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Analysis of JKN Mobile Application Service Quality (Case Study Participants of BPJS Health Surakarta Branch Office)

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Abstract: Mobile JKN is an application facilitating remote access to services under the national health insurance program managed by BPJS Kesehatan, offering numerous features for participant convenience. As of June 2023, registrations in the Surakarta area reached 92,101. This study evaluates the service quality of the Mobile JKN application using e-service quality, Customer Satisfaction Index (CSI), and Importance-Performance Analysis (IPA) methodologies. A quantitative approach focused on 100 participants visiting the Surakarta BPJS Kesehatan branch. The results of this research are that participants who use the Mobile JKN application are satisfied with the Mobile JKN application service, with an average gap value of 0.06 (positive value), and a CSI value of 81.4%, which indicates that participants are satisfied with the Mobile JKN service. IPA results identified three indicators as top priorities for further enhancement and quality improvement.

***Keywords*:** Mobile JKN Application, E-Service Quality, Customer Satisfaction Index, Importance-Performance Analysis

Abstrak: *Mobile JKN* merupakan aplikasi non tatap muka yang memiliki banyak fitur dan memudahkan peserta dalam memaksimalkan program jaminan kesehatan nasional yang diselenggarakan oleh BPJS Kesehatan. Hingga Juni 2023, di wilayah Surakarta, jumlah pendaftaran aplikasi *Mobile JKN* sebanyak 92.101 peserta. Penelitian ini bertujuan untuk menganalisis tingkat kualitas layanan aplikasi *Mobile JKN* dengan menggunakan metode *e-service quality*, *Customer Satisfaction Index* (CSI) dan *important performance analysis* (IPA). Objek penelitian ini adalah peserta yang datang ke kantor BPJS Kesehatan cabang Surakarta yang berjumlah 100 peserta. Hasil dari penelitian ini adalah peserta pengguna aplikasi *Mobile JKN* merasa puas terhadap layanan aplikasi *Mobile JKN*, dengan rata-rata nilai gap sebesar 0,06 (nilai positif), dan nilai CSI sebesar 81,4% yang menandakan peserta puas terhadap layanan *Mobile JKN*, dan hasil analisis IPA menunjukkan 3 indikator masuk ke dalam kuadran I (prioritas utama) untuk dikembangkan dan ditingkatkan kualitasnya.

Kata Kunci: Aplikasi Mobile JKN, E-Service Quality, Customer Satisfaction Index, Importance Performance Analysis

INTRODUCTION

Various elements currently use the development of digital transformation in all aspects of life to maximize services for its users, including the Health Social Security Organisation (BPJS Kesehatan). One of the main non-face-to-face services used by BPJS Kesehatan is the JKN Mobile Application. The JKN Mobile Application is an application specifically designed for mobile platforms such as IOS, Android, or Windows Mobile (Melati, 2022). This application can be used by participants anywhere, anytime without time restrictions (Lubs, Salim, & Jefi, 2020). As of June 2023 in the Surakarta area, the number of Mobile JKN application registrations was 92,101 participants. The JKN Mobile application has a variety of features to make it easier for JKN participants such as checking card validation, printing cards, checking contribution bills, changing domicile addresses, and so on so it has tremendous benefits for JKN Mobile application users (Suhadi, Jumakil, & Irma, 2022).

Along the way, the services provided in the Mobile JKN application still have many shortcomings, one of which can be seen from the reviews on the Google Play Store (rating 4.4 out of 5), many participants still complain about the difficulty of logging in, frequent application updates, restrictions on access hours for registration, to complaints that the input data is not appropriate. This is by research in 2022 conducted by Riri et al on 100 users of the Mobile JKN application, the gap value between expectations and reality of participants on the Mobile JKN application is negative (-), which means that participants are not satisfied with the Mobile JKN application service and the value of service quality is less than 1, namely 0.8287, which means that the quality of service is not good (Riri, Sari, & Rusi, 2022). The JKN Mobile application as a government application provider is expected to provide the best service for the community. However, this application has not fully received positive appreciation and has many shortcomings that reduce the satisfaction of customers who use it. (Roiqoh, Zaman & Kartono, 2023)

The results of a literature review in journals published in 2019-2021 on the factors that influence participant satisfaction with the Mobile JKN application consist of 5 dimensions, namely, reliable, tangible, responsiveness, privacy, and assurance (Anaqamy & Prayoga, 2022). These five dimensions are the dimensions of service quality measurement proposed by Pasurahman, known as service quality (SERVQUAL). In particular (Rita & Firdaus, 2020) in their research stated that reliability, efficiency, fulfillment, privacy, responsiveness, and contact simultaneously have a positive and significant influence on participant satisfaction. The development of service areas in the digital world service quality is modified into e-service quality (e-SQ). Modification of e-service quality makes the dimensions of service quality measurement also develop. Research conducted).

(Li & Suomi, p. 2019) distilled more than 25 literacies about e-service quality and stated that the various dimensions of e-service quality can be summarised into 8 dimensions, namely 1) Website design 2) Reliability 3) Responsiveness 4) Security 5) Fulfillment 6) Personalisation 7) Information 8) Empathy.

CSI is a metric that measures the level of customer satisfaction with a company's products or services. CSI provides an overview of the extent to which the company can fulfill customer wants and needs (Budiman. *et.al*, 2023: 160). CSI is a method used to determine the overall level of satisfaction of participants and is used as a reference in determining future goals (Ardianti & Waluyo, 2021). (Amri, Subagio, & Kusnadi, 2020) The advantage of the CSI method is that it can measure and analyze satisfaction by comparing expectations with existing reality. In addition, Importance Performance Analysis (IPA) is a method that is often used to identify indicators that are important in influencing customer satisfaction (Setiawan, Yamani & Winati, 2022). (Ong & Pambudi, 2014) IPA can be used to see the extent of the institution's achievement in providing satisfaction with a service, as well as knowing which needs to be maintained and which needs to be abandoned.

Based on the explanation above, this study will analyze the service quality of the JKN Mobile Application using the e-service quality method to see the level of satisfaction based on the gap between expectations and reality, strengthened by using the Customer Satisfaction Index (CSI) to measure satisfaction levels and using the Importance Performance Analysis (IPA) method to display the results of the analysis into a Cartesian diagram which will facilitate analysis and can determine accurate final results in this study.

METHOD

This research uses descriptive quantitative research methods. This research was conducted in mid-July 2023 - October 2023. The population in this study amounted to 636 participants, which is the average visitor to the Surakarta Branch BPJS Health office in January - May 2023. The sample was calculated based on the expert opinion of Frankel & Wallen (Amiyani, 2016) which states that the reference for the number of descriptive research samples is 100 people. Sample withdrawal uses non-probability sampling with a purposive sampling technique because not all populations can be involved in the study, namely only participants who have and have used the Jkn Mobile application can fill out the questionnaire.

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Table 1. Validity and Reliability Test Results Expectations and Reality

Attributes	r Calculate Expectations	r Calculate Reality	r tabel	Cronbsch's Alpha Expectations	Cronbsch's Alpha Reality
item 1	0.886	0.822	0.361	0.985	0.984
item 2	0.757	0.769	0.361	0.985	0.984
item 3	0.754	0.858	0.361	0.985	0.984
item 4	0.866	0.918	0.361	0.985	0.984
item 5	0.925	0.954	0.361	0.985	0.984
item 6	0.947	0.946	0.361	0.985	0.984
item 7	0.973	0.962	0.361	0.985	0.984
item 8	0.912	0.902	0.361	0.985	0.984
item 9	0.973	0.925	0.361	0.985	0.984
item 10	0.836	0.779	0.361	0.985	0.984
item 11	0.973	0.933	0.361	0.985	0.984
item 12	0.946	0.910	0.361	0.985	0.984
item 13	0.905	0.894	0.361	0.985	0.984
item 14	0.987	0.977	0.361	0.985	0.984
item 15	0.949	0.962	0.361	0.985	0.984
item 16	0.849	0.873	0.361	0.985	0.984

*n = 30

The data obtained from the instrument will be analyzed with the Customer Satisfaction Index (CSI). Customer Satisfaction Index is obtained from the following calculation:

$$CSI = \frac{T}{5Y}100\%$$

Where: Y = average expectations

T = sum of expectation x sum of satisfaction

The value 5 in 5Y is the maximum value on the measurement scale. Where the CSI value is 100%. Suppose the CSI value is 50% or below. In that case, it indicates poor performance or participants are not satisfied with the Mobile JKN application service. In comparison, a CSI value of 80% or more indicates that participants are satisfied with the performance of services on the Mobile JKN application.

After analyzing the data using CSI, then to find out the gap, analyze the level of conformity and quadrant analysis using IPA.

One of the expected outputs using IPA is the formation of an IPA diagram or what is commonly called a certification diagram. The diagram is a split shape with X and Y axes, where the Y axis

represents Expectations, and the X axis represents the Reality obtained while using product services. (Musyarofah, Ilmadi, & Setiawan, 2021). Data processing using a Cartesian diagram aims to see in detail the attributes that need to be improved and the attributes that need to be considered (Pawennari, et al, 2021). The four quadrants in the cartesian diagram (Syukhri, 2018) are as follows:

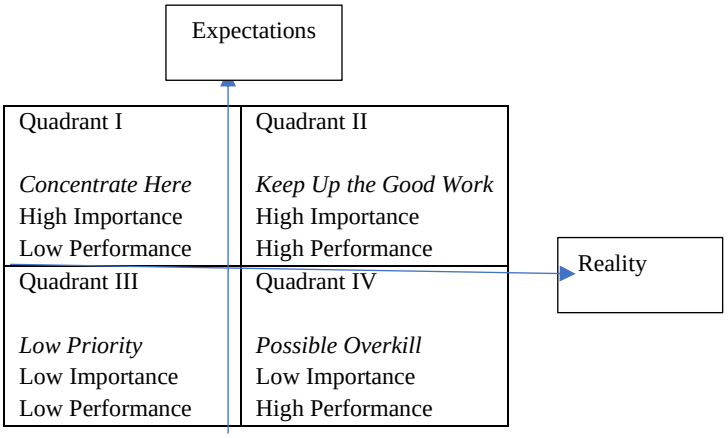

Figure 1. ***Importance Performance Analysis (IPA)***

RESULT

Respondent Demographic Analysis Results

A total of 100 respondents in this study with the characteristics listed in the table below :

Table 2. Respondents' Characteristics

Characteristics	Persentase
Sex	
Male	66 %
Female	34 %
Educations	
High School Equivalent	42 %
Diploma / S1 Equivalent	46 %
Post Graduate/Doctoral	12 %
Type of Membership	
Contribution Assistance Recipients	17 %
Non-wage earners / non-independent workers	22 %
Wage Earners - Government Employees with Employment Agreements	3 %
Salaried Employees Private Employees	36 %
Village Head Wage Receiving Employee	3 %
Wage-earning employees of police officers	1 %
Wage Earners - Civil Servants	17 %

Data Analysis Results

The data obtained is calculated with the help of MS Excel to calculate the average of the expectations and reality questionnaire (e-service Quality), and then the Gap value (difference) is obtained which can be seen in the table below:

Table 3. Expectation and Reality Difference Results

Indicators	Expectations	Reality	GAP
1A	4.10	4.03	0.07
1B	4.14	4.09	0.05
2A	4.14	4.07	0.07
2B	4.14	4.06	0.08
3A	4.06	4.01	0.05
3B	4.10	4.00	0.10
4A	4.15	4.04	0.11
4B	4.19	4.15	0.04
5A	4.15	4.14	0.01
5B	4.18	4.14	0.04
6A	4.11	4.12	-0.01
6B	4.16	4.13	0.03
7A	4.12	4.03	0.09
7B	4.16	4.06	0.10
8A	4.07	3.97	0.10
8B	4.10	4.06	0.04
Average	4.13	4.07	0.06

A positive difference indicates that participants are satisfied with the indicator being asked, while a negative value indicates dissatisfaction with the indicator item. Judging from the average expectation and reality gap is positive (0.06).

The results of the calculation of the Customer Satisfaction Index (CSI) or participant satisfaction index on the JKN Mobile application service are:

$$CSI = \frac{16{,}8091}{5.4{,}13} 100\% = 81{,}4\ \%$$

The CSI value obtained is 81.4%. These results illustrate that participants who use Mobile JKN services are satisfied with their expectations of the application. To find out the attributes that are considered unsatisfactory or that are considered necessary to be improved, the data will be analyzed using Importance Performance Analysis (IPA). The results of the IPA analysis are made in the form of a Cartesian diagram which will be divided into 4 quadrants. With the help of SPSS, the quadrant data on Importance Performance Analysis (IPA) are:

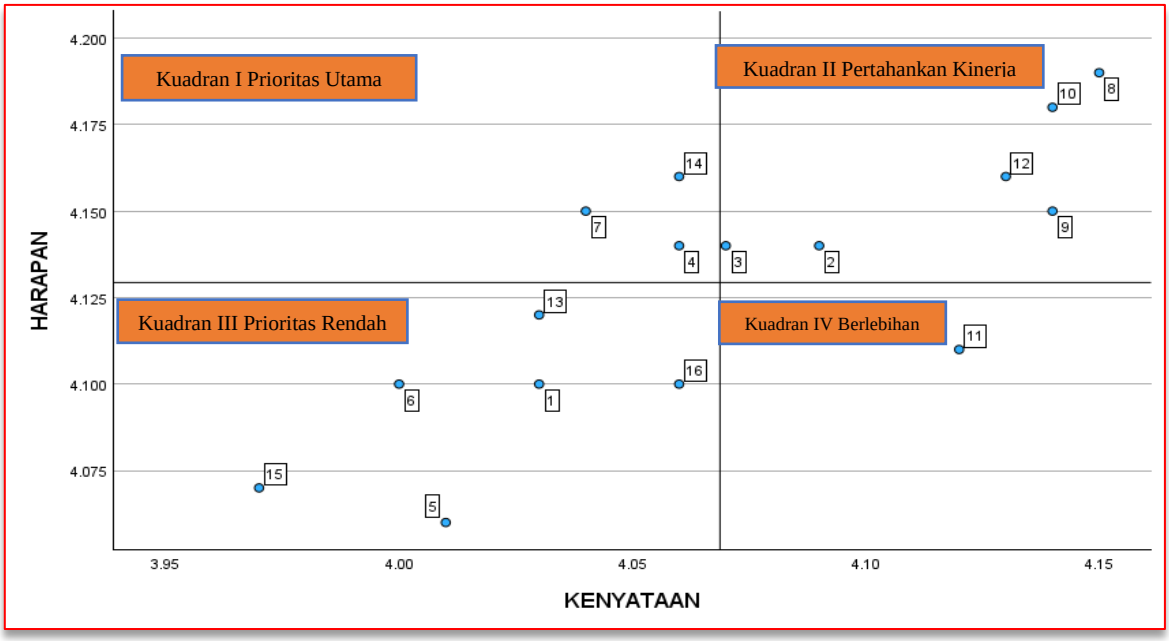

Figure 2. Diagram *Importance Performance Analysis (IPA)*

Based on the results of the quadrant mapping above, the following is an explanation of the analysis of indicators that fall into each quadrant, namely:

a. Quadrant I (Top Priority)
   1. Reliability aspect. Features work as they should
   2. Indicator 7. Security aspects. Participants' data is secured
   3. Indicator 14. Information aspect. Available information meets the needs

b. Quadrant II (Maintain Performance)
   1. Indicator 2. Application Display Aspect. The image symbols in the Mobile JKN application are easy to understand.
   2. Reliability aspect. the Mobile JKN application can be accessed at any time.
   3. Indicator 8. Security aspects. BPJS Health will not distribute usernames and passwords to other parties who are not users.
   4. Fulfillment aspect. the Mobile JKN application is easy to use.
   5. Indicator 10. Fulfillment aspect. The complaint service is functioning properly.
   6. Indicator 12. Personal Aspect. Helps with administrative activities so there is no need to go to the BPJS office.

c. Quadrant III (Low Priority)
   1. Indicator 1. Website display aspect. The appearance of the Mobile JKN application is attractive.
   2. Responsiveness aspect. The solution provided is by the problem.

3. Indicator 6. Responsiveness aspect. Complaints are immediately processed quickly
4. Indikator 13. Information Aspect. The information in the Mobile JKN application is accurate.
5. Empathy aspect. Mobile JKN features show empathy to participants.
6. Indicator 16. The presence of Mobile JKN shows a form of empathy to participants.

d. Quadrant IV (Excessive)

1. Indicator 11. Personal aspect. Using the application can save costs.

DISCUSSION

The difference value between reality and JKN participants' expectations of the JKN Mobile application service is positive (0.06), indicating that JKN Mobile application service participants are satisfied with the services that are already running. The minus value occurs in the personal indicator which reads "Using the application can save costs". In using the Mobile JKN application, participants are still charged internet fees because they cannot be accessed without a quota. Research conducted by (Khusna, Ridwandono, & Pratama, 2021) on Mobile JKN application users in Sidoarjo Regency, states that Monetary Cost has no significant effect (P-Values> 0.05) on the satisfaction of Mobile JKN application users, so satisfaction can still be felt on other indicators. It is only expected that the negative indicators found in this study will be an evaluation for BPJS Kesehatan to be able to provide services that can be accessed offline, to increase the satisfaction of Mobile JKN service users.

The result of the calculation of the Customer Satisfaction Index (CSI) or participant satisfaction index on the Mobile JKN application service is 81.4%. With this CSI value, it can be a reference for participant satisfaction as a user in utilizing the Mobile JKN application service..

Indicators in quadrant I (First) are indicators that are considered very important by participants who use the JKN Mobile application service, but in practice have not provided services as expected. So that it becomes a top priority for BPJS Kesehatan to improve the quality of indicators included in this quadrant. Some of these indicators are, a) reliability indicators, participants have high expectations regarding features that can function properly. So that participants can receive maximum benefits from the features provided. b) Security indicators, participants have high expectations regarding the security of the data provided. The news of data leaks at BPJS Kesehatan can also have an impact on customer satisfaction, therefore BPJS Kesehatan needs to ensure that the data provided is safe and confidential. c) Information indicators, participants have high expectations that the available information can meet their needs so that participants get good and correct knowledge of BPJS Health services..

Indicators in quadrant II (Second) are indicators that are considered important in influencing satisfaction. In this study, the implementation of indicators in this quadrant has met the expectations of participants so the performance of indicators in this quadrant needs to be maintained. Indicators in this quadrant are, a) Application Display Indicators, image symbols in the Mobile JKN application are easy for participants to understand, b) Reliability Indicators, the Mobile JKN application can be accessed at any time, c) Security Indicators, BPJS Health will not distribute usernames and passwords to other parties who are not users, d) Fulfillment Indicators, participants already feel that the Mobile JKN application is easy to use and the complaint service is functioning properly, e) Fulfillment Indicators. Complaint services function properly, f) Personal Indicators, participants already feel that the Mobile JKN application can be helped by the administrative process so they don't need to go to the BPJS Kesehatan office.

Quadrant III (Third) This is a quadrant that is considered less important by participants with an implementation that tends to be as it is, so it is considered unsatisfactory for participants in the JKN Mobile application service. Indicators in this quadrant must receive attention and improvement from BPJS Kesehatan even though they are included as low priority. Some of the indicators included in this quadrant are, a) Application display indicators, the appearance of the Mobile JKN application is quite attractive, b) Responsiveness indicators, the solutions provided are by the problems and complaints are processed quickly enough, c) Information indicators, the information in the Mobile JKN application is considered accurate enough, d) Empathy indicators, the features in the Mobile JKN application are enough to show empathy to participants and the presence of the Mobile JKN application is enough to show a form of empathy to participants.

Quadrant IV (Fourth) shows the excessive performance of the JKN Mobile application service, while the perception of participants, this indicator is less important. The indicator included in quadrant IV is a personal indicator, where the use of this application does not feel that it can save costs because it still requires an internet quota to access services in the Mobile JKN application..

CONCLUSION

Based on the explanation above, it can be concluded that JKN Mobile application users are satisfied with the JKN Mobile application service, this can be seen from the average gap value between expectations and reality is 0.06 (positive value), and the CSI value is 81.4%, while for IPA analysis there are 3 indicators in the priority quadrant (quadrant I), namely reliability (related to features that can function properly), security (guarantee of participant data security) and availability of informative and accurate information. These three indicators are important and main to be improved and improved services to increase participant satisfaction in using the Mobile JKN application.

REFERENCE

Alamsyah, N., Widodo, T. T., Setyabudhi, A. L., & Nadia, R. (2021). Analisis Kepuasan Pelayanaan di UPTD Metrologi Legal Kota Batam pada Sektor Industri dengan Metode IPA dan CSI. *Jurnal Teknik Ibnu Sina,* 52-59.

Amiyani, R. 2016. *Teknik Sampling*. Yogyakarta: Universitas Negeri Yogyakarta

Amri, H. R., Subagio, R. T., & Kusnadi. (2020). Penerapan Metode CSI untuk Pengukuran Tingkat Kepuasan Layanan Manajemen. *Jurnal Sistem Cerdas*, 241- 252.

Anaqamy, L. S., & Prayoga, D. (2022). Factors Affecting User Satisfaction of Mobile JKN. *Jurnal Mantik, 6 (1)*, 649-65.

Ardianti, N. P., & Waluyo, M. (2021). Analisis Kepuasan Pelanggan Terhadap Kualitas Pelayanan Menggunakan Metode CSI dan PGCV di Toko Xyz. *Journal of Industrial Engineering and Management*, 96 - 107.

Budiman, D.,Riswanto, A., & Rinawati. (2023). *Management Strategy*. PT.Sonpedia Publishing Media

Khusna, A., Ridwandono, D., & Pratama, A. (2021). Pengaruh Kualitas Layanan Terhadap Kepuasan dan Penggunaan Berkelanjutan Aplikasi Mobile JKN di Kabupaten Sidoarjo. *Jurnal Informatika dan Sistem Informasi (JIFoSI)*, 152-161.

Li, H., & Suomi, R. (2019). A Proposed Scale for Measuring E-service Quality. *International Journal of U- and e-Service*.

Lubs, B.O., Salim, A.,& Jefi. (2020). Evaluasi Usability Sistem Aplikasi Mobile JKN Menggunakan Use Questionnaire. Jurnal Saintekom, Vol. 10. 65-76

Melati, R. A. (2022) Analisis Kepuasan Penggunaan Aplikasi Mobile Jkn dengan Menggunakan Delone dan Mclean. Skirpsi Thesis. Unama.

Musyarofah, B., Ilmadi, & Setiawan, T. H. (2021). Analisis Tingkat Kepuasan Konsumen Terhadap Pelayanan dengan Metode IPA. *Lebesgue: Jurnal Ilmiah Pendidikan Matematika dan Statistika*, 85 - 95.

Ong, J. O., & Pambudi, J. (2014). Analisis Kepuasan Pelanggan Dengan Importance Performance Analysis di SBU Laboratory Cibitung. *J@TI Undip: Jurnal Tehnik Industri*, 1-10.

Pawennari, A., Afiah, I.,Verawari. (2021) Analisis Kualitas Layanan Bank Syariah dengan Menggunakan Metode Servqual dan IPA di Makassar. *IJMA: International Mathla'ul Anwar of Halal Issues.Vol 1*. No11-17.

Riri, T., Sari, R. P., & Rusi, I. (2022). Pengukuran Kualitas Layanan pada Aplikasi Mobile JKN Menggunakan Metofr E-Service Quality dan Model Kano. *Coding: Jurnal Komputer dan Aplikasi Volume 10, No. 03*, 244-353.

Rita, K., & Firdaus, A. (2020). Analisis Kualitas Layanan Mobile JKN Terhadap Kepuasan Peserta BPJS Kesehatan. *At-Tijaroh: Jurnal Ilmu Manajemen dan Bisnis Islam*, 189-199.

Roiqoh, S., Zaman, B., & Kartono. (2023). Analisis Sentimen Berbasis Aspek Ulasan Aplikasi Mobile JKN dengan Lexicon Based dan Naïve Bayes. *Jurnal Media Informatika Budidarm*a. Vol 7, No 3, 1582-2592.

Sastika, W. (2018). Analisis Kualitas Layanan dengan E-Sercice Quality untuk Mengetahui Kepuasan Pelanggan Belanja Online Shoppse. *IKRAITH-HUMAINORA, VOL. 2*, 69 - 74.

Setiawan, A.Z.,Yamani, A.C.,Winati, F.D. (2022). Pengukuran Kepuasan Konsumen Menggunakan *Customer Satisfaction Index* dan Importance Performance Analysis (IPA). Jurnal Teknologi dan Manajemen Industri Terapan, Vol..1. 286-296.

Siahaan, S. D. N.,& Agustini, F. (2021). Analisis Kepuasan Pelanggan Dengan Metode *Customer Satisfaction Index* (CSI). *Journal Of Business and Economics Research (JBE)*, Vol 1. 13-19.

Suhadi, Jumakil, & Irma. (2022). Aplikasi Mobile JKN untuk Memudahkan Akses Pelayanan BPJS. *Jurnal Penelitian Kesehatan Suara Forikes*, 262 - 267.

Syukhri. (2018). Analisis Kepuasan Mahasiswa Terhadap Pelayanan Laboraturium Jaringan Menggunakan Pendekatan IPA. *Jurnal Inovasi Vokasional dan Teknologi*, 109-114.