Implementation of Health Protocol of Pandemic Covid 19 and Its Impact on Passengers' Satisfaction;

A Study on Indonesia Transportation Customer

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Abstract—**Transjakarta is the first Bus Rapid Transit (BRT) transportation system in Southeast Asia and South Asia, with the longest line (208 kilometers) in the world. Transjakarta is designed as a mode of mass transportation to support the busy activities of the capital city with the longest track in the world (251.2 km), and 260 bus stops spread across 13 corridors. As for the operation at the Bogor Raya flyover stop, there is still a lack of protocol implementation, including the unavailability of a Health post completed with medical personnel around the bus stop. The purpose of this study was to determine the optimization of the implementation of Health protocols on service quality which is assumed to have an impact on passenger satisfaction. The population in this study were people who had ever used and or ones who were using Transjakarta facilities at the Bogor fly over highway bus stop. The sample size used was 230 respondents using the Non-Probability Sampling method with the type of Purposive Sampling. The results of this study confirm that the implementation of Health protocols has a positive and significant effect on passenger satisfaction, service quality has a positive and significant effect on passenger satisfaction, the application of Health protocols has a positive and significant effect on service quality and service quality has a positive and significant effect in mediating the implementation of health protocols on passenger satisfaction.**

Keywords—*implementation of health protocols, service quality, passenger satisfaction*

I. INTRODUCTION

Transportation is very essential for the community to support daily activities, as a derivative of economic and social activities. According to Sambuaga [1] transportation is the activity of moving people or goods from one place to another by using a vehicle driven by humans or machines. The large number of people migrating to Jakarta in search of work is increasingly causing traffic jams. Congestion is getting worse due to the increasing number of private vehicles. Various policies have been taken by the DKI Jakarta government to reduce congestion problems, one of which is building a BRT or what is known as a busway or Transjakarta bus.

One of the fastest growing land transportation modes in Indonesia is the Transjakarta which is claimed as the first Bus Rapid Transit transportation system in Southeast and South Asia. This transportation system has been operating since 2004 in Jakarta - Indonesia as a mode of mass transportation to support the capital's busy activities. The number of passengers is set for only 50 people for articulated buses, 30 people for large buses, 15 people for medium buses and 6 passengers for Microtrans [2].

The number of Transjakarta passengers in 2018 was around 187.96 million passengers and increased by 41% to 265.16 million passengers in 2019. Even at the beginning of 2020 there was still an increase in the number of passengers with an average increase of 45% compared to January-February 2019 [3]. In line with this condition, Transjakarta has also begun to impose several new regulations, such as restrictions on operational time and the number of passengers. The new rules implemented by PT Transportation Jakarta during the Large-Scale Social Restrictions period in Jakarta include that passenger are advised to wait in open areas rather than cramming into bus stops, maintain a minimum distance of 2 meters and avoid physical contact between passengers. Passengers are also required to wear masks, passengers are prohibited from speaking either directly or via telephone. Passengers are also required to wash their hands before entering the Transjakarta bus stop and prepare hand sanitizers to maintain hand hygiene. However, with the policy of limiting the operational time and number of Transjakarta passengers which came into effect in March, there has been a very significant decrease in passengers every month. Until June 2020 there was an increase in the number of Transjakarta passengers by 86% from May 2020 with a total of 4.45 million passengers [3]. Therefore, it can be concluded that passenger satisfaction is the passenger's perception that expectations have been met or exceeded. As to the principle of marketing, if the product or service meets or exceeds customer expectations, then the customer will get satisfied. The main key to providing better service quality is to meet or exceed passenger service quality expectations. Whereas the purpose of providing service is to provide satisfaction to passengers, it results in the

generating of added value or a positive image for the company [4].

The quality of service at the Bogor Raya Fly Over Stop has not experienced many problems, yet there are still few passengers who are dissatisfied with the services provided by the management of the Bogor Raya Fly Over Stop. Several problems are suspected to be a contributing factor, including the lack of competency standards for bus stops in handling service users, poor communication between officers and passengers in the event of obstacles in the field of Health protocols and in the security sector.

A. The Effect of Service Quality on Customer Satisfation

According to Gronroos [5] and Setiawan [6], service quality is a function of what customers actually receive (technical quality), and how the service is delivered (functional quality). Parasuraman et al. [7] stated that overall perceived quality is a disconfirmation of customer expectations and customer evaluation of a service. In other words, service quality is a comparison between expectations and perception. The concept of service quality used in this context is the Servqual model. Thompson [8] state that service quality is a customer's long-term cognitive evaluation of a company's services. Zeithaml et al. [9] explain that service quality is the customer's perception of the service components of a product that they actually receive. According to Yang et al. [10] service quality has a positive effect on customer satisfaction, in addition, all dimensions of service quality that they examine have a positive relationship to customer satisfaction. Service quality has a significant effect on customer satisfaction according to Jahmani [11] and Wang et al. [12]. Moreover, research by Prabantari [4] also proves that the quality of service in Transjakarta has a significant effect on passenger satisfaction.

B. The Effect of Service Quality on Customer Satisfation

As to the pandemic of COVID 19, public activities are profoundly affected by the issue, and public has been coerced for more or less. The implementation of health protocol recommended by the government has been a sensitive issue for many people with multifarious responds. This policy is an effort to prevent the transmission of the Covid-19 virus, including wearing masks, washing hands, maintaining distance, and always carrying hand sanitizer. Research conducted by Mardhia et al. [13] proves that the effect of implementing Health protocols has a significant effect on passenger satisfaction.

C. The Effect of Implementation of Health Protocol on Service Quality

The implementation of the health protocol is a guideline or procedure for activities carried out to ensure that people remain healthy and resistant from COVID 19 disease. The Government of Indonesia has issued Regulation through the Minister of Transportation to overcome the desease by implementing the health protocol of COVID 19 (Peraturan

Menteri Perhubungan Republik Indonesia Nomor PM 18 Tahun 2020) Public will eventually respect people or organizations that care to their needs and interests. In other words, good deeds and actions that benefit people will be perceived as excellent service that may increase service quality. Rohman and Larasati [14] research proves that there is a significant influence between the implementation of health protocols on service quality.

Based on the theoretical basis above, the conceptual framework in this study is as follows (Figure 1):
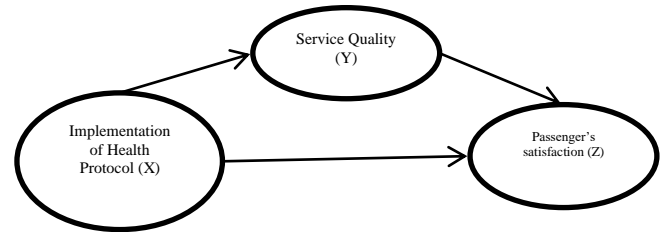

Fig. 1.   Conceptual framework.

II. METHODS

This study uses the Non-Probability Sampling method, namely Purposive Sampling, a sampling technique with certain considerations [15]. The sample criteria used in this study are all people who had ever used and or the ones who were using the Transjakarta bus stop facilities in the Fly Over Raya Bogor area. A total of 230 people were set as respondents.

The data analysis tool used is Partial Least Square (PLS), which is a multivariate statistical technique that can be used to overcome many response variables and explanatory variables at once. PLS analysis can also be used for multiple regression analysis methods and principal component regression, because these methods are more immune [16].

The PLS model is divided into two parts, the inner model which is to analyze the relationship between latent variables and the outer model which specifies the relationship between the latent variable and its indicators or manifest variables. The outer model is used to test the construct validity and instrument reliability. The inner model was evaluated by R-square test and significance test.

III. RESULTS AND ANALYSIS

A. The Outer Model Testing

The outer model test is used to test the construct validity and instrument reliability. Construct validity consists of convergent validity and discriminant validity. The reliability test in PLS uses 2 methods, namely Cronbach's Alpha and Composite Reliability.

B. Convergent Validity

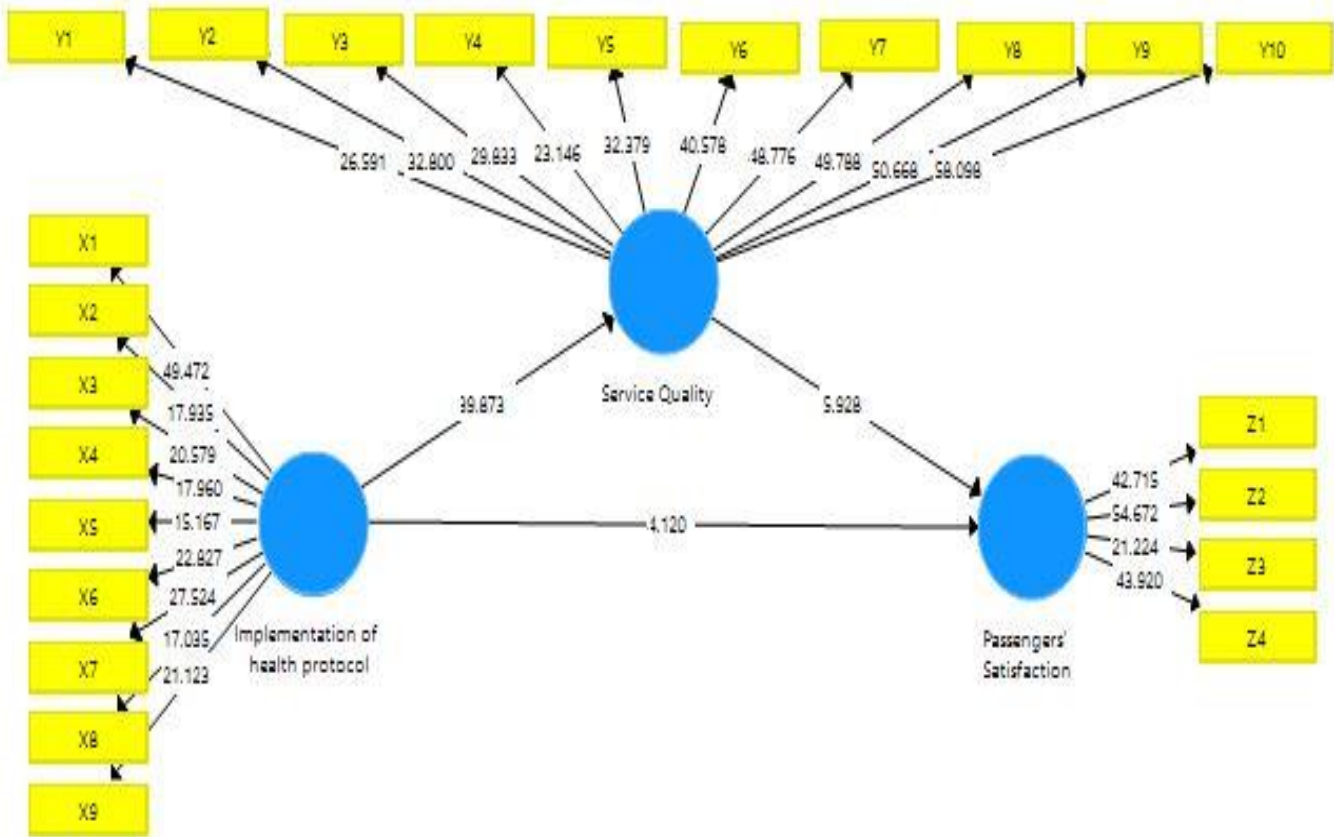The results of the PLS calculation are shown in the Figure 2.

Fig. 2. Outer loading calculation results.

Convergent Validity aims to determine the validity of each indicator. The rule of thumb used for convergent validity is the value of outer loading > 0.70 and Average Variance Extracted (AVE) > 0.50 [17]. Based on the data in Figure 1, the outer loading values for all variables in each indicator have met the requirements and are confirmed as valid.

C. Discriminant Validity

PLS calculation results are exhibited in the table 1.

TABLE I.   DISCRIMINANT VALIDITY TEST WITH AVERAGE VARIANCE EXTRACTED (AVE)

Variable	Average Variance Extracted (AVE)
Implementation of Health Protocol	0,573
Service quality	0,697
Passenger's Satisfaction	0,680

The discriminant validity test was assessed based on the Average Variance Extracted (AVE) value; if the Average Variance Extracted (AVE) value of each variable > 0.50, then it is stated to be valid. Based on table 1, it can be concluded that all statement items on each variable are valid.

TABLE II.   DISCRIMINANT VALIDITY TEST WITH CROSS LOADING

Indicator	Implementation of Health Protocol	Service quality	Passenger's Satisfaction
X1	0,837	0,748	0,689
X2	0,743	0,574	0,524
X3	0,752	0,509	0,440
X4	0,751	0,614	0,500
X5	0,716	0,572	0,414
X6	0,753	0,636	0,581
X7	0,796	0,632	0,599
X8	0,703	0,562	0,588
X9	0,750	0,664	0,506
Y1	0,679	0,811	0,613
Y2	0,762	0,871	0,753
Y3	0,642	0,822	0,556
Y4	0,583	0,797	0,554
Y5	0,585	0,769	0,537
Y6	0,631	0,800	0,524
Y7	0,637	0,819	0,492
Y8	0,705	0,843	0,619
Y9	0,662	0,856	0,709
Y10	0,789	0,851	0,743
Z1	0,649	0,675	0,842
Z2	0,685	0,685	0,881
Z3	0,401	0,485	0,771
Z4	0,617	0,625	0,841

The discriminant validity test was assessed based on the cross loading number in bold, indicating that the correlation value between the constructs was greater than the correlation value between the constructs and other constructs. Based on the information in table 2, it can be concluded that the construct or latent variable already has a good Discriminant Validity.

D. Reliability Test

The results of PLS calculation are exhibited in table 3:

TABLE III. RELIABILITY TEST

	Cronbach's Alpha	Composite Realibility
Implementation of Health Protocol	0,906	0,932
Service quality	0,948	0,955
Passenger's Satisfaction	0,856	0,902

The reliability test in PLS was conducted to measure the internal consistency of the measuring instrument. Based on the information in table 3, it can be seen that the three variables have Cronbach's Alpha and Composite Realibility values of more than 0,70. meaning that the measuring instrument is reliable.

E. Model Testing

1) R-square test: The results of PLS calculation are exhibited in table 4:

TABLE IV. R SQUARE TESTING

Variable	R *Square*
Service quality	0,666
Passenger's Satisfaction	0,597

The value of R-Square (R2) for the service quality variable is 0,666, meaning that the optimization of the implementation of Health protocols on Service Quality has an impact on passenger satisfaction of 66,6% and the remaining 33,4% is influenced by other variables. Then the R-Square value on the Passenger Satisfaction variable is 0,597 or 59,7% and the rest is influenced by other variables.

F. Hypothesis Testing

PLS calculation results are exhibited in the following table:

TABLE V. HYPOTHESIS TEST

Hypothesis	Original Sample	T-*Statistics*	P *Values*
Implementation of Health Protocol -> Passenger's Satisfaction	0,325	4,120	0,000
Service quality -> Passenger's Satisfaction	0,485	5,928	0,000
Implementation of Health Protocol -> Service quality	0,816	39,873	0,000

In this study, hypothesis testing uses the T-Statistic and T-table values. If the T-Statistic value is greater than the T-table value, it means that the hypothesis is supported (accepted). At the 226 with percent confidence level (alpha) is 5% then the T-table value used for the hypothesis is > 1,97.

Based on table 5 above, it can be seen that there is a significant effect between the variables of implementing Health protocols and passenger satisfaction, and the influence between variables implementing Health protocols on passenger satisfaction is positive at 0,325. So, the higher the implementation of the Health protocol, the higher the passenger satisfaction will be.

On the effect of service quality on passenger satisfaction, it shows a significant and positive effect of 0,485. So, the higher the quality of service, the higher the passenger satisfaction will be. The effect of implementing Health protocols on service quality shows a significant and positive effect of 0,806. So, the higher the implementation of the Health protocol, the higher the quality of service will be.

G. Indirect Effect

PLS calculation results are exhibited in the table 6.

TABLE VI. INDIRECT EFFECT

Hypothesis	Original Sample	T-Statistics	P Values
Implementation of Health Protocol -> Service quality -> Passenger's Satisfaction	0,395	5,995	0,000

Due to the large influence of the implementation of the Health Protocol on service quality and the effect of service quality on passenger satisfaction, then the effect of implementing the Health protocol on passenger satisfaction through service quality, it shows a significant and positive effect of 0,395.

IV. CONCLUSION AND SUGGESTION

The implication of the Health protocol has a positive and significant effect on passenger satisfaction, meaning that the higher the implementation of the Health protocol, the higher the passenger satisfaction will be. Meanwhilst, service quality has also a positive and significant effect on service quality, meaning that the higher the service quality, the higher passenger satisfaction will be. Likewise, the implementation of the Health protocol has a positive and significant effect on the quality of service, meaning that the higher the implementation of the Health protocol, the higher the quality of service will be. Furthermore, as to the indirect effect between the implementation of the Health protocol and passenger satisfaction through service quality, the results of hypothesis testing indicate a positive and significant effect.

The results of this study also confirm that respondents, namely people who have or are currently using Transjakarta at the Bogor highway flyover stop, agree that the Health protocol has been implemented properly in accordance with government policy. However, there is one answer from an indicator that has a moderate value, namely the availability of adequate post-health services with medical personnel around the bus stop. Therefore, the company should provide post health services equipped with medical personnel near the Bogor Raya flyover bus stop, should any unexpected things happened, the officers can respond quickly. The results of the analysis based on respondents' answers provide recommendations that Transjakarta, especially at the Bogor fly over bus stop, needs to maintain the Health protocols that have been implemented but need to further improve its performance on services that are not yet optimal.

Based on the results of the study, it can also be concluded that respondents, namely people who have or are currently using Transjakarta at the Bogor Raya flyover stop have quite good perception on the service quality provided by the company, consequently, Transjakarta needs to maintain the quality of its service in order to maintain the satisfaction level of Transjakarta passengers especially at the Bogor fly over stop.

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