

# Improving the Satisfaction of National Health Guarantee Participants through JKN Mobile Services That Educed by Brand Image (Study on Jambi City Health BPJS)

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## Abstract

This study aims to analyze the effect of JKN mobile services on brand image and satisfaction of JKN participants, brand image on satisfaction of JKN participants, and analyze the effect of JKN mobile services through brand image as an intervening variable towards satisfaction of JKN participants. The population in this study were all participants in the Jambi City Branch Health Social Security Organizing Agency which were as many as 563,806 people. The sample size refers to Slovin theory with an e value = 10%, so that a sample of 100 participants was obtained. The collection method uses a survey, followed by a statistical method to test the hypothesis that is by path analysis. The results of this study indicate that JKN mobile services have a positive and significant influence on brand image and satisfaction of JKN participants, as well as brand image has a positive and significant influence on satisfaction of JKN participants. Besides that JKN mobile services through brand image also have an influence on the satisfaction of JKN participants.

**Keywords:** JKN Mobile Services, Brand Image, and JKN Participant Satisfaction.

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## INTRODUCTION

The need for health services is now always a topic of discussion in almost all media. BPJS Kesehatan as a public legal entity as stated in the Law of the Republic of Indonesia Number 24 of 2011 article 7 paragraph (1) is the organizer of a health insurance program with one of its main tasks is to manage Social Security Funds for the benefit of Participants.

As stated in Law Number 24 of 2011 that Social Security is a form of social protection to guarantee that all people can fulfill their basic needs for a decent life. BPJS aims to realize the implementation of guaranteeing the fulfillment of the basic needs of a decent life for each Participant and / or his family members in the implementation. BPJS operates a national social security system based on the principles of: a) humanity, b) benefits, and c) social justice for all Indonesians.

In its implementation, of course, the Health BPJS must be able to improve the quality of services it has, because good quality services are able to provide a large role in efforts to improve the image of BPJS Health and satisfaction of participants. Especially if you see the current phenomenon, there are many

participants who complain about the service, such as a long queue when there is a need at the BPJS Health office, to make a lot of time taken. This of course will have a negative impact on the image of BPJS Kesehatan which has an impact on the dissatisfaction of JKN participants.

The development of information and communication technology lately has provided enormous changes to services. Conventional services have switched to using existing technology through mobile. All that is done by marketers in an effort to meet the demands of consumers who are increasingly busy with their activities while still getting maximum service.

This was also responded by BPJS Kesehatan by launching the JKN Mobile application. Mobile JKN is a form of digital transformation of the BPJS Health business model which was originally in the form of administrative activities carried out at Branch Offices or Health Facilities, transformed into applications that can be used by participants anywhere at any time without self service. At present there are > 1,000,000 users of the Android JKN Application Mobile version and iOS 2,000 Mobile JKN Applications >> [1].

The JKN mobile application is a mobile application that can be accessed via a smartphone. This application is a new breakthrough BPJS Health that allows BPJS Health participants to get five ease of service through the application. The five conveniences include ease of registering and changing membership data, ease of knowing information about participant and family data, ease of knowing billing information and payment of contributions, ease of obtaining services in health facilities, and ease of submitting complaints and information requests about JKN-KIS Hafiz, MPA [2].

Seeing how much convenience JKN participants have received with JKN mobile usage, BPJS as a provider of health social security should pay attention to the quality of existing JKN mobile services, because good quality will meet the needs and desires according to JKN participants' expectations.

This research focuses on the effect of the quality of JKN mobile services, viewed from the perspective of BPJS Health as a provider of JKN mobile services in transacting the satisfaction of JKN participants mediated by brand image. This study intends to see whether the presence of mobile JKN is able to improve the image of BPJS and satisfaction of JKN participants, who have lately often emerged unfavorable opinions on the quality of services provided.

In accordance with the problems raised in the study, the objectives of this research are:

- Analyzing the effect of JKN mobile services on the image of BPJS.
- Analyzing the effect of JKN mobile services on JKN participant satisfaction.
- Analyzing the influence of BPJS image on JKN participant satisfaction.
- Analyzing the effect of JKN mobile services through BPJS image on JKN participant satisfaction.

## LITERATURE REVIEW

### JKN Mobile Services

The mobile application is an application that has been specifically designed for mobile platforms (eg iOS, android, or windows mobile) [3]. In many cases, mobile applications have a user interface with unique interaction mechanisms provided by mobile platforms, interoperability with web-based resources that provide access to a variety of information relevant to applications, and local processing capabilities for information collection, analysis and formatting in a way the most suitable for mobile platforms. In addition mobile applications provide persistent storage capabilities on the platform.

The presence of mobile applications lately has provided significant changes in the world of service

marketing. Conventional services have switched to using existing technology through mobile. All that is done by marketers in an effort to meet the demands of consumers who are increasingly busy with their activities while still getting maximum service.

Lovelock and Wirtz [4] state that the use of advanced technology in service delivery will lead to a goal where employee productivity is one of the keys to profitability, and in particular will save employee time (speed up work time) in serving customers, and will increase the level of accuracy service results.

Gummesson and Lovelock (2004) reveal that the quality of mobile services becomes four parts, namely: 1) Speed, namely the speed and convenience of customers in performing services; 2) Security, which is a guarantee of confidentiality in every service; 3) Accuracy, namely accuracy and accuracy in obtaining information; and 4) Trust, which is the customer's trust in the service.

### Brand Image

According to Kotler, P and Armstrong, G [5] brand image is a set of consumer beliefs about a particular brand. The strength of the brand image in the minds of consumers will cause the stronger confidence that consumers feel in using the products they buy. This high confidence indicates that the consumer is satisfied with the product he bought.

Peter & Olson in Ratri, L.E [6] Brand image is defined as consumer perceptions and preference for brands, as reflected by various types of brand associations that exist in consumer memory. Although brand associations can occur in various forms but can be divided into performance associations and imaginary associations that relate to the attributes and strengths of brands.

According to Tjiptono, F [7] brand image is a description of consumer associations and beliefs about a particular brand. Brand image itself has meaning to an image of a product in the minds of consumers in general. Everyone will have the same image of a brand. Meanwhile, according to Keller, K. L [8] states that brand image is a perception of the brand described by brand associations that exist in consumer memory. Ratri, L. E [6] argues that brand image is a concept created by consumers because of subjective reasons and personal emotions.

Furthermore, according to Xian, Gou Li, *et al.*, [9] stated that "The user image is referring to whether the brand personality is congruent with the consumers." The user image refers to whether the brand's personality matches the consumer. Furthermore, Xian, Gou Li, *et al.*, [9] brand image has three components, namely corporate image, user image, and product image.

## Satisfaction

According to Kotler and Keller [8] satisfaction is the feeling or disappointment of someone who arises because it compares the perceived performance of the product (or result) to their expectations. If performance fails to meet expectations, customers will be dissatisfied. If performance is in line with expectations, customers will be satisfied. If performance exceeds expectations, customers will be very satisfied or happy. Customer expectations are estimates or customer beliefs about what he will receive if he makes a purchase or consumes a product or service, while the perceived performance is the customer's perception of what he receives after consuming the product or service he bought.

Howard and Sheth in Tjiptono [7] reveal that customer satisfaction is the buyer's cognitive situation with regard to equivalence or incompatibility between the results obtained with the sacrifices made. Bitner and Zeithaml in Akbar and Parves [10] state that satisfaction is an evaluation of customers about a product or service, whether the product or service has met their needs and expectations. Customer satisfaction plays an important role because there are large differences in loyalty, between customers who are simply satisfied and who are truly satisfied [11].

According to Levesque and MacDougall in Simamora [12] as for indicators that can be used in measuring satisfaction are 1) The right choice is the feeling of the customer in choosing the company as his partner is the right choice; 2) Conformity of expectations, namely customer feelings about the company's ability to meet expectations; and 3) Facility

satisfaction is a feeling of customer satisfaction with the complete facilities provided by the company.

Whereas according to Hawkin and Lonney in Tjiptono, F [7] as for satisfaction-forming attributes consist of: 1) Conformity of Hope, is the degree of conformity between product performance expected by the customer and what is perceived by the customer; 2) Revisiting interest, is the willingness of customers to re-visit or re-purchase related products; and 3) Willingness to Recommend, is the willingness of customers to recommend products that they have felt to friends or family.

Departing through the theory revealed by Levesque and MacDougall in Simamora [12] and Hawkin and Lonney in Tjiptono, F [7], researchers tried to elaborate on the two theories to be used as indicators. In this study, researchers will use the indicators "Conformity of Hope" and "Facility Satisfaction" proposed by Levesque and MacDougall in Simamora [12] and indicators of "Willingness to Recommend" according to Hawkin and Lonney in Tjiptono, F [7] to be indicators of satisfaction in this research.

## Conceptual Framework

Based on the research objectives, literature review, previous research and the relationship between variables, the analysis framework in this study is presented in the form of Figure-1. Where JKN Mobile Service variables are independent variables, satisfaction variables as dependent variables and variables Brand image as intervening variables, or variables that mediate between independent variables with dependent variables.

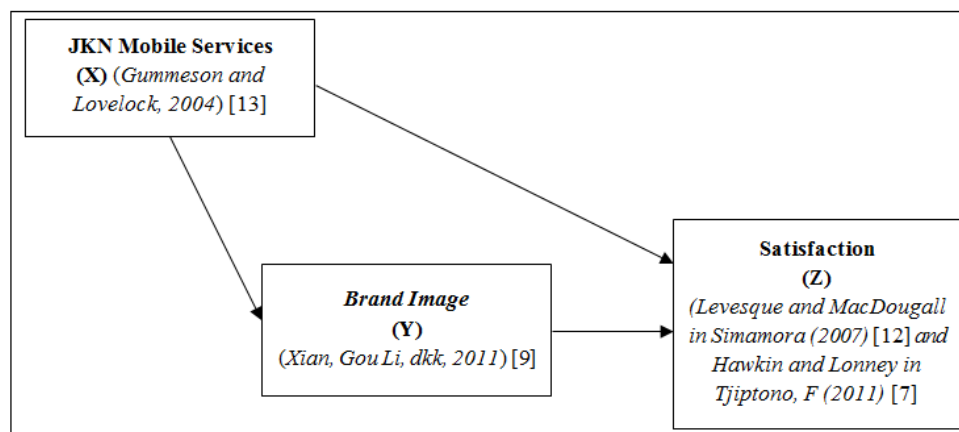


Fig-1: Framework

## Hypothesis

Based on the problems studied, a hypothesis is drawn as follows:

- H1: Mobile JKN services affect the brand image.
- H2: Mobile JKN services affect the satisfaction of JKN participants.
- H3: Brand image affects the satisfaction of JKN participants.

- H4: Mobile JKN services through brand image affect the satisfaction of JKN participants.

## METHODS

The unit of analysis of this study was participants of the National Health Insurance (JKN) at the Jambi City Branch Health Social Security Organizing Agency, which amounted to 563,806

people. The size or number of samples in this study was determined based on the theory developed by Slovin. with the formula:  $n = \frac{N}{1+Ne^2}$ . Based on the determination formula of the number of samples from Slovin above, the number of samples (n) as much as 99.98 is rounded to 100 with an e = 10%.

The research approach used in this study is a quantitative approach using Path Analysis. This analysis is a development of the regression equation, which is one option in order to study the dependence of a number of variables in the model. This analysis is a good method to explain if there is a large set of data to analyze and find causal relationships (Ghozali, 2012). The tool for analyzing SPSS version 21.0 application program data.

After analysis, then proceed with the test of determination analysis (R Square), partial hypothesis testing (t test) error tolerance 5 percent, and testing of the mediation hypothesis with the Sobel test (Sobel test). But beforehand it was first tested in research instruments (questionnaires) with validity and reliability tests, and conducted normality tests.

**RESULT**

**Description of Research Variables**

Descriptive statistics used are mean values, values that often appear on respondents' answers (mode), middle values (median), standard deviations and sample variances. The results of descriptive statistics in the study using the SPSS 21.0 tool as follows:

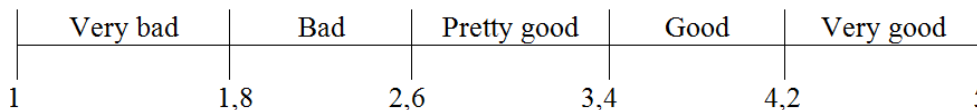
**Table-1: Descriptive Statistics of Research Variables**

		Statistics		
		X_Service_Mobile_JKN	Y_Brand_Image	Z_Satisfaction
N	Valid	100	100	100
	Missing	0	0	0
Mean		3.7357	3.7140	3.7671
Std. Error of Mean		.04492	.04905	.04985
Median		3.7857	3.8000	3.8571
Mode		3.86	4.00	4.00
Minimum		2.43	2.20	2.29
Maximum		5.00	4.60	4.57
Sum		373.57	371.40	376.71

Source: SPSS 21.0 output

Before assessing the criteria for research variables, the score assessment criteria will first be made. With the highest number of scores is 5, and the lowest number of scores is 1. The classification of

respondents' answers to the research variables can be described in the weighting stages of the score with a score range of  $5 - 1/5 = 0.8$ , as follows:



**a. Description of JKN Mobile Services (X)**

The descriptive results of the JKN mobile service variable as shown in Table 1 above obtained an average value of 3.7357 including in the range 3.4 - 4.2 in the Good criteria. This shows that the quality of the existing JKN mobile services is going well, both from speed, security, accuracy, and trust. So it is very helpful for JKN participants to obtain services.

**b. Brand Image Description (Y)**

Descriptive results of brand image variables as seen in Table 1 above obtained an average value of 3.7140 including in the range 3.4 - 4.2 in the Good criteria. Which explains that the Health BPJS has a good image in the perception of national health insurance participants. Whether it's from the company's image, user image, and product image. So as to make the level of confidence of the guarantee participants increasingly trust with BPJS Health.

**c. Description of JKN Participant Satisfaction (Z)**

The descriptive results of JKN participant satisfaction variables as seen in Table 1 above obtained an average value of 3.7671 including in the range 3.4 - 4.2 in the criteria of Good / Satisfied. That explained that JKN participants were satisfied to be part of BPJS Kesehatan. This is due to the suitability of JKN participants' expectations, as well as satisfaction with the facilities provided.

**Normality Test Results**

Basically the normality test with graphs can be misleading if it is not carefully visually looking normal, whereas statistically it can be otherwise. From the normality test performed statistically, the value of Asymp is obtained. Sig. 2-tailed greater than 0.05 (0.294 > 0.05) so that it can be concluded that the data in this study are normally distributed.

**Path Analysis**

To answer the objectives in this study, the main structure in the research model was broken into two sub-structures. Where to answer goal 1 with the first sub-structure, to answer goals 2 and 3 by using the

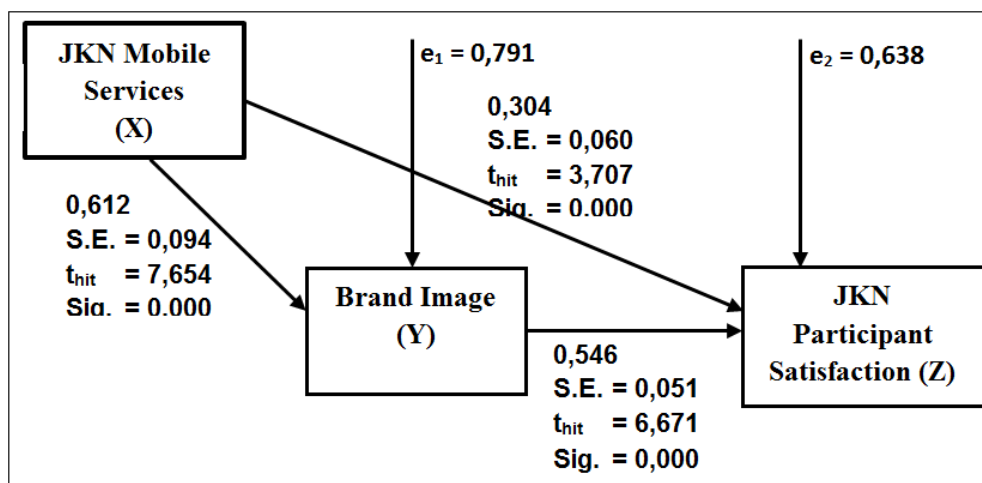
second sub-structure, and to answer the objectives 4 the values taken are the output values of the first and second sub-structures to see direct and indirect influences. The following is the SPSS output of the two structures summarized in the following table.

**Table-1: SPSS Output Two Sub Structures**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
X – Y	0.716	0.094	0.612	7.882	0.005
X – Z	0.221	0.060	0.304	3.707	0.000
Y – Z	0.340	0.051	0.546	6.671	0.000

Source: Data processed from SPSS output.

The output results above are included in the structural equation image as follows:



**Fig-2: Path Analysis Results**

To see how much the contribution of Mobile JKN (X) and brand image (Y) services to JKN (Z)

participant satisfaction can be seen from the coefficient of determination R2 as shown in Table-2 below:

**Table-2: Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.770 <sup>a</sup>	.593	.585	1.4748

a. Predictors: (Constant), Y\_Brand\_Image, X\_Layanan\_Mobile\_JKN

R value of 0.770 shows multiple correlation (JKN mobile service and brand image) with JKN participant satisfaction. By considering variations in the value of Adjusted R Square of 0.585 which shows the amount of contribution or contribution of variable JKN mobile services and brand image is able to explain the variable satisfaction of JKN participants by 58.5 percent and the remaining 41.5 percent influenced by other factors not revealed in this model.

**Hypothesis testing**

**1) Effect of JKN Mobile Services on Brand Image.**

From the results of SPSS output as shown in Table 1, the number of t counts for variable X for Y is 7.654, with a significance level of 0.000, because the number of significance levels is more <0.05 (0.000

<0.05), it can be concluded that JKN mobile services are influential towards brand image. Based on the explanation, therefore H0 is rejected and H1 is accepted, meaning that JKN mobile services affect the brand image.

**2) Effect of JKN Mobile Services on JKN Participant Satisfaction**

From the results of SPSS output as shown in Table 1, the number of t counts for variable X with Y is 3,707, with a significance level of 0,000, because the number of significance levels is more <0.05 (0,000 <0.05), it can be concluded that JKN mobile services are influential towards the satisfaction of JKN participants. Based on the explanation, therefore H0 is

rejected and H1 is accepted, meaning that JKN mobile services affect the satisfaction of JKN participants.

### 3) The Effect of Brand Image on JKN Participant Satisfaction

From the results of SPSS output as shown in Table 1, the number of t counts variable Y with Z is 6.671, with a significance level of 0.000, because the number of significance level is more <0.05 (0.000 <0.05), it can be concluded that brand image affects satisfaction of JKN participants. Based on the explanation, therefore H0 is rejected and H1 is accepted, meaning that brand image influences the satisfaction of JKN participants.

### 4) Effect of JKN Mobile Services Through Brand Image of JKN Participant Satisfaction.

To find out whether the brand image variable is able to mediate the JKN mobile service variable towards JKN participant satisfaction, the steps are as follows.

Calculate the standard error from indirect effect coefficients (Sp2p3)

$$Sp2p3 = \sqrt{p3^2 Sp2^2 + p2^2 Sp3^2 + Sp2^2 Sp3^2}$$

$$Sp2p3 = \sqrt{(0,546)^2(0,094)^2 + (0,612)^2(0,051)^2 + (0,094)^2(0,051)^2}$$

$$Sp2p3 = \sqrt{(0,298116.0,008836) + (0,374544.0,002601) + (0,008836.0,002601)}$$

$$Sp2p3 = \sqrt{0,002634152976 + 0,000974188944 + 0,000022982436}$$

$$Sp2p3 = \sqrt{0,003631324356} = 0,06$$

Based on the results of Sp2p3, we can calculate the t-value of the statistical influence of mediation using the following formula:

$$t = \frac{p2p3}{Sp2p3} = \frac{0,638152}{0,06} = 10,636$$

Because the value of t arithmetic = 10.636 is greater than the value of t table with a significant level of 0.05, which is 1.6605, it can be concluded that the mediation coefficient is 0.638152 which means that there is a mediating effect.

From the results of the interpretation of the data above, it can be discussed that:

- JKN's mobile service has proven to have a positive and significant influence on the brand image. This shows that if BPJS Health wants to improve the BPJS brand image through the JKN Mobile service, then BPJS Health can improve the quality of JKN mobile services by paying attention to good service access from speed and convenience indicators. In addition, in terms of security, BPJS Health must also be able to improve the security and confidentiality of its participants. Then in terms of accuracy, BPJS Health must also provide the accuracy of the information displayed by Mobile JKN services, as well as the accuracy of the information obtained through the JKN Mobile

Direct influence of JKN mobile services on JKN participant satisfaction

$$= Pyx (p1)$$

$$= 0,304$$

Indirect influence of JKN mobile services on JKN participants

$$= Pyx (p2) \times Pzy (p3)$$

$$= 0,612 \times 0,546 = 0,334152$$

Total influence (JKN mobile service for JKN participants)

$$= p1 + (p2 \times p3)$$

$$= 0,304 + 0,334152 = 0,638152.$$

The results of path analysis show that JKN mobile services can have a direct effect on JKN participant satisfaction and can also indirectly affect JKN's mobile service to brand image (as an intervening variable) then to JKN participant satisfaction. To find out the effect of mediation indicated by the coefficient multiplication (p2 x p3) of 0,638152 significant or not, tested with Sobel test as follows:

service. This is important, because it can increase the trust of JKN participants and have an impact on the increasing brand image of BPJS Kesehatan.

- JKN mobile services proved to have a positive and significant influence on JKN participants' satisfaction. This shows that if BPJS Health wants to increase JKN participant satisfaction through Mobile JKN services, then BPJS Health can improve the quality of JKN mobile services through speed with speed and convenience indicators, security with security and confidentiality indicators, accuracy with accuracy and accuracy indicators, and trust. This is very important, because if the indicator can proceed well, it will be able to increase the satisfaction of national health insurance participants for the better services provided.
- Brand image proved to have a positive and significant influence on satisfaction of JKN participants. This shows that if BPJS Health wants to increase the satisfaction of JKN participants through a brand image, then BPJS Health can increase brand image through improving its corporate image by providing complete facilities, technology updates, and professionals in serving JKN participants. In addition, Health BPJS must also be able to improve the wearer's image by providing convenience, comfort, saving time, and

security for participants in obtaining social security provided by BPJS Kesehatan.

- Brand image proved to be able to mediate JKN mobile services to JKN participants' satisfaction. This shows that if BPJS Kesehatan can improve the quality of JKN mobile services, this will be followed by an increase in the brand image of BPJS Kesehatan which will have an impact on increasing JKN participants' satisfaction. Image is a set of consumer beliefs about a particular brand. The strength of the image in the minds of consumers will cause stronger confidence felt by consumers in using the products they buy. This high confidence indicates that consumers are satisfied with the products they buy [5]. Seeing the importance of a strong image for a company, BPJS Kesehatan should form a strong image in order to provide confidence to JKN participants. Because of that confidence, it will eventually shape the satisfaction of JKN participants.

## CONSLUSSION AND SUGESTION CONCLUSSION

Based on the results of the research and discussion in this thesis, it can be concluded as follows:

- Based on the results of calculations and analysis, it is known that JKN mobile services have an influence on BPJS brand image health.
- Based on the results of calculations and analysis, it is known that JKN mobile services have an influence on the satisfaction of JKN participants.
- Based on the results of calculations and analysis, it is known that brand image has an influence on the satisfaction of JKN participants.
- Brand image is able to mediate JKN mobile services to JKN participants' satisfaction with BPJS Health.

## SUGESTION

Based on some conclusions obtained, the suggestions for improving future research in Jambi City Health BPJS are as follows:

- It is hoped that in the future the management will be able to improve the quality of JKN mobile services through access to services in the form of speed and ease of mobile applications. In addition, in terms of security, BPJS Health must also be able to improve the security and confidentiality of its participants. Then in terms of accuracy, BPJS Health must also provide the accuracy of the information displayed by Mobile JKN services, as well as the accuracy of the information obtained through the JKN Mobile service. This is important, because it can increase the trust of JKN participants and have an impact on increasing brand image BPJS Health and satisfaction of JKN participants.

- This research needs to be followed up to see what factors can affect the satisfaction of national health insurance participants (JKN) at the Jambi City Health BPJS.
- National health insurance participant satisfaction (JKN) in Jambi City Health BPJS can be influenced by other factors, therefore more comprehensive studies are needed to answer other factors (epsilon) that affect JKN participants' satisfaction apart from JKN mobile services and brand image.

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