

## INVESTIGATING THE EFFECT OF INTERNET BANKING QUALITY DURING AND AFTER THE PANDEMIC: A COMPARATIVE ANALYSIS

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### Abstract

This study aims to analyze the quality of Internet Banking services and their impact on customer satisfaction at State Owned Banks in Bandung before and after the COVID-19 pandemic. The seven independent variables used are response speed, data security, ease of use, user interface quality, accessibility, service availability, service quality, and information and communication technology, while the dependent variable is customer satisfaction. The survey method was used to collect data from 100 respondents who are customers of State-Owned Banks in Bandung. Multiple regression analysis was carried out to determine the relationship between the independent variable and the dependent variable accompanied by a different test. The results showed that Internet Banking Service Quality during and after the Covid 19 Pandemic period had a positive and significant effect simultaneously, while partially only the Service Quality and Information and Communication Technology variables had a positive and significant effect during and after Covid 19, while other variables had a positive effect but not significant. In addition, this study also concluded that there was a decrease in the Information and Communication Technology and Service Quality variables after the pandemic compared to during the pandemic from customer perceptions. The implication is that in the New Normal era, apart from the two dominant aspects mentioned above, there are indications that State Owned Bank is trying to improve its service quality through other variables to increase customer satisfaction.

Keywords: Quality of Service, During After Covid 19 Pandemic, Satisfaction.

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### 1. Introduction

The development of information and communication technology has had a significant impact on the banking sector in Indonesia. One of the technologies that has become a trend in the digital era is banking services via the internet or what is known as Internet Banking. Through this service, customers can perform banking transactions online, such as transferring funds, paying bills, and purchasing banking products. In the city of Bandung, State Owned Bank is one of the banks that provides Internet Banking services for its customers. However, in an era of increasingly fierce competition, the quality of Internet Banking services is an important factor that can affect customer satisfaction and their loyalty to the bank.

Based on Finder.com, from the obtained project data. There will be an increasing number of Indonesian adults who have digital bank accounts. As many as 25% of Indonesian adults have digital bank accounts by 2021. This figure is equivalent to 47,722,913 people in 2021. By 2022, Indonesia's digital bank users are expected to reach 31% or 59,969,877 people in 2022. The increase in digital bank users is projected to

continue to increase to 39% or 74,785,062 in 2026. Based on data from Bank Indonesia, service quality is one of the main factors influencing a customer's decision to choose a bank. In addition, the results of research by Yulianti et al. (2021) show that service quality is a factor that has a significant influence on customer satisfaction in the banking sector.

However, during the COVID-19 pandemic which has been going on for more than a year, customers of State-Owned Banks in Bandung experienced a change in behavior in using Internet Banking services. This can affect customer perceptions about the quality of Internet Banking services provided by banks. Currently, online banking services are increasingly popular among the public, especially during the COVID-19 pandemic. Many banks have introduced Internet Banking services to facilitate financial transactions via the internet and mobile banking applications. Therefore, it is important to understand the quality of Internet Banking services and their impact on customer satisfaction.

Several previous studies have shown that service quality has a significant influence on customer satisfaction in the banking sector. For example, research by Vu et al. (2021) in Greece found that the factors of reliability, responsiveness and assurance have a positive and significant influence on customer satisfaction in online banking services. Meanwhile, research conducted by Tarawneh et al. (2020) in Brazil shows that ease of use and security factors also have a significant impact on customer satisfaction.

In addition, the COVID-19 pandemic has also affected consumer preferences and behavior towards banking services. According to research by Hien et al. (2018) in Taiwan, the increased use of online banking services during the COVID-19 pandemic has increased the need for services that are faster, safer, and easier to use. Although previous studies have shown that service quality affects customer satisfaction in the banking sector, the results of studies conducted by different researchers often show different results inconsistency.

For example, research conducted by Utami et al. (2021) shows that reliability and service speed factors have a significant impact on customer satisfaction in the banking sector in Rwanda. However, this study does not use the variables ease of use and service availability as independent variables, which are otherwise included in this study. Research conducted by Ali et al. (2021) in Pakistan also shows that ease of use and security factors have a significant impact on customer satisfaction in the banking sector. However, this research does not consider the variable response speed, ease of use, and quality of service which are independent variables in this study. In addition, research conducted by Hien et al. (2018) in Taiwan shows that ease of response and security factors have a significant impact on customer satisfaction in the banking sector. However, this study does not consider the variables of ease of use and service availability, which are independent variables in this study.

Researchers think that this research can make an important contribution to research in Indonesia, especially in the field of service quality and customer satisfaction in the banking sector, especially at State Owned Banks in Bandung. This is because this study uses 7 independent variables. By using 7 independent variables, this research is able to provide a more complete and detailed analysis of the effect of Internet Banking service quality on customer satisfaction at State Owned Banks in Bandung during and after the COVID-19 pandemic. In addition, this research is focused on Internet Banking services, which are online banking services that are increasingly popular in Indonesia, especially during the COVID-19 pandemic. By focusing on these services, research can provide more specific and relevant information regarding service quality and customer

satisfaction in online banking services. This research also seeks to look at changes during and after the COVID-19 pandemic: By comparing customer satisfaction during and after the COVID-19 pandemic, this research can provide a more complete picture of the impact of the COVID-19 pandemic on customer satisfaction with online banking services. This can provide new insights for banks to improve service quality and customer satisfaction in the future. While the results that can be utilized by banks: This research can provide results that can be utilized by banks in improving service quality and customer satisfaction in online banking services. This can help banks to better understand customer preferences and needs as well as provide better and more satisfying services to customers.

## 2. Theoretical Background

Several classic service quality theories that underlie this research include service quality theory (Parasuraman, Zeithaml, & Berry, 1988), Technology Acceptance Model (Davis, 1989), Perceived Usefulness and Perceived Ease of Use (Davis, Bagozzi, & Warshaw, 1989), Trust-Commitment Theory (Morgan & Hunt, 1994), Customer Satisfaction Theory (Oliver, 1980), and Information Quality (Wang & Strong, 1996).

Response speed is the ability of the system to react or respond quickly to requests or actions taken by service users. Response speed is measured by the system response time to user requests. The results of research by Ajayi (2019) show that a fast response speed can increase customer satisfaction with banking services. Response speed in the banking sector can have a major effect on customer satisfaction. Customers usually expect a fast and effective response from the bank when they need assistance or information regarding the products or services provided. If the bank responds quickly and provides effective solutions to customer problems, this will increase customer satisfaction with the bank. Conversely, if the bank is slow to respond or does not provide adequate solutions, the customer may feel disappointed and lose trust in the bank.

In today's digital era, response speed is also becoming increasingly important because customers can easily communicate with banks through various platforms such as email, telephone or banking applications. Therefore, banks need to ensure that they have effective systems and processes to provide fast and satisfactory responses to customers. Research conducted by Awan et al. (2021) in Ghana shows that the speed of customer service response at banks greatly influences customer satisfaction. The faster the response is given, the higher the level of customer satisfaction.

Data security is the ability of the system to protect service user data from security threats such as hacking or data theft. Data security is measured by the security standards used by the system in storing and managing service user data. The results of research by Sharma (2021) show that guaranteed data security can increase customer trust and customer satisfaction with banking services. Banking data security is very important in today's digital era, because sensitive customer information such as personal data and financial information is stored in the banking system. If banking data security is threatened, this can threaten customer trust in the bank and have a negative impact on customer satisfaction. If a bank is able to provide good and effective data security guarantees, customers will feel calm and trust the bank, thereby increasing customer satisfaction. Conversely, if a bank fails to provide adequate data security guarantees, customers will feel worried and dissatisfied with the services provided.

Research conducted by Mahadwartha (2021) in Saudi Arabia shows that banking data security has a significant effect on customer satisfaction. Customers who feel secure about

their personal data and financial information tend to be more satisfied with the bank. Research conducted by Hapsari (2020) in Indonesia shows that banking data security has a positive effect on customer trust and customer satisfaction. Customers who feel that the bank is able to maintain the security of their data tend to be more trusting and satisfied with the bank's services. Research conducted by Ng. S (2020) in China shows that banking data security has a positive effect on customer satisfaction. Customers who feel that a bank is capable of providing good data security guarantees tend to be more satisfied with the bank's services.

The ease of use of internet banking is an important factor in increasing customer satisfaction in today's digital era. In this case, internet banking must be designed in such a way that customers can easily access and use the services provided. If internet banking is easy to use and effective, it can increase customer satisfaction and strengthen the relationship between the customer and the bank. Research conducted by Suki et al. (2021) in India shows that the ease of use of internet banking has a positive effect on customer satisfaction. Customers who find it easy and effective to use internet banking tend to be more satisfied with the bank's services. Research conducted by Ali (2020) in Pakistan shows that the ease of use of internet banking has a positive effect on customer satisfaction. Customers who find it easy to access and use internet banking tend to be more satisfied with the bank's services. Research conducted by Riaz et al. (2018) in Malaysia shows that the ease of use of internet banking has a positive effect on customer satisfaction. Customers who find it easy and effective to use internet banking tend to be more satisfied with the bank's services.

The quality of the user interface is the ability of the system to provide an attractive user interface that is easy for service users to use. The quality of the user interface is measured by factors such as the appearance, colors and animations provided by the system. The results of research by Iqbal (2020) show that a good quality user interface can increase customer satisfaction with banking services. The quality of the internet banking user interface is an important factor in influencing customer satisfaction. A good and easy-to-use user interface can increase customer convenience in using internet banking services thereby increasing customer satisfaction. Conversely, a bad user interface can cause frustration and inconvenience in using internet banking, which can reduce customer satisfaction. Research conducted by Ng. S, et al. (2020) in Taiwan shows that the quality of the internet banking user interface has a positive effect on customer satisfaction.

Customers who feel the internet banking user interface is easy to use and effective tend to be more satisfied with the bank's services. Research conducted by Nurhayati (2021) in Indonesia shows that the quality of the internet banking user interface has a positive effect on customer satisfaction. Customers who feel the internet banking user interface is easy to use and provide a good experience tend to be more satisfied with the bank's services. Research conducted by Trung et al. (2021) in Vietnam shows that the quality of the internet banking user interface has a positive effect on customer satisfaction. Customers who feel the internet banking user interface is easy to use and provide a positive experience tend to be more satisfied with the bank's services.

Service availability is the ability of the system to provide services that are available anytime and anywhere according to the needs of service users. Service availability is measured by factors such as access time and range of services provided by the system.

The results of research by Sulaeman, Putra and Afrizal (2020) show that the availability of good services can increase customer satisfaction with banking services.

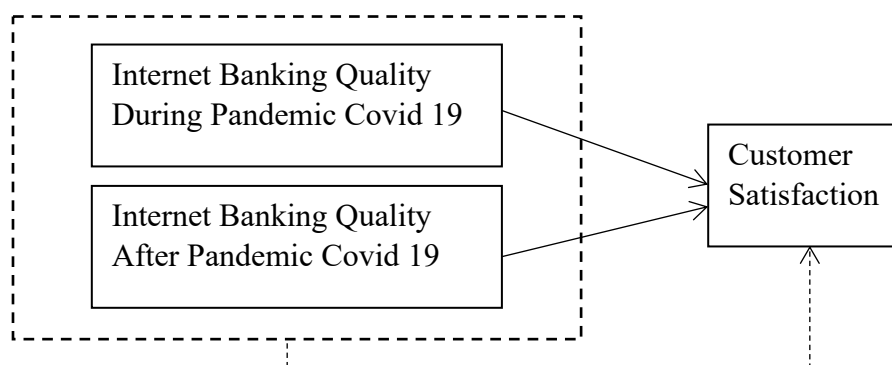
Service quality is the ability of the system to provide quality services and meet the expectations of service users. Service quality is measured by factors such as service speed, information accuracy, and ease of transaction processing provided by the system. The results of research by Siregar, et al (2021) show that good service quality can increase customer satisfaction with banking services. The quality of internet banking services also plays an important role in customer satisfaction. The better the quality of the internet banking services provided, the higher the customer satisfaction with these banking services.

Fathoni (2020) found that the quality of internet banking services has a significant influence on customer satisfaction. The results of the study show that customers who feel that the internet banking services provided by banks are of good quality tend to be more satisfied with banking services as a whole. In addition, Kurniawan (2020) found that the quality of internet banking services also influences customer intentions to use internet banking services in the future. The results of the study show that customers who feel that the internet banking services provided by banks are of good quality tend to be more likely to use these services in the future.

Information quality is the ability of the system to provide information that is accurate, clear and easily understood by service users. Information quality is measured by factors such as the accuracy of the information, the completeness of the information, and the ease of understanding the information provided by the system. The results of research by Nduka (2019) show that good quality information can increase customer trust and satisfaction with banking services. The availability of internet banking services is a very important factor in customer satisfaction because the easier and faster access available to customers, the higher their satisfaction with these banking services (Nugraha, 2021). In today's digital era, internet banking provides very flexible access for customers to access their accounts anytime and anywhere.

Kurniawan (2021) found that the availability of internet banking services has a significant effect on customer satisfaction. The results of the study show that customers who use internet banking services are more satisfied with banking services and are more likely to use online banking services. (Rizky, 2021). In addition, Rifa'i (2021) study found that the availability of internet banking services also affects customer loyalty to the bank. The results of the study show that customers who have easy and fast internet banking access tend to be more loyal and do not switch to other banks.

From these two journals, it can be concluded that the availability of internet banking services has a significant influence on customer satisfaction and loyalty to the bank. Therefore, it is important for banks to continuously improve and update their internet banking services to provide a better experience for customers (Nurlaela, 2021). Based on the above phenomenon, the Research Model and Hypotheses in this study are as follows:



**Figure 1.** Research Model

- H1: Response speed, ease of use, user interface quality, service availability, service quality, and information and communication technology have a positive and significant impact on customer satisfaction of State Owned Banks in the city of Bandung during the Covid 19 Pandemic era.
- H2: Response speed, ease of use, user interface quality, service availability, service quality, and information and communication technology have a positive and significant effect on customer satisfaction of State Owned Banks in Bandung City after the Covid 19 Pandemic era (new normal period).
- H3: The quality of Internet Banking services after the Covid 19 Pandemic era has increased compared to during the Covid 19 Pandemic era.
- H4: The Information and Communication Technology variable is the variable that has experienced the greatest increase after the pandemic compared to other variables.

### 3. Methods

The type of this study is quantitative. The data used in this study is primary data. The main data of this study were obtained from the results of survey of State-Owned Bank customers in Bandung city. The sampling technique used in this study is purposive sampling. A total of 100 samples were taken according to the respondent's criteria such as name, gender, age, and occupation. Question points are made based on indicators related to opinions. In this research, the number of samples needed is 100 customers. This study used a non-probability sampling method with a purposive sampling technique, namely collecting samples with certain criteria under different conditions according to the needs of researchers and people who use internet banking services at 4 State Owned Banks in the city of Bandung namely BNI, BRI, Mandiri, and BTN during and after the Covid-19 Pandemic Era. This criterion is checked by filter. This study used a test instrument consisting of validity and reliability test. In addition, multiple regression analysis test is used as a test, and model test consists of F test, t test, coefficient of determination, and different test. Besides that, the response of respondents is processed using IBM SPSS Statistics 26. In this study there are 7 independent variables consisting of response speed, data security, ease of use, user interface quality, service availability, service quality, and information and communication technology, as well as 1 dependent variable, namely Customer Satisfaction.

#### 4. Results and Discussion

##### Analysis of Internet Banking Service Quality During the Covid 19 Pandemic

**Table 1.** Descriptive Statistics

	Means	std. Deviation	N
Customer Satisfaction before Covid	7.97	1,410	100
Response Speed	14.69	2,688	100
Data Security	7.38	1,476	100
Ease of Use	10.22	2,385	100
User Interface Quality	17.06	3,690	100
Service Availability	11.43	1,760	100
Service Quality	7.25	1,546	100
Information and communication technology	7.32	1,537	100

a. Dependent Variable: Customer Satisfaction during Covid

b. All requested variables entered.

The results of this analysis show the average value (mean), standard deviation (std. deviation), and total data (N) of several variables related to customer satisfaction with banking services during Covid-19.

- a. Customer satisfaction before Covid has an average value of 7.97 with a standard deviation of 1,410 from 100 existing data.
- b. Response Speed has an average value of 14.69 with a standard deviation of 2,688 from 100 existing data.
- c. Data Security has an average value of 7.38 with a standard deviation of 1,476 out of 100 existing data.
- d. Ease of Use has an average value of 10.22 with a standard deviation of 2,385 from 100 existing data.
- e. User Interface Quality has an average value of 17.06 with a standard deviation of 3,690 from 100 existing data.
- f. Service Availability has an average value of 11.43 with a standard deviation of 1,760 from 100 existing data.
- g. Service Quality has an average value of 7.25 with a standard deviation of 1,546 from 100 existing data.
- h. Information and Communication Technology has an average value of 7.32 with a standard deviation of 1,537 from 100 existing data.

These results provide an overview of how customers perceive state owned banking services during the Covid-19 pandemic. A high mean value indicates that customers are relatively satisfied with the service, while a low standard deviation indicates that customer perceptions tend to be similar. This can help banks to evaluate and improve their services to better satisfy their customers.

**Table 2.** ANOVA <sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	97,916	7	13,988	13,000	.000 <sup>b</sup>
	residual	98,994	92	1,076		
	Total	196,910	99			

a. Dependent Variable: Customer Satisfaction during Covid

b. Predictors: (Constant), Information and Communication Technology, Data Security, Ease of Use, Service Availability, User Interface Quality, Service Quality, Response Speed

Based on the results of the analysis above, where the Sig value obtained is  $0.00 < 0.05$ , it means that it can be concluded that simultaneously the independent variable has a significant effect on the dependent variable, or it can be concluded that simultaneously the response speed, ease of use, user interface quality, service availability, service quality, and information and communication technology have a positive and significant effect on customer satisfaction of State owned Bank in the City of Bandung during the Covid 19 Pandemic era. Hypothesis 1 can be confirmed.

**Table 3.** Coefficients <sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	std. Error	Betas			tolerance	VIF
1	(Constant)	1,763	.816		2.162	.033		
	Response Speed	.039	.060	.074	.646	.520	.415	2,409
	Data Security	.095	.090	.100	1,056	.294	.616	1624
	Ease of Use	-.040	.057	-.067	-.699	.486	.591	1693
	User Interface Quality	.017	.034	.044	.492	.624	.698	1,433
	Service Availability	.010	.076	.012	.126	.900	.612	1635
	Service Quality	.275	.087	.301	3,169	.002	.605	1652
	Information and communication technology	.404	.081	.440	5.003	.000	.706	1,416

a. Dependent Variable: Customer Satisfaction during Covid

Based on the results of the data processing, there is a regression model used to predict customer satisfaction during Covid 19. The independent variables used are the same as in the previous case, namely Response Speed, Data Security, Ease of Use, User Interface Quality, Service Availability, Service Quality, and Information and communication technology

The regression results show that the Information and Communication Technology variable has the greatest influence on customer satisfaction during Covid, with a standard coefficient value of .440 and a p-value significance of .000. This shows that the higher the level of Information and Communication Technology owned, the higher the level of customer satisfaction. Hypothesis 4 can be confirmed.



In addition, the Service Quality variable also has a significant influence on customer satisfaction during Covid, with a standardized coefficient value of .301 and a p-value significance of .002.

Other variables, such as Response Speed, Data Security, Ease of Use, User Interface Quality, and Service Availability, do not have a significant effect on customer satisfaction during the Covid 19 pandemic.

### **Analysis of Internet Banking Service Quality after the Covid 19 Pandemic (New Normal)**

**Table 4.** Descriptive Statistics

	<b>Means</b>	<b>std. Deviation</b>	<b>N</b>
Post-Covid Customer Satisfaction	7.67	1,477	100
Response Speed	14.38	2,643	100
Data Security	7.16	1,502	100
Ease of Use	9.95	2,418	100
User Interface Quality	16.69	3,504	100
Service Availability	11.00	1826	100
Service Quality	6.78	1,515	100
Information and communication technology	6.97	1,507	100

Source: Researcher, Processed (2023)

#### **Post-Covid Customer Satisfaction**

The mean post-covid customer satisfaction is 7.67, with a standard deviation (std. deviation) of 1,477. This shows that the majority of customers are quite satisfied with the services provided by the company after the Covid-19 pandemic.

#### **Response Speed**

The average value of response speed is 14.38, with a standard deviation of 2,643. This shows that the speed of response provided by the company can still be improved to make it more efficient.

#### **Data Security**

The average value of data security is 7.16, with a standard deviation of 1,502. This shows that the company has paid close attention to data security aspects.

#### **Ease of Use**

The average value of ease of use is 9.95, with a standard deviation of 2,418. This shows that the majority of customers find it easy to use the services provided by the company.

#### **User Interface Quality**

The average value of user interface quality is 16.69, with a standard deviation of 3,504. This shows that the company has provided a good and comfortable user interface for customers to use.

### Service Availability

The average value of service availability is 11.00, with a standard deviation of 1,826. This shows that the company has provided adequate service to customers.

### Service Quality

The average value of service quality is 6.78, with a standard deviation of 1,515. This shows that there are service aspects that need to be improved in order to provide better service to customers.

### Information and communication technology

The average value of information and communication technology is 6.97, with a standard deviation of 1,507. This shows that the company can still improve the information and communication technology used in its services.

**Table 5.** Summary Model <sup>b</sup>

Model	R	R Square	Adjusted R Square	std. Error of the Estimate	Durbin-Watson
1	.629 <sup>a</sup>	.396	.350	1,191	1993

a. Predictors: (Constant), Information and Communication Technology, Data Security, Ease of Use, Service Quality, User Interface Quality, Service Availability, Response Speed

b. Dependent Variable: Post-Covid Customer Satisfaction

The R value of 0.629 indicates that there is a positive relationship between the predictor variable and the response variable, although it is not that strong because the value is less than 1. Meanwhile, the coefficient of determination explains how much percentage of the variation in the response variable can be explained by the predictor variable. The R Square value of 0.396 indicates that around 39.6% of the variation in the response variable can be explained by the predictor variable. *Adjusted R Square* value of 0.350 indicates that about 35.0% of the variation in the response variable can be explained by the predictor variable after taking into account other predictor variables and sample size. Durbin-Watson statistics are used to test whether there is a correlation between adjacent residual values. The Durbin-Watson value of 1,993 indicates that there is no significant correlation between adjacent residual values.

**Table 6.** ANOVA <sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	85,543	7	12,220	8,611	.000 <sup>b</sup>
	residual	130,567	92	1,419		
	Total	216,110	99			

a. Dependent Variable: Post-Covid Customer Satisfaction

b. Predictors: (Constant), Information and Communication Technology, Data Security, Ease of Use, Service Quality, User Interface Quality, Service Availability, Response Speed

Based on the results of the analysis above, where the Sig value obtained is  $0.00 < 0.05$ , it means that it can be concluded that simultaneously the independent variable has a significant effect on the dependent variable, or it can be concluded simultaneously that

the response speed, ease of use, user interface quality, service availability, service quality, and information and communication technology have a positive and significant effect on customer satisfaction of State Owned Banks in Bandung City after the Covid 19 Pandemic era. Hypothesis 2 can be confirmed.

**Table 7.** Coefficients <sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	std. Error	Betas			tolerance	VIF
1	(Constant)	1,408	.942		1,494	.139		
	Response Speed	.009	.062	.015	.137	.891	.526	1901
	Data Security	.064	.094	.065	.682	.497	.719	1,392
	Ease of Use	.046	.058	.075	.798	.427	.740	1,352
	User Interface Quality	.042	.040	.100	1,042	.300	.713	1,403
	Service Availability	.041	.078	.051	.531	.597	.711	1,407
	Service Quality	.211	.091	.216	2,322	.022	.756	1,323
	Information and communication technology	.378	.092	.385	4,120	.000	.751	1,332

a. Dependent Variable: Post-Covid Customer Satisfaction

The regression results show that the Information and Communication Technology variable has the greatest influence on post-Covid customer satisfaction, with a standard coefficient value of .385 and a p-value significance of .000. This shows that the higher the level of Information and Communication Technology owned, the higher the level of customer satisfaction. Hypothesis 4 can be confirmed. In addition, the Service Quality variable also has a significant influence on post-Covid customer satisfaction, with a standardized coefficient value of .216 and a significant p-value of .022.

Other variables, such as Response Speed, Data Security, Ease of Use, User Interface Quality, and Service Availability have no significant effect on post-Covid customer satisfaction.

**Different Test****Table 8.** Group Statistics

	Code	N	Means	std. Deviation	std. Error Means
Service Quality	Covid era	100	7.25	1,546	.155
	New Normal Era	100	6.78	1,515	.151
Information and communication technology	Covid era	100	7.32	1,537	.154
	New Normal Era	100	6.97	1,507	.151

Source: Researcher, Processed (2023)

The data is the result of statistical analysis on two groups of variables, namely Service Quality and Information and Communication Technology, each of which is grouped by time period, namely the Covid Era and the New Normal Era. The following is an interpretation of the results of the data processing:

**Service Quality**

The average value of service quality in the Covid Era is 7.25, while in the New Normal Era it is 6.78. the standard deviation in the two periods is not much different, which is around 1.5. The standard error in both periods is also almost the same, which is around 0.15.

From these results, it can be concluded that in general, service quality in the Covid Era is higher than the New Normal Era. However, the difference between the two periods is not very significant.

**Information and communication technology**

The average value of information and communication technology in the Covid Era is 7.32, while in the New Normal Era it is 6.97. The standard deviation in the two periods is not much different, which is around 1.5. The standard error in both periods is also almost the same, which is around 0.15.

From these results, it can be concluded that in general, information and communication technology scores in the Covid Era are higher than the New Normal Era. However, the difference between the two periods is also not very significant.

Overall, the results of the data processing show that the two groups of variables tend to decrease in average values in the New Normal Era compared to the Covid Era. That is, Hypothesis 3 cannot be confirmed. However, because the difference between the two periods is not significant, further research is needed to confirm this finding.

**5. Conclusions**

Based on research on the effect of internet banking quality during and after the Covid-19 pandemic, it is found that information and communication technology (ICT) and service quality variables have a positive and significant impact on customer satisfaction. This shows that the better ICT and the better the quality of services provided by the bank, the better the quality of internet banking perceived by customers. On the other hand, it is found that other variables such as data security, user interface quality, response speed, ease of use, and customer service availability also have a positive effect on customer satisfaction, but not statistically significant. Therefore, banks need to pay attention to these variables as factors that can influence customer perceptions of the quality of internet banking. Meanwhile, seen from the Different Test, the post-pandemic internet banking

service quality has actually decreased compared to during the pandemic. This is likely to occur because after the pandemic, banks are trying to improve offline *Customer Relationship Management* compared to before, even though the results are not that significant.

In conclusion, banks need to continue to improve the ICT and service quality provided to customers to improve the quality of internet banking. In addition, banks also need to pay attention to the other factors above in order to provide a better experience to customers in using internet banking.

However, this research has some limitations that need to be considered. First, this study only involved respondents from one particular city or region, therefore the results cannot be generalized broadly to the entire customer population in Indonesia or other countries. Second, data collection was carried out through questionnaires sent online, therefore there is a possibility of bias in sampling and respondents' assessment of the quality of internet banking. Third, this study only focuses on the influence of certain variables on the quality of internet banking and does not consider other factors that might influence internet banking use. Therefore, further research can expand the number of respondents and the factors considered to produce findings that are more representative and can be applied more broadly.

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