

Customer Satisfaction Improvement using Private Dentalcare Service Quality (Privdent Servqual) and Importance Performance Analysis (IPA)

Sandy Aditya Susilo^{1,3} and Moses Laksono Singgih^{2,4}

¹ Department of Technology Management, Sekolah Interdisiplin Manajemen Teknologi, Institut Teknologi Sepuluh Nopember, Surabaya 60264, Indonesia;

² Department of Industrial and System Engineering, Institut Teknologi Sepuluh Nopember Institut Teknologi Sepuluh Nopember, Surabaya 60264, Indonesia;

³ sandyadrg@gmail.com; ⁴ moseslsinggih@its.ac.id.

Abstract. As new competitors grow, the East Surabaya Dental Clinic (ESDC) experiences a significant decrease in the number of patient visits in 2022. The reduced number of patients visit has prompted ESDC management to analyze customer satisfaction and wish to improve service quality based on customer interests. This study is based on customer ESDC satisfaction measurement. Private Dentalcare Service Quality (Privdent Servqual) aims to analyze the gap between customer expectations and the reality of the services provided by ESDC. Dimensions need to measure in Privdent Servqual: availability convenience, tangible, reliability, treatment quality, equipment, cost and payment, patient safety, assurance, responsiveness, and empathy. After that, the results of the analysis were used as a formulation of suggestions to increase customer satisfaction at the ESDC. In addition, the importance of the service was also carried out using the Importance Performance Analysis (IPA). Questionnaires were filed by 50 respondents in this study. Results of improvement suggestion using integrated weighted gap service and IPA cartesian diagram are six attributes as follows: treatment cost (-1,370), treatment costs commensurate with the quality treatment (-1,102), customer served on time (-0,951), dental care treatment bundling (-0,865), payment process (-0,728), parking area availability (-0,522). Based on these results author suggests ESDC improve cost and payment dimension by recalculating treatment cost structure using Activity Based Costing (ABC), evaluating supply chain policies for alternative raw materials that are affordable and excellent, advancing dentist scientific knowledge, providing dentist soft skill training, human resources (dentist, admin, dental nurse) training towards to electronic dental record to accommodate faster payment process.

Keywords: Dental Clinic; Customer Satisfaction; Importance Performance Analysis (IPA); Private Dentalcare (Privdent); Service Quality (Servqual).

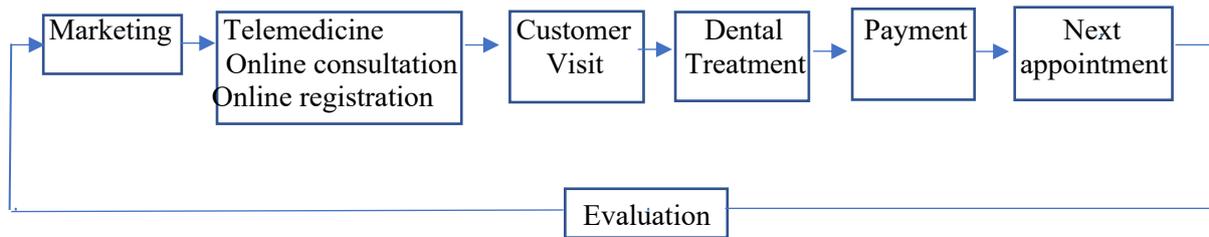
53. 1. INTRODUCTION

The dental clinic is a dental and oral health service facility provided to the public. The implementation of dental clinic services is carried out by the government and the private sector, where private clinics can be in the form of individual or group independent practice. Dental clinics are also useful as curative services, health rehabilitation, maintaining and improving the quality of individual

health, organizing learning and training of medical personnel to increase expertise in providing health services, and organizing research and development and screening of health technology [1].

The basic function of ESDC is facilitating dental health services to customers and must be able to provide the best service to customers. An analysis of the level of customer satisfaction at ESDC must be carried out to find out whether these customers have received the best service. However, ESDC does not know yet customer satisfaction situation towards service quality that have been provided.

Figure 1. Customer services process flow at East Surabaya Dental Clinic.



In addition, ESDC does not yet have structured assessment parameters and requires priority attention to analyze and improve customer satisfaction. The formulation of the problems to be examined in this study are:

1. Does the ESDC customer satisfaction level match the expectations of ESDC service performance?
2. What factors influence ESDC customer satisfaction?
3. Which ESDC service are important for customer to improve ESDC customer satisfaction?

Several of the complains that have been mentioned previously, ESDC strategy's in facing competition is the service quality improvement to differentiate their value from others private dentalcare competitors. This research aims to locate service quality attributes that are considered important for ESDC's customers and to determine ESDC's service quality given to customer. Measurement methods service quality used is the Private Dentalcare Service Quality (PRIVDENT SERVQUAL) model. PRIVDENT SERVQUAL final results were analyzed using the Importance-Performance Analysis (IPA), its aim is to pinpoint which attributes become priorities for ESDC's service quality improvement.

54. 2. LITERATURE REVIEW

Service quality can be interpreted as a measurement of customer expectations. Based on this meaning, Service quality is clarified how company can draw together customer needs and customer expectations [2]. Two factors can affect a service quality: 1. how a service is expected by a customer (expected service); 2. how is the consumer's perception of a service (perceived service). When the value of the perceived service matches the expected service, the quality of the service provided will be of good value to the customer. When the perceived service value exceeds the expected service, the company provides an ideal service. Conversely, if the perceived service value is lower than the expected service, then the value of service quality in the company is bad or low. From this explanation, it can be concluded that the good or bad quality of the services provided by the company, can be judged by how a company can provide good service that can meet customer needs. [3].

Assessment of the quality of service and an assessment of satisfaction from the customer side, a consensus has been obtained that customer expectations are an important factor in comparing quality and customer satisfaction. If the service quality of the service provider satisfies the customer, it will affect the customer in purchasing the service again (repurchasing) and vice versa [4].

Every customer has a different vision of service quality. The level of customer satisfaction is a relatively complex factor, but the quality of services provided must be consistent with the majority of customers. In general, customers do not have a professional guide to assess satisfaction just following personal expectations [5]. This is a challenge for ESDC to align the perspective of a service that has guidance with the expectations of customers who do not have a guide.

This study integrates several service qualities selected from the literature, namely Service Quality [4], Private Health Quality/Privthealthqual [6], Dental Quality Alliance [7], and Dental Satisfaction Questionnaire [8].

Privhealthqual is a development of Service Quality specifically designed to measure the quality of private sector health services and cannot be used in other industrial sectors. Privhealthqual suggests seven dimensions of service quality in health services: tangible, reliable/fair and equitable treatment, responsiveness, assurance/empathy, core medical services, professionalism/skill/competence, equipment and records, and information dissemination [6]. Furthermore, the Dental Quality Alliance (DQA), which is part of the American Dental Association (ADA) suggests six dimensions of quality of dental health services: safe, timely, effective, efficient, equitable, and patient-centered which is also referred to as The STEEEP Model [7]. The Dental Satisfaction Questionnaire suggests five dimensions of quality dental health services: access, availability convenience, cost, pain, and quality treatment [8].

The previous researchs in Indonesia mostly in government dentalcare provider and used 5 dimension service quality [14] and narrative of risk management dentalcare provider [15]. The author summarized service quality in private dental service into Private Dentalcare Service Quality (Privdent Servqual). Privdent Servqual suggests ten dimensions of quality of private dental health services: availability convenience, tangibility, reliability, quality treatment, equipment, cost and payment, patient safety, assurance, responsiveness, and empathy.

Table 1. The ten dimensions of Private Dentalcare Service Quality

Availability convenience	The dental clinic location, and its access [8]
Tangible	The physical facilities, employees, images, and appearance [4, 6].
Reliability	The ability to perform promised services dependably, accurately, fairly, equitably [4, 6].
Quality Treatment	The quality of dentist most dental problems that customers get [8]
Equipment	The physical equipment used by dental clinic to treat [6]
Cost and Payment	The charge of dental treatment and payment process [8]
Patient Safety	The standard procedure to provide safety during dental treatment [6]
Assurance	The knowledge of employee courtesy and their ability to create trust [4, 6].
Responsiveness	The willingness to help customers and provide prompt service [4, 6].
Empathy	The provision of caring, individualized attention to customers [4, 6].

Every attribute was measured rely on customer responses two parameters, customer expectations of service (E) and actual provided services perceptions by company (P). Each attribute gap value was calculated by subtracting perception to expectations (P-E). This study results can be summarized as follows: 1. A positive gap score indicates expectations have been met or exceeded, service quality is considered satisfactory to the customer. 2. A negative gap score indicates that expectations have not been met, quality is considered unsatisfactory to customers [19].

IPA has been used as a tool to identify customer importance from service quality attribute. Furthermore, IPA can be used as well to develop marketing strategies to respond to them. IPA is widely used in many fields where customer satisfaction is key to a thriving business including healthcare, higher education, tourism, government, public services, convenience stores, hospitality and banking services. These customer satisfactions are a function of customer perception, which involves the quality of the organization's products or services and customer expectations. IPA elements ranking is divided into four quadrants as seen in the picture below:



Figure 2. Importance-Performance Analysis Cartesius Diagram.

1. Quadrant I (High Importance, Low Performance), represents critical service elements not performed at the expected level.
2. Quadrant II (High Importance, High Performance), represents critical service elements well performed; the company must maintain high performance attribute.
3. Quadrant III (Low Importance, Low Performance), represents non-critical service elements that are delivered in an unremarkable way but do not require attention.
4. Quadrant IV (Low Importance, High Performance), represent that non-critical service element is very well done but has less importance customer level.

Therefore, IPA measurement proceeds customer satisfaction from preliminary survey based two parameters: product or service desired customer importance and product or service performance provided by the company [20]. IPA is very closely related to the Cartesian diagram because the final result is depicted by using a Cartesian diagram in which there are four quadrants. The Cartesian diagram has two axes, namely X and Y. X represents the average level of reality that affects customer satisfaction of all factors and Y is the average level of importance or expectation of all factors that affect customer satisfaction [11].

55. 3. METHODS

In this study, purposive sampling methods (a non-probability sampling technique) was used by selecting samples that have certain characteristics criteria to homogenize samples. 50 ESDC customers were participated in preliminary survey to collect customer satisfactory appraisal, customers criteria in this study are previously ever visited other dental clinic or other dentist, recently visited ESDC minimum 2 times during November 14th-December 14th 2022, self-funded payment independently. The PRIVDENT SERVQUAL was formulated based on basic servqual attribute and its development from discussion conducted with the ESDC's management, customer complaints database, and previous research literature. The collected questionnaire data were validity tested using Pearson's Product Moment and reliability tested using Cronbach's Alpha. Validity results will be analyzed using PRIVDENT SERVQUAL attributes and IPA, invalid attribute will not included in the analysis. Demographic customer data, such as sex, age, educational background, occupation, salary per month, number of visit being a customer at ESDC were filled in the questionnaire as well to facilitate customer complaints tracking.

4. RESULTS and DISCUSSION

4.1 DEMOGRAPHIC

Table 2. Respondent demographic data

Demographic Variables		Total			
Sex	Male	12	26-45 years old	14	
	Female	38	> 46 years old	7	
Age	< 17 years old	1	Occupation	College	8
	17-25 years old	10		Entrepreuner	11
	26-35 years old	18		Government	4
				BUMN	2

	Doctor	3
	Unemployeed	6
	Others	16
	High school	8

Education Background	Diploma	3
	Bachelor	30
	Master	8
	Doctorate	1

The respondent demographic data were gathered based on those visit ESDC for dental treatment divided into sex, age, education background, occupation, being a customer of ESDC. These data will help researchers further respondents characteristics, especially their decision having dental treatment offered by ESDC.

4.2. PRIVDENT SERVQUAL Attribute

Table 3. PRIVDENT SERVQUAL Attribute

DIMENSION	Attibute Code	PRIVDENT SERVQUAL Attributes
<i>Availability convenience</i>	X1.1	ESDC location strategic
	X1.2	ESDC location is easy to access
	X1.3	Parking area availability
<i>Tangibility</i>	X2.1	Dental worker appearance
	X2.2	ESDC area clean
	X2.3	ESDC interior design comfort
<i>Reliability</i>	X3.1	Dental appointment process easy
	X3.2	Customer served on time
	X3.3	Dentist explains customer condition
	X3.4	Dentist explains customer treatment planning
	X3.5	Dentist explains customer treatment cost
	X3.6	Dentist explanation is convincing
<i>Quality Treatment</i>	X4.1	Painless dental treatment
	X4.2	Collaboration of specialist dentists to resolve customer complaints
	X4.3	Treatment is carried out according to the needs of customer complaints
	X4.4	Treatment cost is commensurate with the quality treatment
<i>Equipment</i>	X5.1	Visual communciation customer conditions with dental photography
	X5.2	Diagnose customer conditions using digital rontgen
<i>Cost and Payment</i>	X6.1	Treatment cost
	X6.2	Dental care treatment bundling
	X6.3	Payment process
<i>Patient safety</i>	X7.1	Personal Protective Equipment (PPE) customer to prevent cross infection
	X7.2	Use of sterile examination equipment
<i>Assurance</i>	X8.1	Dental worker are friendly when serving customers
	X8.2	Services are carried out according to the queue
	X8.3	Ease of submitting customer complaints
	X8.4	Customers feel comfort when at ESDC
<i>Responsiveness</i>	X9.1	Operational hours as written
	X9.2	The admin take initiative to provide an alternative schedule if customer reschedules

	X9.3	Admin reconfirm treatment cost before payment
<i>Empathy</i>	X10.1	ESDC serves all types customers
	X10.2	Customer suggestion box
	X10.3	Dental personnel serve sincerely
	X10.4	Clarity of recording the history of customer visits

PRIVIDENT SERVQUAL's attributes in the questionnaire were compiled from interviews with ESDC management team, in this case the marketing manager, direct observations when customers visitation, submitted customer complaints databases to the front office team, and literature collected from previous research.

4.3. PRIVIDENT SERVQUAL Results

Table 4. Average Level Calculation of Compliance PRIVIDENT SERVQUAL Dimension.

Privident Servqual Dimension	Average Performance	Average Expectation	Privident Servqual Performance (%)
Availability Convenience	4.127	4.253	97.022
Tangibility	4.660	4.613	101.012
Reliability	4.557	4.640	98.204
Quality Treatment	4.400	4.460	98.655
Equipment	4.460	4.320	103.241
Cost and Payment	4.053	4.280	94.704
Patient Safety	4.700	4.710	99.788
Assurance	4.670	4.695	99.468
Responsiveness	4.547	4.587	99.128
Empathy	4.360	4.490	97.105
AVERAGES	4.453	4.505	98.832

Suitability private dentalcare service quality dimensions of the average level calculation exhibit that average PRIVIDENT SERVQUAL dimension for service quality is 98.832% and each dimension as following: availability convenience 97.022%, tangibility 101.012%, reliability 98.204%, quality treatment 98.655%, equipment 103.241%, cost and payment 94.704%, patient safety 99.788%, assurance 99.468%, responsiveness 99.128%, empathy 97.105%. Based on the results of this research data, dimension under average are cost and payment, availability convenience, empathy, reliability, quality treatment. Gap 5 indicates gap between customer expectation and customer perception, it was measured by subtracting total perception average value items with the total expectations average value on each attribute.

4.4. Importance Performance Analysis Results

In this study Importance-Performance Analysis (IPA) was carried out on all respondents using comparison between customer importance level against company performance (can be seen in table 5). The results of the average score for calculating the customer importance level with the performance of the services provided by ESDC are as follows:

Table 5. The results of the weighted score of the gap performance and expectations multiply with importance.

Dimension	Attribute Code	Performance (P)	Expectation (E)	Gap (P-E)	Importance (I)	Weighted Gap(P-E)*I
Availability convenience	X1.1	4,140	4,300	-0,160	4,320	-0,691
	X1.2	4,240	4,340	-0,100	4,480	-0,448
	X1.3	4,000	4,120	-0,120	4,360	-0,523
Tangibility	X2.1	4,720	4,620	0,100	4,600	0,460
	X2.2	4,780	4,720	0,060	4,800	0,288
	X2.3	4,480	4,500	-0,020	4,460	-0,089
Reliability	X3.1	4,480	4,640	-0,160	4,800	-0,768
	X3.2	4,340	4,560	-0,220	4,760	-1,047
	X3.3	4,660	4,740	-0,080	4,760	-0,381
	X3.4	4,760	4,700	0,060	4,840	0,290
	X3.5	4,460	4,620	-0,160	4,700	-0,752
	X3.6	4,640	4,580	0,060	4,760	0,286
Quality Treatment	X4.1	4,360	4,400	-0,040	4,460	-0,178
	X4.2	4,500	4,500	0,000	4,580	0,000
	X4.3	4,560	4,520	0,040	4,620	0,185
	X4.4	4,180	4,420	-0,240	4,580	-1,099
Equipment	X5.1	4,500	4,360	0,140	4,480	0,627
	X5.2	4,420	4,280	0,140	4,500	0,630
Cost and Payment	X6.1	4,080	4,380	-0,300	4,500	-1,350
	X6.2	3,860	4,080	-0,220	4,320	-0,950
	X6.3	4,220	4,380	-0,160	4,540	-0,726
Patient safety	X7.1	4,620	4,640	-0,020	4,520	-0,090
	X7.2	4,780	4,780	0,000	4,760	0,000
Assurance	X8.1	4,740	4,740	0,000	4,760	0,000
	X8.2	4,660	4,720	-0,060	4,680	-0,281
	X8.3	4,600	4,620	-0,020	4,680	-0,094
	X8.4	4,680	4,700	-0,020	4,680	-0,094
Responsiveness	X9.1	4,600	4,620	-0,020	4,560	-0,091
	X9.2	4,600	4,620	-0,020	4,660	-0,093
	X9.3	4,440	4,520	-0,080	4,500	-0,360
Empathy	X10.1	4,540	4,520	0,020	4,600	0,092
	X10.2	3,800	4,120	-0,320	4,060	-1,299
	X10.3	4,560	4,660	-0,100	4,680	-0,468
	X10.4	4,540	4,660	-0,120	4,620	-0,554
		4,457	4,520	-0,063	4,588	-0,281

From the results of the calculation of the gap obtained from performance minus expectation then multiplied with importance. There are 23 attributes obtained negative results, meaning that ESDC performance was still unable to satisfy customer expectation. Nevertheless, this gap analysis shown the average level of ESDC's service quality at -0,281 which mean still quite good. If the gap result <-1 implies good, and if gap result >-1 implies the service quality provided is not good [21].

Table 6. The results of the weighted score for calculating the level of customer interest with the performance of the services provided by ESDC.

Attribute Code	Attribute	Weighted Gap(P-I)*I	Gap P-I	I
X6.1	Treatment cost	-1,350	-0,3	4,500
X10.2	Customer suggestion box	-1,299	-0,32	4,060
X4.4	Treatment cost is commensurate with the quality treatment	-1,099	-0,24	4,580
X3.2	Customer served on time	-1,047	-0,22	4,760
X6.2	Dental care treatment bundling	-0,950	-0,22	4,320
X6.3	Payment process	-0,726	-0,16	4,540
X1.1	ESDC location strategic	-0,691	-0,16	4,320
X3.1	Dental appointment process easy	-0,768	-0,16	4,800
X3.5	Dentist explains customer treatment cost	-0,752	-0,16	4,700
X10.4	Clarity of recording the history of customer visits	-0,554	-0,12	4,620
X1.3	Parking area availability	-0,523	-0,12	4,360
X10.3	Dental personnel serve sincerely	-0,468	-0,1	4,680
X1.2	ESDC location is easy to access	-0,448	-0,1	4,480
X3.3	Dentist explains customer condition	-0,381	-0,08	4,760
X9.3	Admin reconfirm treatment cost before payment	-0,360	-0,08	4,500
X8.2	Services are carried out according to the queue	-0,281	-0,06	4,680
X4.1	Painless dental treatment	-0,178	-0,04	4,460
X8.3	Ease of submitting customer complaints	-0,094	-0,02	4,680
X8.4	Customers feel comfort when at ESDC	-0,094	-0,02	4,680
X9.1	Operational hours as written	-0,091	-0,02	4,560
X2.3	ESDC interior design comfort	-0,089	-0,02	4,460

Importance performance analysis (IPA) results can be seen from the average score calculation (can be seen on table 6). IPA will assess various attributes of the service variable and identify the actions improvements should be taken by ESDC. The results IPA from the highest importance value to the lowest are below: X6.1; X10.2; X4.4; X3.2; X6.2; X6.3; X1.1; X3.1; X3.5; X10.4; X1.3; X10.3; X1.2; X3.3; X9.3; X8.2; X4.1; X8.3; X8.4; X9.1; X2.3. Most of the average scores attribute shown smaller performance value than customer importance level. It shows that customer feel these attributes are very important but are not done well by ESDC.

The IPA results divided into 4 quadrant shown on Cartesian Diagram in Figure 3. ESDC primary concern must be on Quadrant I (High Priority Low Performance) and there is only 1 attribute X3.2. Quadrant I (concentrate here) explains that the importance average score is quite high but the average score of performance is low. Afterwards, Quadrant II (high priority high performance) implied keep up the good work, which represents the strong side and ESDC's competitive advantage, its task is to continue to maintain the quality of the attributes in it. There are 17 attributes in this quadrant sequentially X3.4, X2.2, X3.1, X3.6, X3.3, X8.1, X7.2, X3.5, X10.3, X10.4, X8.3, X8.2, X8.4, X9.2, X4.3, X10.1, X2.1. These results can be concluded that customers are very 50 satisfied with the services provided by

the company. This attribute also has high average importance score, so the company must maintain this service quality attribute.

In Quadrant III contains 10 attribute: X4.4, X6.3, X6.1, X5.2, X9.3, X1.2, X4.1, X1.3, X6.2, X1.1 and these attributes also have interpretation as low importance and low performance. Quadrant III do not represent any threat to the company, but managers should re-think do transfer resources from these attributes to another attributes demand immediate improvement [17].

In Quadrant IV contains 5 attributes: X4.2, X9.1, X7.1, X5.1, and X2.3 and these attribute have low importance and high performance interpreted as possilby overkilled. ESDC's customers were satisfied with its performance. However, this attribute is actually not very important but its performance is relatively high. Respondents were satisfied with organizational performance, but managers should consider efforts on this quadrant attribute as excessive or unnecessary.

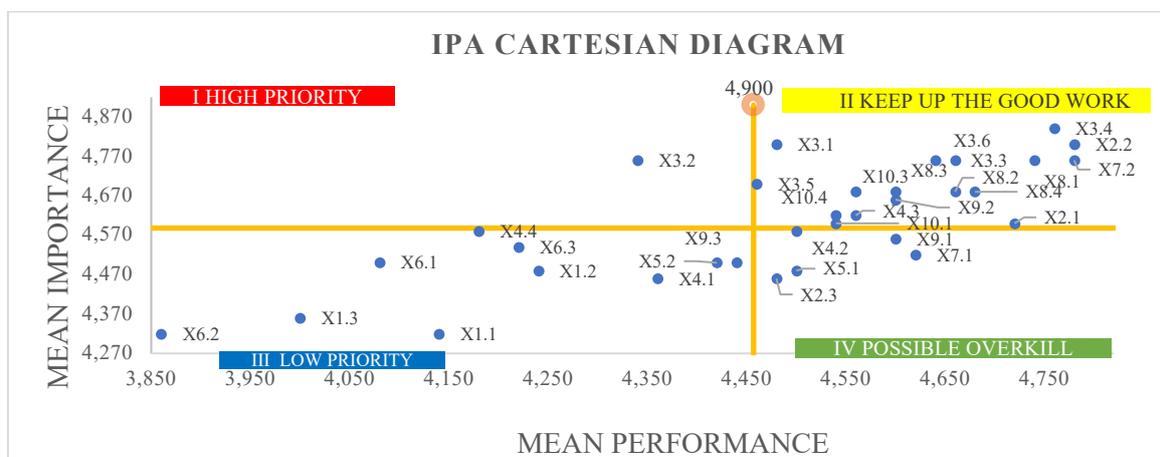


Figure 3. The Cartesian Diagram Importance Performance Analysis Privdent Servqual.

There is a significant difference in improvement recommendations between weighted gap service by customer importance level and the IPA cartesian diagram. From IPA cartesian diagram shows only 1 high priority would enhance customer satisfaction meanwhile weighted gap service by customer importance level suggests improvement from highest to lowest score. It indicates that most attributes are satisfying ESDC customers. Regarding the importance of customer satisfaction, integrating recommendations between weighted gap service and IPA cartesian diagram should be considered by ESDC management from possible to do or not. Results of improvement suggestion using integrated weighted gap service and IPA cartesian diagram are six attributes as follows: X6.1 treatment cost (-1,370), X4.4 treatment costs commensurate with the quality treatment (-1,102), X3.2 customer served on time (-0,951), X6.2 dental care treatment bundling (-0,865), X6.3 payment process (-0,728), X1.3 parking area availability (-0,522).

From this suggestion, frequent dimensions that may affect customer satisfaction are cost and payment shown in 3 attributes, quality treatment shown 1 attribute, reliability shown in 1 attribute, and availability convenience is shown 1 attribute. The author suggests ESDC improve cost and payment dimension by recalculating treatment cost structure using Activity Based Costing (ABC), evaluating supply chain policies for alternative raw materials that are affordable and excellent, advancing dentist scientific knowledge, providing dentist soft skill training, human resources (dentist, admin, dental nurse) training towards to electronic dental record to accommodate faster payment process.

56. 4. CONCLUSION

Privdent Servqual is a metric measurement to detect customer satisfaction, but Privdent Servqual has many disadvantages and doubts due to cognitive ability, personality disorders, and irrationality response [12]. Importance-Performance Anaylis ease company to assess which service attribute lack of performance but highly important to improve that would increase customer satisfaction. Decreased

number visit of ESDC patients in the last year was mostly influenced by six attributes: treatment cost too high, treatment cost not commensurate with the quality treatment, customers not served on time, absence of dental care treatment bundling, customers waiting too long for payment process, and lack of parking area availability.

5. REFERENCES

- [1] Peraturan Kementerian Kesehatan RI nomor 920/Menkes/Per/XII/1986
- [2] Tjiptono, Fandy. (2006). Strategi Pemasaran : Andy Offset, Edisi Kedua, Yogyakarta.
- [3] Parasuraman, A. Valarie, A. Zeithaml, & L. Berry. 1985. A Conceptual Model of Service Quality and Its Implications for Future Research, *Journal of Marketing*, Vol. 49 (Fall 1985). Pp: 41-50.
- [4] Parasuraman, A., Zeithaml, V.A., Berry, L.L. 1988. SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, 64, 12-40.
- [5] Schmitz, U. 2018. *Challenges of Measuring Dental Service Quality*. GRIN Verlag. Berlin. The German National Library. ISBN: 9783668931886. Pp:
- [6] Ramsaran-Fowdar, R. R. 2008. The Relative importance of Service Dimensions in a Healthcare Setting. *International Journal of Health Care Quality Assurance*. Vol. 21 No.1, 2008. Emerald Group Publishing Limited. Pp: 104-124. DOI: 10.1108/09526860810841192
- [7] American Dental Association. 2019. *Quality Measurement in Dentistry: A Guidebook*. Dental Quality Alliance Improving Oral Health Through Measurement. https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/dqa/educational-resources/2019_guidebook.pdf?rev=ddef845838024bc7b72cf7312e8775b8&hash=CC40EC6E587CAC1778453826ADA15AB5 at 20 Agustus 2022.
- [8] Davies, A., Ware, J. 1981. *Measuring Patient Satisfaction With Dental Care*. Soc. Sci and Med Vol. 15A. Pergamon Press Ltd. Great Britain. Pp: 751-760.
- [9] Zeithaml, B., Bitner, M. J., Gremler. (2009). *Services Marketing: Integrating Customer Focus Across The Firm*. The McGraw-Hill Companies Inc. New York. S, 529, 532.
- [10] Martilla, J. A., James, J.C. 1977. Importance Performance Analysis. *The Journal of Marketing*, 41 (1), pp. 77-79.
- [11] Suhendra, A., Prasetyanto, D. 2016. *Kajian Tingkat Kepuasan Pengguna Trans Metro Bandung Koridor 2 Menggunakan Pendekatan Importance Performance Analysis*. Reka Racana, 2(2).
- [12] Ozkan, A. H. 2016. Weaknesses of Servqual Which Resources from Cognitive Differences. *International Journal of Business and Social Research* Vol. 06, issue 11, 2016. Pp: 34-37.
- [13] Widiastuti. 2011. *Tes dan Pengukuuran Olahraga*. Jakarta: PT Bumi Timur Jaya.
- [14] Watini, K., Singgih, M. L. 2022. *Service Quality Assessment PT. Distributor Reagent: Combination of Service Quality and Importance Performance Analysis Methods*. Pp: 494-503.
- [15] Akbar, F. H., Pasinringi, S., Awang, A. H. 2019. Factors Affecting Dental Center Service Quality in Indonesia. *Pesquisa Brasileira em Odoontopediatria e Clinica Integrada* 2019, 19:e4269. Pp: 5-7.
- [16] Mirandani D, Setijanto D. *Dental Care Service Quality Assists in Comprehensive Clinical Dental Risk Management: A narrative review*. *J Int Oral Health* 2022;14:209-14.
- [17] Ormanović. S., Ciric. A., Talovic. M., Alic. H., Jeleskovic. E., Causevic. D., (2017). *ImportancePerformance Analysis: Different Approaches*. *Acta Kinesiologica* 11 Supp. 2: 58-66
- [18] Kuat, W., Singgih, M. L. 2022. *Service Quality Assessment PT. Distributor Reagent: Combination of Service Quality and Importance Performance Analsysis Methods*.
- [19] Yousapronpaiboon, K. (2014), "SERVQUAL: measuring higher education service quality in Thailand", *Procedia – Social and Behavioral Sciences*, Vol. 116 No. 1, Pp. 1088-1095
- [20] Kwon, J., Chung, T. 2018. "Importance-Performance Analysis (IPA) of Service Quality for Virtual Reality Golf Center," *International Journal of Marketing Studies*, Canadian Center of Science and Education, vol. 10(3), Pp. 1-30, August.
- [21] Sianturi, H. P., Singgih, M. L. 2011. *Peningkatan Kualitas Pelayanan Kesehatan Pasien Unit Instalasi Rawat Jalan (IRJ) Rumkital Dr. Ramelan Surabaya Dengan Menggunakan Metode*

Servqual dan QFD. Prosiding Seminar Nasional Manajemen Teknologi XIV. Program Studi MMT-ITS. Pp: 141-146