



Customer perspective by integrating Kano model and Quality Function Deployment method into Cinema XXI: A case study from Semarang City Indonesia

Agung Sedayu , Rahmat Budi Santoso

Faculty of Economics and Business, Dian Nuswantoro University,
50131, Semarang, Indonesia



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Abstract: This research aims is to identify the needs and desires of Cinema XXI customers in Semarang. As the largest market leader and cinema network in Indonesia, Cinema XXI must have the best quality of service. The population in this study were respondents with criteria that had watched at least at three XXI theaters in the Semarang City. The sample selection uses a purposive sampling method and from questionnaires, 138 respondents met the criteria. By using the Kano Model and integrated into the Quality Function Deployment method, it can be concluded that the highest influence on the increase in satisfaction level is the attribute of the quality of the image display on the cinema screen. Whereas the highest influence on the decline in the level of customer satisfaction is the attribute of the use of polite language and easily understood by officers when explaining / providing information to customers. And attributes that service providers prioritize for improvement are cleanliness and comfort of toilets.

Keywords: customer satisfaction, Cinema XXI, Kano model.

1. Introduction

Entertainment spot are needed by the community to eliminate the burden of the mind due to work or activities that are crowded. Today people prefer practical entertainment places, for example watching movies in theaters. The development of Cinema in Indonesia is very rapid because the development of the Indonesian film industry is increasingly showing a positive trend. Indonesia had at least 385 cinemas in early 2020. About 88 percent or 342 cinemas came from the three giant cineplex cinema networks, Cinema XXI from Indonesia, CGV from Korea, and Cinopolis from Mexico, formerly known as Cinemaxx. Hundreds of cinemas of the three giant networks are also mostly located in the provincial capital, municipalities, and even the district capitals.

Corresponding author: Agung Sedayu
E-mail: agung.sedayu@dsn.dinus.ac.id

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The Cinema XXI network is still the largest cinema owner. In 2019, Cinema XXI had 54.9 percent of the total 353 theaters or the equivalent of 194 theaters. The remaining 159 cinemas are owned by Cinemaxx, CGV Blitz and independent theaters. Indonesia according to the Motion Pictures Association of America (MPAA) report is already classified as a large international film market. According to the MPAA report in 2018, Indonesia managed to record revenues of around US \$ 400 million so that it returned to the top 15 in the international market. This achievement increased by around US \$ 100 million or Rp1.4 trillion compared to 2017, when Indonesia was ranked 16th in the top 20 in the international market.

Semarang City is one of the major cities in Indonesia, located in the province of Central Java. There are several cinema companies in Semarang, namely XXI, Cinemaxx and E-Plaza. XXI is the largest cinema company in the city of Semarang with the highest number of locations, namely in 4 different locations. In the cinema industry, service quality plays an important role in the success of the business. As the largest cinema company and has the largest number of cinemas, it is expected to possess the better service quality than its competitors. The quality of service throughout XXI cinema in Semarang City will be investigated by distributing questionnaires to respondents who have at least watched 3 XXI cinemas in Semarang City.

Good service quality is very influential in the service industry for the advancement of the company and customer satisfaction (Park et al., 2012; Tiwari, 2011). Service quality, and customer satisfaction, can be improved by managing the performance of the service attributes. Since, not all attributes have the same role in satisfying customer needs, it becomes important to find out how their performance impacts on customer satisfaction. It means that a company the attributes for the customers and evaluate the current performance of these attributes to plan quality improvements (Sulisworo, 2015 and Hsiao et al., 2016). The assessment of customer desires is very important because businesses must be able to shorten product life cycles and customer expectations that are increasing. This fact greatly influences the process of developing new products / services, and new customer satisfaction assessment methods are needed to help businesses act more quickly to market demand (Shahin et al., 2012).

Research on customer satisfaction is carried out to develop company strategy (Lin et al., 2017; Chen et al., 2018). Previous studies integrate two-dimensional analysis of the dimensions of importance and performance dimensions to evaluate quality attributes that are very important for customers but do not produce the expected performance and thus need to be improved (Lin et al., 2017; Chen et al., 2013). They assume that quality attributes and customer satisfaction have asymmetric and nonlinear relationships, and that for a product, quality attributes that must and are attractive must be considered in addition to one-dimensional quality attributes (Chen et al., 2018; Lin et al., 2010).

In addition, previous studies in the service quality literature often conceptualize customer satisfaction in a one-dimensional view. This means that higher service attribute performance leads to higher levels of customer satisfaction. Recent studies have found that this relationship is nonlinear. Improved performance attributes will not always lead to proportional improvements in customer satisfaction (Gupta & Shri, 2017; Chul Oh, 2011; Baki et al. 2009 and Matzler, 2004). A number of researchers have studied the Kano model further, providing an explanation of customer satisfaction (Hsiao, 2016). The Kano model was first developed by Kano et al. (1984) to categorize the attributes of a product or service, based on how well they are able to meet customer needs. The Kano model shows that world-class services must meet all three types of needs, not just what customers say. It is important to emphasize that service providers must identify not only current customer expectations, which are crucial for success, but also potential expectations that might excite customers (Gupta and Shri, 2018).

Therefore, the Kano model has been used in related literature to identify service attributes that are essential for satisfaction. This model involves a little mathematical calculation and can be used to gather relevant information quickly. The improved Kano model improves the traditional Kano model and is thus used in this study. The Kano model that has been defined is then integrated with QFD to categorize service attributes, to provide corrective action, and to rank these actions. Suggestions for practitioners and managers are given to improve the operation performance accordingly (Hang, 2012). The Kano model explores the effect of quality disparities on customer satisfaction. Although various methods have been adopted, all of them are intended to achieve identical goals through important quality attributes; to increase customer satisfaction (Hashim, & Mkpjojogu, 2016).

In this research the method used is the Kano model aims to categorize the attributes of a product or service based on how well the product / service is able to satisfy customer needs. Quality Function Deployment aims to translate customer needs so that they can be measured to meet those needs.

2. Literature review

2.1. Customer satisfaction

Consumer satisfaction becomes something important for companies and marketers in achieving successful performance. Although consumer satisfaction is something that is difficult to measure, it is subjective and abstract. According to Azis et al. (2014) customer satisfaction is a person's feelings of pleasure or disappointment that results from comparing a product' s perceived performance (or outcome) to expectations. Based on these definitions, it can be concluded that satisfaction will be obtained when the performance of a product or service is at least the same as what is expected by consumers. When performance does not meet expectations, consumers will feel dissatisfied, but if the performance of the product or service it exceeds what is expected, consumers will feel very satisfied (Lin., 2017, Park et al., 2012 and Hwuang, 2017)

2.2. Service quality

The Service Quality plays an important role in the success of any business. There are two concept in measuring service quality, first is based on the process service quality and the second is on output service quality. Westbrook and Richard (1991) the process service quality means that customers can immediately enjoy the results when the service process takes place.

Quality of service focuses on efforts to meet the needs and desires of customers and the accuracy of delivery to offset consumer expectations. Previous studying suggests that service quality is an important indicator of customer satisfaction (Spreng & Machoy, 1996). Especially when developing customer-oriented products, subjective quality to meet customer satisfaction should be carefully considered (Sohn et al., 2017). For the better positioning and improvement of any service organization, it is necessary to evaluate the performance of the service provided by them (Tiwari, 2015).

The study was conducted on service attributes that exist in every XXI in Semarang City. The list of attributes is as follows:

Table 1: Service attribute

No	Service Attribute
1	Physical building
2	Waiting room atmosphere
3	Number of visitors waiting seats
4	Atmosphere in the studio
5	The quality of the audience seats in the studio
6	Distance of the audience seats between rows in the studio
7	Sound quality of the soundsystem
8	Picture quality on the cinema screen
9	Cleanliness and comfort of the toilet
10	All rooms are equipped with CCTV
11	The speed and friendliness of purchasing tickets at the counter
12	Ease of purchasing tickets online
13	Ease of payment of ticket purchases on the spot / online
14	Service speed and friendliness when purchasing food and drinks in a mini cafe
15	Speed of officer response to customer requests
16	Employee knowledge about Citra XXI
17	The customer's feeling of security when receiving services
18	Use of language that is polite and easily understood by officers when explaining / providing information to customers

Technical responses are arranged to meet customer needs. The technical response is as follows:

Table 2: Technical Response

No	Technical Response
1	Periodic building maintenance
2	The selection of elegant interior waiting rooms
3	Studio cleaned after use
4	Good quality seat selection
5	Adjustment of line spacing between seats
6	Selection of a quality sound system
7	Selection of a quality projector
8	Toilet cleaned after use
9	Addition of CCTV / other safety devices
10	Add ticket window
11	Improved online ticket booking system
12	Improved payment system (debit / credit)
13	Increase employee skills
14	Employee Training

2.3. Kano model

The Kano model aims to categorize the attributes of products and services based on how well the product or service is able to satisfy and meet customer needs. Kano et al. (1984) classified five types of quality attribute that lead to customer satisfaction and dissatisfaction when the attributes are sufficient or insufficient, respectively; they are must-be, one-dimensional, attractive, indifferent, and reverse quality attributes.

1. Must-be quality attributes: sufficient quality attributes do not lead to customer satisfaction, but insufficient quality attributes lead to customer dissatisfaction.
2. One-dimensional quality attributes: sufficient quality attributes lead to customer satisfaction, and insufficient quality attributes lead to customer dissatisfaction.
3. Attractive quality attributes: sufficient quality attributes lead to customer satisfaction, but insufficient quality attributes do not lead to customer dissatisfaction.
4. Indifferent quality attributes: sufficient quality attributes do not lead to customer satisfaction, and insufficient quality attributes do not lead to customer dissatisfaction.
5. Reverse quality attributes: sufficient quality attributes lead to customer dissatisfaction, and insufficient quality attributes lead to customer satisfaction.

2.4. Quality Function Deployment

QFD helps companies to identify customer requirements, and translates these requirements into design requirements, engineering specifications, and finally, production details. The product can then be manufactured to satisfy the customer's needs. QFD is an integrative process which links together customer needs, product design requirements, process planning, and manufacturing specifications during product development (Chaudha, 2011).

Quality Function Deployment is often achieved by expressing the correlation matrix between customer needs and product/service design in the form of the House of Quality (Cohen, 1995). The structure of the HOQ consists of six elements, i.e., customer needs, demand assessments, engineering techniques (called service improvement in this study), correlation matrixes, engineering/technological analysis, and improvement priority (Chen et al., 2018). Customer needs to improve performance based on priority so that it becomes effective

3. Methodology

The population in this study were respondents with criteria that had watched at least at three XXI theaters in the Semarang City. The sample selection uses a purposive sampling method because the researcher has the criteria of the respondents to be studied to get more accurate results. The data type that is used is quantitative, it contains about the perceptions of the respondents against the performance attributes of the service (functional) and the perception if the attribute service that is not provided (disfunctional). The data will be entered into the KANO model category assessment table. Data collection using an online questionnaire from google form and likert scale 1 – 5. The

method which is used to evaluate and improve service quality is the Kano model which then is integrated into the Quality Function Deployment method. The original Kano questionnaire consists of functional and dysfunctional questions for each attribute. The highest response frequency determines the Kano category through a special evaluation table (Kano et al., 1984).

Table 3: Kano Category Assessment

Customer needs			Dysfunctional				
			1 Like	2 Hope	3 Neutral	4 Tolerance	5 Dislikes
Functional	1	Like	Q	A	A	A	O
	2	Hope	R	I	I	I	M
	3	Neutral	R	I	I	I	M
	4	Tolerance	R	I	I	I	M
	5	Dislikes	R	R	R	R	Q

Notes:

A = Attractive

I = Indifferent

O = One Dimensional

R = Reverse

M = Must be

Q = Questionable

4. Result and discussion

4.1. Kano model

From questionnaires, 138 respondents met the criteria. The results of the Kano category calculation use Blauth's Formula as follows:

Table 4: Kano Questionnaire results using Blauth's Formula

Attribute	A	O	M	I	R	Q	A + O + M	I + R + Q	Total	Category
1	25	44	43	23	1	2	112	26	138	O
2	27	31	43	34	1	2	101	37	138	M
3	6	7	26	84	13	2	39	99	138	I
4	27	41	37	30	2	1	105	33	138	O
5	31	36	41	28	1	1	108	30	138	M
6	21	20	37	56	2	2	78	60	138	M
7	22	48	28	37	1	2	98	40	138	O
8	31	45	28	30	1	3	104	34	138	O
9	18	51	39	28	2	0	108	30	138	O
10	18	36	37	45	0	2	91	47	138	M
11	15	31	46	42	3	1	92	46	138	M
12	13	48	29	46	0	2	90	48	138	O
13	11	43	42	38	1	3	96	42	138	O
14	13	42	39	43	0	1	94	44	138	O
15	18	29	39	49	2	1	86	52	138	M
16	9	21	58	49	0	1	88	50	138	M
17	6	31	49	50	0	2	86	52	138	M
18	7	45	48	35	2	1	100	38	138	M

4.2. Extent of satisfaction and extent of dissatisfaction

Calculate the Extent of Satisfaction and Extent of Dissatisfaction to determine the level of satisfaction and dissatisfaction of consumers with the following attributes:

Table 5: Extent of Satisfaction (ES) and Extent of Dissatisfaction (ED)

Attribute	A	O	M	I	A + O	O + M	A + O + M + I	ES	ED	ES/ED
1	25	44	43	23	69	87	135	0,51	0,64	ED
2	27	31	43	34	58	74	135	0,43	0,55	ED
3	6	7	26	84	13	33	123	0,11	0,27	ED
4	27	41	37	30	68	78	135	0,50	0,58	ED
5	31	36	41	28	67	77	136	0,49	0,57	ED
6	21	20	37	56	41	57	134	0,31	0,43	ED
7	22	48	28	37	70	76	135	0,52	0,56	ED
8	31	45	28	30	76	73	134	0,57	0,54	ES
9	18	51	39	28	69	90	136	0,51	0,66	ED
10	18	36	37	45	54	73	136	0,40	0,54	ED
11	15	31	46	42	46	77	134	0,34	0,57	ED
12	13	48	29	46	61	77	136	0,45	0,57	ED
13	11	43	42	38	54	85	134	0,40	0,63	ED
14	13	42	39	43	55	81	137	0,40	0,59	ED
15	18	29	39	49	47	68	135	0,35	0,50	ED
16	9	21	58	49	30	79	137	0,22	0,58	ED
17	6	31	49	50	37	80	136	0,27	0,59	ED
18	7	45	48	35	52	93	135	0,39	0,69	ED

4.3. Raw importance

Raw Importance explains how important attributes are based on the Kano category. Indifferent attributes are not continued to the next stage because they have a weight value of 0, then these interests are weighted as follows:

Table 6: Raw importance

Service Attribute	Kano Category	Kano Weight
Physical building	O	2
Waiting room atmosphere	M	1
Number of visitors waiting seats	I	0
Atmosphere in the studio	O	2
The quality of the audience seats in the studio	M	1
Distance of the audience seats between rows in the studio	M	1
Sound quality of the soundsystem	O	2
Picture quality on the cinema screen	O	2
Cleanliness and comfort of the toilet	O	2
All rooms are equipped with CCTV	M	1
The speed and friendliness of purchasing tickets at the counter	M	1
Ease of purchasing tickets online	O	2
Ease of payment of ticket purchases on the spot / online	O	2
Service speed and friendliness when purchasing food and drinks in a mini cafe	O	2
Speed of officer response to customer requests	M	1
Employee knowledge about Citra XXI	M	1
The customer's feeling of security when receiving services	M	1
Use of language that is polite and easily understood by officers when explaining / providing information to customers	M	1

4.4. Adjustment factor

Adjustment Factor is used to calculate the value of adjusted improvement ratio, with the following results:

Table 7: Adjustment factor

Attribute	ES	ED	Adjustment Factor
Physical building	0,51	0,64	0,64
Waiting room atmosphere	0,43	0,55	0,55
Atmosphere in the studio	0,50	0,58	0,58
The quality of the audience seats in the studio	0,49	0,57	0,57
Distance of the audience seats between rows in the studio	0,31	0,43	0,43
Sound quality of the soundsystem	0,52	0,56	0,56
Picture quality on the cinema screen	0,57	0,54	0,57
Cleanliness and comfort of the toilet	0,51	0,66	0,66
All rooms are equipped with CCTV	0,40	0,54	0,54
The speed and friendliness of purchasing tickets at the counter	0,34	0,57	0,57
Ease of purchasing tickets online	0,45	0,57	0,57
Ease of payment of ticket purchases on the spot / online	0,40	0,63	0,63
Service speed and friendliness when purchasing food and drinks in a mini cafe	0,40	0,59	0,59
Speed of officer response to customer requests	0,35	0,50	0,50
Employee knowledge about Citra XXI	0,22	0,58	0,58
The customer's feeling of security when receiving services	0,27	0,59	0,59
Use of language that is polite and easily understood by officers when explaining / providing information to customers	0,39	0,69	0,69

4.5. Improvement ratio

Improvement Ratio is used to measure performance improvement based on targets to be achieved. Then the performance improvement of each attribute is calculated, with the following results:

Table 8: Improvement Ratio

Attribute	Target	Raw Importance	Improvement Ratio
Physical building	5	2	2,5
Waiting room atmosphere	5	1	5
Atmosphere in the studio	5	2	2,5
The quality of the audience seats in the studio	5	1	5
Distance of the audience seats between rows in the studio	5	1	5
Sound quality of the soundsystem	5	2	2,5
Picture quality on the cinema screen	5	2	2,5
Cleanliness and comfort of the toilet	5	2	2,5
All rooms are equipped with CCTV	5	1	5
The speed and friendliness of purchasing tickets at the counter	5	1	5
Ease of purchasing tickets online	5	2	2,5
Ease of payment of ticket purchases on the spot / online	5	2	2,5
Service speed and friendliness when purchasing food and drinks in a mini cafe	5	2	2,5
Speed of officer response to customer requests	5	1	5
Employee knowledge about Citra XXI	5	1	5
The customer's feeling of security when receiving services	5	1	5
Use of language that is polite and easily understood by officers when explaining / providing information to customers	5	1	5

4.6. Adjusted improvement ratio

Adjusted Improvement Ratio provides information of absolute importance to obtain the final result. The results are as follows:

Table 9: Adjusted Improvement Ratio

Attribute	f	K Value	Improvement Ratio	Adjusted Improvement Ratio
Physical building	0,64	1	2,5	4,11
Waiting room atmosphere	0,55	0,5	5	3,87
Atmosphere in the studio	0,58	1	2,5	3,94
The quality of the audience seats in the studio	0,57	0,5	5	3,92
Distance of the audience seats between rows in the studio	0,43	0,5	5	3,56
Sound quality of the soundsystem	0,56	1	2,5	3,91
Picture quality on the cinema screen	0,57	1	2,5	3,92
Cleanliness and comfort of the toilet	0,66	1	2,5	4,15
All rooms are equipped with CCTV	0,54	0,5	5	3,84
The speed and friendliness of purchasing tickets at the counter	0,57	0,5	5	3,94
Ease of purchasing tickets online	0,57	1	2,5	3,92
Ease of payment of ticket purchases on the spot / online	0,63	1	2,5	4,09
Service speed and friendliness when purchasing food and drinks in a mini cafe	0,59	1	2,5	3,98
Speed of officer response to customer requests	0,50	1	5	3,76
Employee knowledge about Citra XXI	0,58	0,5	5	3,94
The customer's feeling of security when receiving services	0,59	0,5	5	3,97
Use of language that is polite and easily understood by officers when explaining / providing information to customers	0,69	0,5	5	4,22

4.7. Adjusted importance

Adjusted Importance provides information about which attributes will be prioritized for repairs. The results are as follows:

Table 10: Adjusted Importance

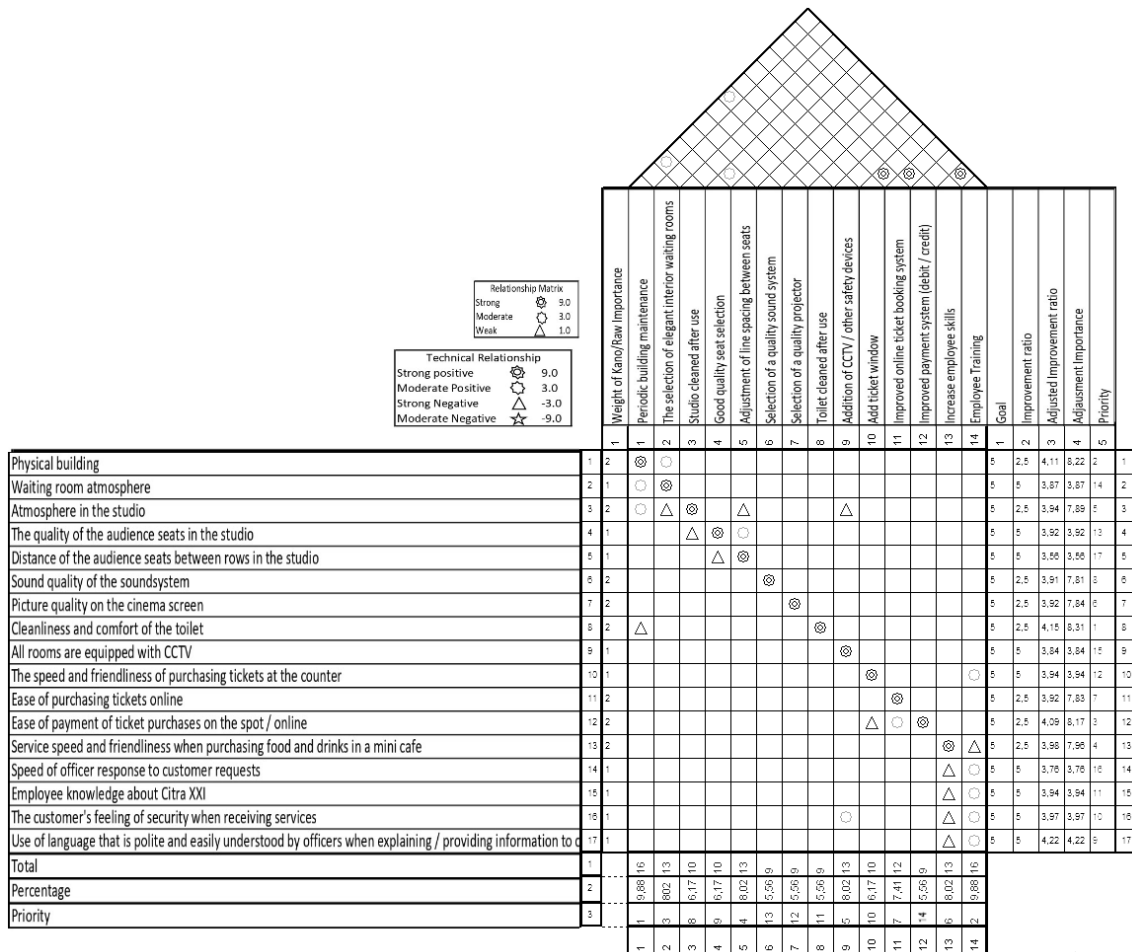
Atribut	Raw Importance	Adjusted Improvement Ratio	Adjusted Importance	Priority
Physical building	2	4,11	8,22	2
Waiting room atmosphere	1	3,87	3,87	14
Atmosphere in the studio	2	3,94	7,89	5
The quality of the audience seats in the studio	1	3,92	3,92	13
Distance of the audience seats between rows in the studio	1	3,56	3,56	17
Sound quality of the soundsystem	2	3,91	7,81	8
Picture quality on the cinema screen	2	3,92	7,84	6
Cleanliness and comfort of the toilet	2	4,15	8,31	1
All rooms are equipped with CCTV	1	3,84	3,84	15
The speed and friendliness of purchasing tickets at the counter	1	3,94	3,94	12
Ease of purchasing tickets online	2	3,92	7,83	7
Ease of payment of ticket purchases on the spot / online	2	4,09	8,17	3
Service speed and friendliness when purchasing food and drinks in a mini cafe	2	3,98	7,96	4

Speed of officer response to customer requests	1	3,76	3,76	16
Employee knowledge about Citra XXI	1	3,94	3,94	11
The customer's feeling of security when receiving services	1	3,97	3,97	10
Use of language that is polite and easily understood by officers when explaining / providing information to customers	1	4,22	4,22	9

4.8. House of quality

From the data that has been obtained from the results of the Kano model questionnaire, it is integrated into the Quality Function Deployment to form House of Quality as the final stage of this research (Hauser, 1988).

Figure 1: House of quality



5. Conclusion

Based on data analysis that has been done, it can be concluded that the conclusions obtained are as follows:

1. Attributes whose performance can be maintained and improved
 - a. The image quality of the image display on the cinema screen
2. Attributes whose performance must be increased
 - a. The physical attributes of the building
 - b. The atmosphere of the lounge, the atmosphere in the studio
 - c. The quality of the audience in the studio
 - d. The distance of the audience seats between rows in the studio

- e. The sound quality of the sound system
 - f. Cleanliness and comfort of the toilet
 - g. The whole room is equipped with CCTV
 - h. Speed and friendliness of ticket purchase at the counter
 - i. The convenience of online ticket purchases
 - j. The ease of payment of ticket purchases on-site / online
 - k. Service speed and friendliness when purchasing food and drinks in the mini café
 - l. The speed of response of the customer to customer requests, employee knowledge of XXI imagery
 - m. Customer security feelings when receiving services
 - n. The use of language that is polite and easily understood by officers when explaining / providing information to customers
3. The quality of the image display quality on the cinema screen is the highest influence on the increase in the level of customer satisfaction up to 57% and the employee's knowledge about the XXI Image is the lowest influence on the increase in the level of customer satisfaction that up to 22%.
 4. The task attribute always uses polite language and is easy to understand when explaining / giving information to customers is the highest influence on the decrease in the level of customer satisfaction up to -69% and the attributes of the audience seat in the line are the lowest influence on the decline level of customer satisfaction up to -43%.
 5. Priority of attribute improvements for repairs can be sorted according to results from the adjusted importance value, namely:
 - a. Cleanliness and comfort of the toilet
 - b. Physical building
 - c. Ease of payment of ticket purchases on the spot / online
 - d. Service speed and friendliness when purchasing food and drinks in a mini café
 - e. Atmosphere in the studio
 - f. Picture quality on the cinema screen
 - g. Ease of purchasing tickets online
 - h. Sound quality of the soundsystem
 - i. Use of language that is polite and easily understood by officers when explaining / providing information to customers
 - j. The customer's feeling of security when receiving services
 - k. Employee knowledge about Citra XXI
 - l. The speed and friendliness of purchasing tickets at the counter
 - m. The quality of the audience seats in the studio
 - n. Waiting room atmosphere
 - o. All rooms are equipped with CCTV
 - p. Speed of officer response to customer requests
 - q. Distance of the audience seats between rows in the studio
 6. The contribution of technical responses to meeting customer needs is sorted from the biggest contributions as follows:
 - a. Periodic building maintenance
 - b. Employee Training
 - c. The selection of elegant interior waiting rooms
 - d. Adjustment of line spacing between seats
 - e. Addition of CCTV / other safety devices
 - f. Increase employee skills
 - g. Improved online ticket booking system
 - h. Studio cleaned after use
 - i. Good quality seat selection
 - j. Add ticket window
 - k. Toilet cleaned after use
 - l. Selection of a quality projector
 - m. Selection of a quality sound system
 - n. Improved payment system (debit / credit)

Appendix A. Supplementary material

Supplementary data associated with this article can be found, in the online version, at <https://doi.org/10.14254/jems.2020.5-2.4>

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