,01%	Very Important	3.421	82,83%	Good
<i>Privacy</i>	3.753	90,87%	Very Important	3.629	87,87%	Excellent
<i>Responsiveness</i>	3.614	87,51%	Very Important	3.374	81,82%	Good
<i>Compensation</i>	3.577	86,61%	Very Important	3.380	81,84%	Good
<i>Contact</i>	3.621	87,68%	Very Important	3.401	82,35%	Good
<i>Importance-Performance</i>	29.298	88,67%	Very Important	27.945	84,58%	Excellent

Source: Author's Processed Results (2022)

Based on Table 1, the dimension that has the highest level of importance is the privacy dimension with an average importance level of 90.87%. The lowest level of importance is found in the compensation dimension with a percentage of 86.61%. Then for the average the highest level of performance is found in the privacy dimension with a percentage of 87.87%. While the average lowest performance level is found in the responsiveness dimension with an average performance of 81.82%. The average Importance score (Expectation) in each dimension is 88.67%, while the average Performance score (Perception/Reality) is 84.58% based on electronic service quality. The average importance level is higher by 4.09% than the average performance level on TIX ID applications.

#### 5.4 Gap Analysis

Table 2 Gap Analysis

No.	Attributes	Performance ( $\bar{X}$ )	Importance ( $\bar{Y}$ )	Gap (Nsi)	Degree of Conformity (Tki)
1.	EFF.1 Speed in loading TIX ID application pages.	4,31	4,41	-0,10	97,73%
2.	EFF.2 Ease of finding what users want in the TIX ID application.	4,35	4,51	-0,16	96,45%
3.	EFF.3 Information in the TIX ID application is well-organized.	4,31	4,45	-0,14	96,85%
4.	EFF.4 Speed in completing transactions in the TIX ID application.	4,30	4,53	-0,23	94,92%
Average <i>Efficiency</i>		4,32	4,48	-0,16	96,43%
5.	FUL.1 Accuracy of appointments regarding the	4,31	4,44	-0,13	97,07%

	delivery of tickets and vouchers in the TIX ID application.				
6.	FUL.2 Stock/availability of tickets (seats) and vouchers available as written in the TIX ID application.	4,40	4,53	-0,13	97,13%
<i>Average Fulfillment</i>		4,36	4,49	-0,13	97,10%
7.	SA.1 TIX ID application that runs properly without any crashes.	4,04	4,39	-0,35	92,03%
8.	SA.2 The TIX ID application system is always available to buy tickets and vouchers.	4,25	4,41	-0,16	96,37%
<i>Average System Availability</i>		4,15	4,40	-0,26	94,32%
9.	PRI.1 Personal data and user information in the TIX ID application are maintained and protected.	4,41	4,56	-0,15	96,71%
10.	PRI.2 Personal data information related to user transactions in the TIX ID application is maintained and protected.	4,38	4,53	-0,15	96,69%
<i>Average Privacy</i>		4,40	4,55	-0,15	96,70%
11.	RES.1 Customer Support TIX ID handles issues quickly.	4,07	4,36	-0,29	93,35%
12.	RES.2 Customer Support TIX ID handles issues effectively.	4,11	4,39	-0,28	93,62%
<i>Average Responsiveness</i>		4,09	4,38	-0,29	93,38%
13.	COM.1 TIX ID compensates for the problems it creates.	4,04	4,23	-0,19	95,51%
14.	COM.2 Refund when there is a problem from TIX ID in accordance with the promised time.	4,14	4,43	-0,29	93,45%
<i>Average Compensation</i>		4,09	4,33	-0,24	94,46%

15.	CON.1 TIX ID offers the ability to talk to real people (not <i>bots</i> ) in case of problems.	4,08	4,36	-0,28	93,58%
16.	CON.2 TIX ID Customer Service offers complete facilities such as phone, email, etc. to handle problems if there are complaints.	4,15	4,41	-0,26	94,10%
Average Contact		4,12	4,39	-0,27	93,85%

Source: Author's Processed Results (2022)

Based on the Table 2 results of the gap analysis, the highest gap is in the attribute "TIX ID application that runs well without any crashes" (SA1) with a gap of -0.35. This statement is also consistent with the results of a pre-survey the author has conducted that most users disagree with the statement on this attribute. As for the smallest gap, it is found in the attribute "Speed in loading TIX ID application pages" (EFF1) with a gap of -0.10. The dimension that has the biggest gap is "responsiveness" with a gap of -0,29. Whereas the dimension that has the smallest gap in this research is "fulfillment" with a gap of -0,13.

## 5.5 Average Importance and Performance Level

Table 3 Average Importance and Performance Levels

No.	Statements (Attributes)	Average Importance ( $\bar{Y}$ )	Average Performance ( $\bar{X}$ )
1.	EFF.1 TIX ID application loads site pages (loading) quickly or is not slow.	4,41	4,31
2.	EFF.2 Easy to find what users want in the TIX ID application.	4,51	4,35
3.	EFF.3 The information in the TIX ID app is well organized.	4,45	4,31
4.	EFF.4 The TIX ID application allows users to complete transactions quickly.	4,53	4,30
5.	FUL.1 The TIX ID application makes accurate promises regarding the delivery of tickets and vouchers.	4,44	4,31
6.	FUL.2 Stock/availability of tickets (seats) and vouchers available as written in the TIX ID application.	4,53	4,40
7.	SA.1 The TIX ID application runs fine without any crashes.	4,39	4,04
8.	SA.2 The system in the TIX ID application is always available to buy tickets and vouchers.	4,41	4,25
9.	PRI.1 Users feel that personal data and user information in the TIX ID application are maintained and protected.	4,56	4,41

10.	PRI.2 The users feel that personal data information related to user transactions is maintained and protected.	4,53	4,38
11.	RES.1 Customer Support TIX ID handles issues quickly.	4,36	4,07
12.	RES.2 Customer Support TIX ID handles issues effectively.	4,39	4,11
13.	COM.1 TIX ID compensates for the problems it creates.	4,23	4,04
14.	COM.2 Refund when there is a problem from TIX ID in accordance with the promised time.	4,43	4,14
15.	CON.1 TIX ID offers the ability to talk to real people (not bots) in case of problems.	4,36	4,08
16.	CON.2 TIX ID Customer Service offers complete facilities such as phone, email, etc. to handle problems if there are complaints.	4,41	4,15
Total Average ( $\bar{Y}$ & $\bar{X}$ )		4,43	4,22

Source: Author's Processed Results (2022)

Based on the results of research and data analysis Table 3 that has been carried out, it can be concluded that the results of the average value of the importance level of 4.43 and the average value of the performance level of the TIX ID application of 4.22 which shows that the performance of the TIX ID application is good but has not been able to fully meet the interests of users. These Total Average of  $\bar{Y}$  and  $\bar{X}$  are which will be the center line in the cartesian diagram.

## 5.6 Importance-Performance Analysis (IPA)

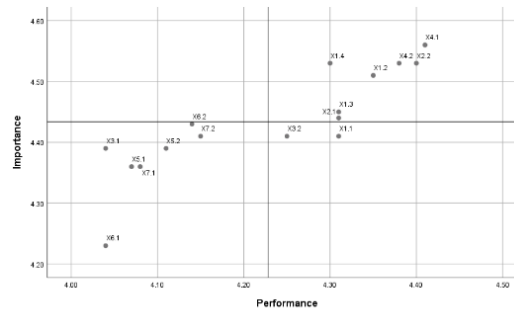


Figure 5 Cartesian Diagram Results of Importance-Performance Analysis  
Source: Author's Processed Results from SPSS (2022)

Based on the Figure 5 of Importance-Performance Analysis (IPA) diagram, because there is no attribute that is in Quadrant I, according to Hatta, H. & Rumahorbo, S. G. R. (2021), the attribute that is the top priority to make improvements is the attribute that has the highest gap value on the Quadrant III. In this research, those attributes are the SA1 item code (ranked first with the largest gap by -0.35), RES1 (ranked second with a gap of -0.29), RES2 (ranked third with a gap of -0.28), COM2 (ranked second with the number of gap score, which is the same as the RES1 item code attribute with a gap of -0.29), CON1 (ranked fourth with a gap of -0.28), and CON2 (ranked fifth with a gap of -0.26).

While the attributes that are in Quadrant II are EFF2 item code (with a gap of -0.16), EFF3 (with a gap of -0.14), EFF4 (with a gap of -0.23), FUL1 (with a gap of -0.13), FUL2 (with a gap of -0.13), PRI1 (with a gap of -0.15), and PRI2

(with a gap of -0.15). Although the performances of these attributes need to be maintained, these attributes still do not fully meet user expectation & satisfaction because they still have negative values (gaps).

And then the attributes that are in Quadrant III are SA1 item code (with a gap of -0.35), RES1 (with a gap of -0.29), RES2 (with a gap of -0.28), COM1 (with a gap of -0.19), COM2 (with a gap of -0.29), CON1 (with a gap of -0.28), and CON2 (with a gap of -0.26). Although they have low importance, these attributes also do not fully meet the expectations & satisfaction of users because they still have negative values (gaps) and have low performances.

Then for Quadrant IV there are attributes with an item code of EFF1 (with a gap of -0.10) and SA2 item code (with a gap of -0.16). Although it has a higher performance compared to the level of importance, this can also be a supporting factor for the company (Hatta, H. & Rumahorbo, S. G. R., 2021). This indicates that the performance is above user expectations. There could be good reasons to continue the performance/maintain these attributes (Martilla, J. A. & James, J. C., 1977). Although they have high performance with a low level of importance, these two attributes also still do not meet user expectations & satisfaction because they still have negative values (gaps).

## **6. Conclusion & Suggestions**

### **6.1 Conclusion**

The average level of user importance/expectation falls into the "very important" category with a percentage of 88.67%. While the average level of performance/perception/reality falls in to the "very good" category with a percentage of 84.58%. This shows that users already feel that the quality of electronic services on the TIX ID application is very good, but still has not met the level of user expectations. The user satisfaction rate of the TIX ID application is 95.26% (<100%). All dimensions of the e-service quality variable have a Level of Conformity below 100%. All 16 attributes in the dimensions of the e-service quality variable have negative values (<1). Thus, the work of the TIX ID application has not met the satisfaction and / expectations of users. However, it is indicated that there is no attribute that is in Quadrant I (top improvement priority). There are 7 attributes in Quadrant II, namely EFF2; EFF3; EFF4; FUL1; FUL2; PRI2; and PRI2. There are 7 attributes in Quadrant III, namely SA1; RES1; RES2; COM1; COM2; CON1; and CON2. Then in Quadrant IV there are 2 attributes, namely EFF1 and SA2.

### **6.2 Suggestions**

Based on the results of the Importance-Performance Analysis (IPA) diagram on the TIX ID application, according to Hatta, H. & Rumahorbo, S. G. R. (2021), if it does not have attribute that is in Quadrant I, then the author advises companies to make improvements to attribute that is in Quadrant III. After Quadrant I, Quadrant III is also a quadrant which is considered important for customers and requires improved performance so that customers feel satisfied (Hatta, H. & Rumahorbo, S. G. R., 2021). Therefore, TIX ID could do the following things to improve these attributes to increase user satisfaction:

- It is recommended that the TIX ID application improve the performance of its application so that it does not error when it comes to making online booking, opening the e-ticket's booking code, toping up the e-money, and doing the transaction.
- It is recommended that TIX ID increase the speed in responding to user complaints so that the user's time does not waste much in waiting for a response from TIX ID.
- It is recommended that TIX ID improve the ability regarding a compensation to those who should get their rights if something goes wrong from TIX ID.
- It is recommended that TIX ID solve the problem more effectively and not responding to the same answer repeatedly according to user complaints, so it does not waste time and the problem is immediately resolved properly.
- It is recommended that TIX ID application does not use bots (automatic messages) too often when communicating with users. The bots could be used only to give greetings and ask for user complaints.
- It is recommended that TIX ID put the link of the official TIX ID website on TIX ID's Tiktok and Instagram accounts (because TIX ID's contact information such as telephone numbers, Help Center, and Consumer Complaints Service are available on the website).

The author suggests to subsequent researchers to be able to collect more complete and specific data about the TIX ID application and develop the attributes of statements and replace or add research variables other than e-service quality to make it more diverse. In addition, the author also suggests in subsequent studies to be able to use other methods or add other methods besides Importance-Performance Analysis (IPA) such as Quality Function Deployment (QFD), Customer Satisfaction Index (CSI), Kano, Delon & McLean Success Model, etc.

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