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Analysis of Service Quality and Connectivity to the Effectiveness of Commuter Line Train Passengers at Soekarno-Hatta Airport (Basoetta)

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Abstract: The purpose of this study was to determine the effect of service quality and connectivity on the effectiveness of Soekarno-Hatta airport commuter line train passengers. The population in this study were all passengers of the Soekarno-Hatta Airport Commuter Line (Basoetta) train who used the train service. The research employed a quantitative methodology, utilizing data analysis techniques such as validity testing, reliability testing, multiple linear regression testing, multiple correlation coefficient testing, multiple determination coefficient testing, partial T testing, simultaneous F testing, and assessment of classical assumptions, including multicollinearity testing. The data analysis in this study reveals that both service quality and connectivity have a positive and statistically significant impact, either individually or together. This implies that passengers are content with the level of service quality and connection provided by the Soekarno-Hatta Airport Commuter Line (Basoetta).

Keywords: Service quality, Connectivity, Passengers Effectiveness, Airport Train

INTRODUCTION

The Soekarno-Hatta Airport Commuter Line (Basoetta) train is one of the fast and affordable modes of transportation designed to meet the needs of the community. The Soekarno-Hatta Airport Commuter Line (Basoetta) began operating by PT Railink in December 2017, initially connecting Soekarno-Hatta International Airport with BNI City Station. In October 2017, PT Railink added a new route to serve passengers at Manggarai Station.

In December 2022, PT KAI Commuter Indonesia (KCI) took over the airport train service with the aim of unifying and integrating the airport train service into the wider Commuter Rail route network in the Greater Jakarta area. With this integration, it is expected to improve operational coordination, service efficiency, and provide a better travel experience

for passengers. This integration also enables increased accessibility to Soekarno-Hatta Airport via rail services, along with efforts to improve transportation connectivity in the Jakarta area.

Currently, the Soekarno-Hatta Commuter Line (Basoetta) operates from Manggarai Station, BNI City Station, Duri Station, Batu Ceper Station, and Soekarno-Hatta Airport Station. On March 1, 2024, PT KAI Commuter conducted a trial of adding a stop point at Rawabuaya Station, Jakarta. This addition aims to make it easier for Soekarno-Hatta Airport (Basoetta) Commuter Line passengers to choose alternative transportation for trips to the airport and to various areas in Jakarta and its surroundings, in response to the mobility needs of the Tangerang community.

The Soekarno-Hatta Airport Commuter Line (Basoetta) train operates with a headway of 30 minutes to 1 hour. Every day, the Soekarno-Hatta Airport Commuter Line (Basoetta) train serves 30 trips from Manggarai Station to Soekarno-Hatta International Airport Station. The Soekarno-Hatta Airport Commuter Line (Basoetta) train has two services, namely executive and premium classes, with a total seat capacity of 272 passengers per train of the Soekarno-Hatta Airport Commuter Line (Basoetta). The operating schedule starts from morning to night, adjusting to the departure schedule at Soekarno-Hatta Airport.

The travel time of the Soekarno-Hatta Airport Commuter Line (Basoetta) train from Manggarai station to Soekarno-Hatta Airport station is around 56 minutes and stops at each station around 2 to 4 minutes, and the average waiting time from the Airport station to each airport terminal using a floating train (Automatic People Mover System, APMS) is 13 minutes. While the time required to move between terminals using a sky train is around 3 to 5 minutes.

Intermodal connections from each Basoetta Commuter Line station can support passenger connectivity. Manggarai Station is directly connected to KRL Commuter Line, Transjakarta, and Manggarai bus terminal. BNI City Station is connected to KRL, MRT, LRT, Transjakarta BRT, and integrated with the Dukuh Atas transit center. Stops at Duri and Rawabuaya stations are also directly connected to the KRL. Dukuh Atas Station is connected to KRL, Transjakarta, and Plawad terminal. The last station at Soekarno-Hatta Airport is connected to the airport, and to get to terminals 1, 2, and 3 you can use a shuttle bus or a sky train (Automatic People Mover System, APMS).

The sky train (Automatic People Mover System, APMS) is an airport facility that can be used by airport service users to move between terminals or from the terminal to the Soekarno-Hatta Airport Commuter Line (Basoetta) train station. There are two tracks, namely Line A and Line B used in the operation of the drifting train (Automatic People Mover System, APMS), and each track is operated by two series of drifting trains with two trains per series. To use the sky train (Automatic People Mover System, APMS), service users must go through the shelter located in each terminal and in the Integrated Building which is connected to the Soekarno-Hatta Airport Commuter Line Train Station (Basoetta). This sky train (Automatic People Mover System, APMS) was made to support passenger connectivity to each airport terminal.

The Soekarno-Hatta Airport Commuter Line (Basoetta) train station has a platform capacity of 2,000 passengers and a building capacity of 1,500 passengers. The station is equipped with various facilities such as ticketing counter, public hall, tapping gate in, waiting lounge, commercial area, toilet, prayer room, station headroom, connectivity to Integrated Building, and airport station Automatic People Mover System (APMS).

The effectiveness of the service quality of the Soekarno-Hatta Airport Commuter Line (Basoetta) can be seen from various aspects. The high operational frequency and diversity of services offered demonstrate a commitment to providing comfort and efficiency for passengers. Good intermodal integration allows passengers to switch transportation easily and quickly, increasing accessibility to various destinations in Jakarta and its surroundings.

The addition of new stopping points such as at Rawabuaya Station also shows responsiveness to the needs of the community, providing wider mobility alternatives. The facilities provided at each station, including the floating train (Automatic People Mover System, APMS), enhance a pleasant and efficient travel experience, strengthening the position of the Soekarno-Hatta Airport Commuter Line (Basoetta) as the main transportation choice to Soekarno-Hatta Airport.

With all these efforts and innovations, the Soekarno-Hatta airport Commuter Line (Basoetta) is expected to continue to improve its service quality, provide reliable transportation solutions, and become the backbone of transportation connectivity in the Greater Jakarta area. This research will further evaluate the effectiveness and impact of this service on community mobility and passenger travel quality.

Literature review

Transportation System

A transportation system is defined as a combination of the terms "transportation" and "systems." Transporting people or products from one place to another is an endeavor known as transportation, whereas a system is a way of attaching and connecting one variable to another in a systematic order (Nur et al., 2021). There hasn't been any evidence of connection between Indonesia's mass transit systems thus far. There are numerous options for public transit to go to a given location, meaning multiple modes share the same route. Even better would be if all available public transit options were used to their fullest potential in order to help each other reach previously undiscovered paths (Rasyid et al., 2020). Sufficient utilization of public transportation by entities, individuals, or affiliated parties to execute and oversee primary business operations, hence yielding advantages such as enhanced security, adaptability, integration, efficiency, and/or higher revenue and profits (Purba, 2021).

The increasing demand for transportation is caused by the activities carried out by humans from one place to another, such as working, shopping, and attending school. Not only daily activities, the process of distributing goods is also one of the factors in the increasing need for transportation (Nasution, 2008). There are two important factors that greatly influence the transportation system. According to (Tamin, 1997), The first important factor is the macro transportation network system, road network system, and railways that must be able to meet future transportation needs. The next important factor is land use. Multimodal transportation modes in an area encourage mode selection considerations made by KRL users who make mode selection on their way to the transit point.

Travelers may consider movements that use more than one mode of travel (multimodal), either by private vehicle or public transportation (Toar et al., 2015). Transportation mode selection in Indonesia currently uses the captive user method where travelers only have the option to use public transport and choice users where travelers can choose between using private transport and public transport (Kawengian, Jansen, & Rompis, 2017).

According to (Tamin, 1997), When it comes to transportation systems, there are spatial distribution factors of land use that influence movement or travel. Land use is directly related to transportation needs as a means to meet the needs of its land use functions. Land use activities using intercity transportation systems, such as tourism, trade, agriculture, industry, mining, and so on, result in the movement of flows of people, vehicles, and goods. The transportation system aims to link interactions between land uses efficiently and easily, including balancing the distribution of land use functions with the capacity and distribution of transportation facilities.

Kereta Commuter

According to (Vuchic, 1981), The term Commuter Rail is supposed to relate to the operation of trains only at the beginning and end of the working day, specifically to transport

consumers going to and or leaving the city center. However, the term is also commonly used for all types of rail transit that do not fall under the Metro/Heavy Rail Transit category (Grava, 2002). In order to ensure a satisfactory level of service, it is important for the distance between stops or shelters for commuter trains to be no less than 1.6 km, as these trains often have sluggish acceleration and deceleration capabilities. The determination of the station/shelter site is directly linked to the presence of a meeting point, which serves as a gathering place for feeder vehicles. If these criteria are satisfied, a distance of up to 4.8 km between stations/shelters is still deemed acceptable (Grava, 2002). Advantages and Disadvantages of Commuter Trains Here are some advantages and disadvantages of commuter trains (Lloyd Wright and Karl Fjellstrom in (R. Setiawan, 2005).

The establishment of a new airport remote from the city has resulted in the necessity for alternate modes of transportation for passengers to get to and from the airport. The primary option for meeting these demands and achieving ecologically friendly, mass, and sustainable transportation is the rail-based Airport Train (Airport Train). There are now 5 mass transit options in Indonesia that are centered on airport-city train connections. The Kualanamu International Airport Train (Medan), the Minangkabau International Airport Train (Padang), and the SM Badaruddin II LRT (Palembang) are the three trains that run on the island of Sumatra. The Soekarno-Hatta International Airport Train (Jakarta) and the Adi Sumarmo International Airport Train (Solo) are the two trains that run on the island of Java (Suseno, 2021). Users' trip may be made easier by the way the Airport Train operates. The trip to Soekarno-Hatta International Airport can be completed more quickly with the Airport Train mode than with other public transportation, which can take hours in the event of heavy traffic. A study that examines customers of the Soekarno-Hatta International Airport Train is required in order to assess the level of service quality and connection of Airport Train public transportation (Giovanny & Astutik, 2021).

a) Advantages of commuter trains
    1. It possesses a greater capacity for carrying people in comparison to other forms of public transportation, such as buses, enabling it to efficiently convey huge numbers of individuals from one location to another.
    2. It possesses a designated lane, which prevents it from causing any disruption to other individuals using the road.
    3. Travel time is comparatively less than that of other modes of transportation for the same destination.
b) Weaknesses of commuter trains
    1. The coverage area is limited, as this train is specifically designed to serve just particular localities and is unable to reach remote locations.
    2. Passengers are required to adhere to the established train timetable and demonstrate patience in the event of any delays.

Service Quality

According to Moenir which is quoted Suharto Abdul (Majid, 2015: 34), states “Service is a series of activities to meet customer needs, for the services they get from a company”.

While the definition of service or service according to (Undang-Undang Nomor 8, 1999) on Consumer Protection is “Any service in the form of work or achievement provided for the community to be utilized by consumers”.

Based on the above definition, we can conclude that service is closely related to efforts or actions to meet the needs of people or organizations. The keywords are effort/action, human relations, communication and needs (something is offered).

Theory SERVQUAL (Service Quality Model)

The theory used in this research is SERVQUAL (Service quality model). High service quality positively correlates with customer satisfaction. Content customers assess the caliber of the service by determining if it lives up to their expectations (Hong et al., 2020). Service quality is defined as the endeavor to meet the wants and wishes of customers while ensuring accurate delivery in order to align with customer expectations. According to (Lin, 2024) The desired level of perfection and the capacity to retain control over that level in order to meet customer expectations are what constitute service quality. The SERVQUAL model, established by Parasuraman, Zeithmal, and Berry, is a commonly used benchmark in marketing research for evaluating service quality. Servqual is constructed by comparing two primary factors: customer impressions of the actual service provided and their expectations of the service. Customers' expectations align with the level of service that the firm should offer. Five methods that is:

1. Tangibles. Includes the physical appearance of trains, stations, facilities, and staff. Train cleanliness, interior design, neatness of staff uniforms, and supporting facilities such as seats and waiting rooms at the station.
2. Reliability. The ability to deliver the promised service accurately and reliably. Timeliness of train departures and arrivals, schedule consistency, and ticket booking system reliability.
3. Responsiveness. Willingness and ability of staff to help passengers and provide fast service. Speed in handling passenger complaints, availability of information about schedules and changes, and assistance at the station or on the train.
4. Assurance. The knowledge and courtesy of staff and their ability to instill a sense of trust and security. Staff competence in handling emergency situations, ability to provide information clearly, and polite and friendly demeanor.
5. Empathy (Emphaty). Individualized care and attention to passengers. Ease of access for people with disabilities, special attention to the elderly or passengers with special needs, and the availability of staff to answer questions patiently.

Connectivity

According to (Gorji et al., 2022) They contend that the degree to which a transportation network facilitates simple, quick, and easy mobility between various locations—including the seamless integration of various modes of transportation—is referred to as connectedness in the context of transportation. According to the recommendation Federal Aviation Administratio/FAA, An airport must have adequate availability of land transportation both to and from the airport location. Availability of land transportation modes such as airport commuter line trains as a support for air mode connectivity with other modes (Gulyás & Kovács, 2016). From the above understanding, it can be concluded that connectivity in the context of airport commuter line trains can be defined as the ability to connect train stations with other modes of transportation, such as long-distance trains, KRL, and Transjakarta, and facilitate passenger travel from stations to airports and vice versa.

Effectiveness

Effectiveness is a measure of the informativeness of a method or way of conveying meaning to users (Komninos, 2020). Based on the above explanation, it can be inferred that efficacy refers to the act of performing the correct action, in order to achieve good efficiency. Effectiveness is the key to the success of a company or organization. Before being able to carry out activities efficiently, you must do the right thing first, namely doing tasks that are in accordance with your field of expertise.

The Soekarno Hatta Airport commuter line train can be said to be effective if it meets the standardized criteria. Effective in question is the journey from home to the terminal for the

check-in process. One of the guidelines that can be used in assessing the effectiveness of the Soekarno Hatta Airport commuter line train is the Minimum Service Standards (MSS). Minimum Service Standards according to PERMENHUB consist of service aspects: Safety, Security, Comfort, Reliability (operating speed, punctuality, frequency, and headway), Convenience (accessibility), Equality (passengers with special needs).

Based on PP RI No.83/2011 and PERMENHUB RI No.54/2013, the acquisition of the Soekarno Hatta Airport commuter line aims to enhance the quality of public transportation services by providing a rapid, safe, integrated, orderly, smooth, comfortable, economical, efficient, effective, and affordable option for the community. The main objectives of the policy are to unravel and reduce traffic congestion, improve accessibility and mobility of transportation service users, integrate transportation network patterns, improve the road network and the Soekarno Hatta Airport commuter line, and reduce the use of private vehicles.

By decreasing reliance on private vehicles and easing traffic near the airport, the airport train's installation has greatly improved passenger mobility to and from Soekarno-Hatta International Airport (D. Setiawan, 2019). Airport trains are a better option for travelers who value their time because of their shorter and more reliable travel times when compared to other forms of transportation (Vitriyana & Latifam Eva Azhra, 2019). By carrying more passengers and causing fewer traffic bottlenecks, the Soekarno-Hatta airport train has proven to be efficient in lowering carbon emissions (Reza & Sari, 2022).

Framework Of Thought

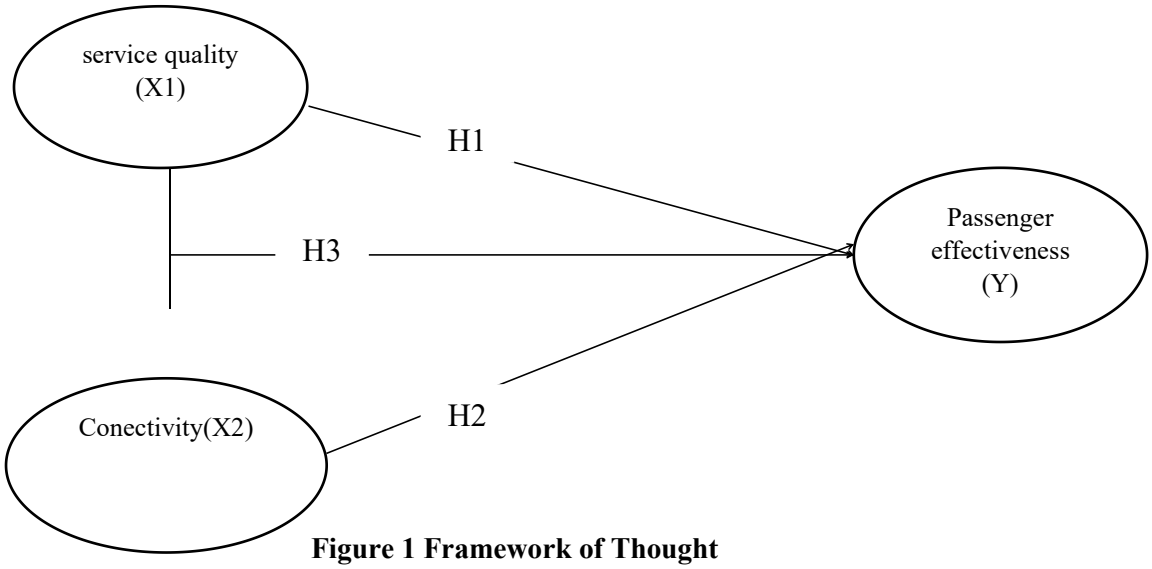

Figure 1 Framework of Thought
Source: processed by the author

METHOD

This research utilizes a quantitative methodology. As stated by (Sugiyono, 2022) a quantitative strategy refers to a research approach rooted in the philosophy of positivism. It involves studying specific populations or samples, collecting data using research instruments, and analyzing the data in a quantitative and measurable manner. The main objective of this strategy is to test hypotheses. Questionnaires were distributed to 78 passengers at the Soekarno-Hatta Airport Commuter Line Train Station (Basoetta). In this study, the population is all passengers of the Soekarno-Hatta Airport Commuter Line Train. The research was conducted for 4 days starting August 09 - August 12, 2024, which included peak hours and non-peak hours to get a comprehensive picture of the passenger experience. For this research, Descriptive Statistical Test, Validity Test, Reliability Test, T Test (partial),

Heteroscedaticity Test, Multicollinearity Test, F Test (simultaneous), Normality Test, Multiple Libear Regression Test, Determination Coefficient Test. This test uses SPSS (Statistical Package for The Social Sciences) software version 26.

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RESULT AND DISCUSSION

The data collected is primary data through the distribution of surveys using Google Forms. The respondents were provided with instructions on how to fill out the instrument, focusing on Service Quality, connectivity, effectiveness Passengers of the soekarno-hatta airport commuter line (BASOETTA) in August 2024.

Validity Test

Table 1.1 Validity Test Results

Validity	Statement	R. Calculate	R Table	Description
Service Quality (X1)	X1.1	0.595	0.223	Valid
	X1.2	0.581	0.223	Valid
	X1.3	0.571	0.223	Valid
	X1.4	0.542	0.223	Valid
	X1.5	0.503	0.223	Valid
	X1.6	0.623	0.223	Valid
	X1.7	0.582	0.223	Valid
	X1.8	0.527	0.223	Valid
	X1.9	0.529	0.223	Valid
	X1.10	0.375	0.223	Valid
Conectivity(X2)	X2.1	0.548	0.223	Valid
	X2.2	0.645	0.223	Valid
	X2.3	0.541	0.223	Valid
	X2.4	0.605	0.223	Valid
	X2.5	0.676	0.223	Valid
	X2.6	0.694	0.223	Valid
Effectiveness (Y)	Y1.1	0.665	0.223	Valid
	Y1.2	0.548	0.223	Valid
	Y1.3	0.651	0.223	Valid
	Y1.4	0.679	0.223	Valid
	Y1.5	0.490	0.223	Valid
	Y1.6	0.632	0.223	Valid

(Source: Data processed by the author using SPSS)

(Sugiyono, 2022) states that if the count of r is more than the r table, then the assertion is considered legitimate. The validity test employs a significant threshold (α) of 5% or 0.05. To calculate the value of the r table, we may use the formula Df = N-2, where N is the total number of observations. In this case, N is equal to 78, thus the degrees of freedom (Df) is 78 – 2 = 76. Therefore, the value of the r table is 0.223. The data is deemed legitimate if the r count value is more than the r table value and the significance value is less than 0.05. According to the table provided, all elements are considered legitimate as the resultant coefficient is more than 0.223. So there is no need to replace or delete statements.

Reliability Test

Table 1.2 Reliability Test Results

Variabel	Cronbach Alpha	Descriorion
Service Quality (X1)	0.736	Reliabel
Connectivity (X2)	0.680	Reliabel
Effectiveness (Y)	0.666	Reliabel

(Source: Data processed by the author using SPSS)

According to (Sugiyono, 2022), a reliable instrument is one that consistently produces the same results when used to collect data. In this study, the table above indicates that all statement variables have values that meet the criteria for acceptable reliability, as they are greater than the Cronbach's alpha value of 0.6.

Multicollinearity Test

Table 1.3 Multicollinearity Test Results

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.428	2.128		1.141	.257		
	Service Quality	.351	.069	.517	5.086	.000	.542	1.843
	Connectivity	.317	.104	.309	3.037	.003	.542	1.843
a. Dependent Variable: Efektivitas								

(Source: Data processed by the author using SPSS)

According for (Ghozali, 2019) The multicollinearity test aims to test and determine whether the regression model has a correlation between the independent variables to the dependent variable. From the output above, All variables have a VIF value below 10.00 and a tolerance value close to 1, indicating the absence of multicollinearity in the regression model.

Multiple Linear Regression Test

Table 1.4 Multiple Linear Regression Tests

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.428	2.128		1.141	.257		
	Service Quality	.351	.069	.517	5.086	.000	.542	1.843
	Connectivity	.317	.104	.309	3.037	.003	.542	1.843
a. Dependent Variable: Effectiveness								

(Source: Data processed by the author using SPSS)

(Sugiyono, 2022) defines several Linear Regression Analysis as a statistical method used to elucidate the connection between variations in the dependent variable and several variables that influence more than one predictor. The regression equation provided can be understood in the following manner:

The value of a, which is 2.428, indicates that when X1 and X2 are both zero, the variable Y (Effectiveness) has a value of 2,428.

1) b1 = 0.351 states that if X1 increases by one unit, then Y will increase by 0.351 assuming there is no change in the value of X2 (X2 is constant).

2) b2 = 0.317 states that if X2 increases by one unit, then Y will increase by 0.317 assuming there is no change in the value of X1 (X1 is constant).

Correlation Coefficient Test

Table 1.5 Correlation Coefficient Test

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.761[a]	.579	.568	2.170

a. Predictors: (Constant), Connectivity,Service Quality
b. Dependent Variable: Effectiveness

(Source: Data processed by the author using SPSS)

(Sugiyono, 2022) The multiple correlation coefficient is used to determine the degree or strength of the relationship between all X variables on Y simultaneously. So based on the table above, it shows that between the variables of Service Quality (X1) Connectivity (X2) and Effectiveness (Y) there is a (R) of 0.761. This implies that there is a positive correlation between the two variables, indicating a high degree of association.

Determination Coefficient Test

Table 1.5 Test Coefficient of Determination

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.761[a]	.579	.568	2.170

a. Predictors: (Constant), Connectivity, Service Quality
b. Dependent Variable: Effectiveness

(Source: Data processed by the author using SPSS)

(Mardiatmoko, 2020) The Coefficient of Determination is a statistical metric used to quantify the extent to which variable X (independent) influences variable Y (dependent). The Coefficient of Determination Test yielded a R square value of 0.579, which corresponds to 57.9% when multiplied by 100. This indicates that 57.9% of the variation in the dependent variable (Y) can be explained by the independent variables (X1 and X2), while the remaining variation is attributed to unexamined factors.

T (Parsial)Test

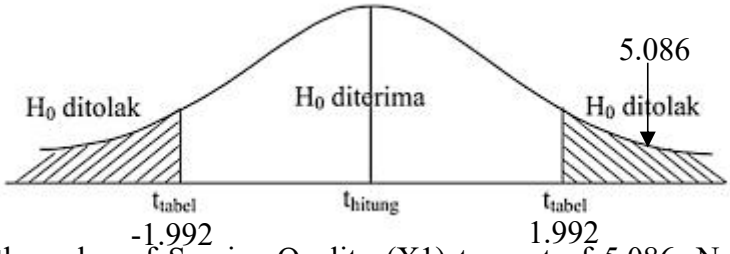
Tabel 1.6 T (Parsial) Test

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.428	2.128		1.141	.257		
	Service Quality	.351	.069	.517	5.086	.000	.542	1.843
	Connectivity	.317	.104	.309	3.037	.003	.542	1.843

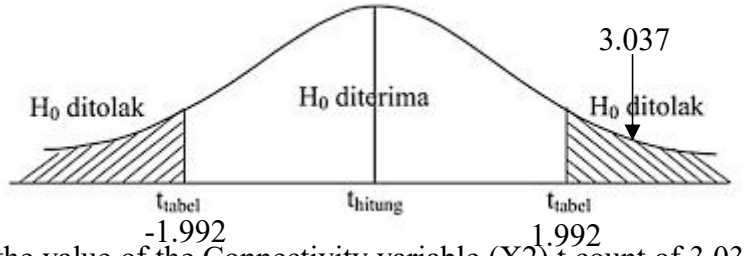
a. Dependent Variable: Effectiveness

(Source: Data processed by the author using SPSS)

(Ghozali, 2019) states that the goal of the T test is to assess the relationship between the Independent variable and the dependent variable.



Obtained the value of Service Quality (X1) t count of 5.086. Next determine the t table. The t distribution table is searched at α / 2 = 0.05 = 0.025 with N-k-1 free degrees, namely 78 - 2 - 1 = 75, so t Table 1.992 is obtained. Because t count is greater than t table, namely 5.086> 1.992 and the significance value (Sig.) 0.000 <0.05, there is a clear correlation between Service Quality and Effectiveness.



Obtained the value of the Connectivity variable (X2) t count of 3.037. Next determine the t table. The t distribution table is searched at α / 2 = 0.05 = 0.025 with N-k-1 free degrees, namely 78 - 2 - 1 = 75, so t Table 1.992 is obtained. Because t count is greater than t table, namely 3.037> 1.992 and the significance value (Sig.) 0.003 <0.05, i There is a clear correlation between Connectivity and Effectiveness.

F Test (Simultaneous)

Table 1.7 F Test (Simultaneously simultaneously)

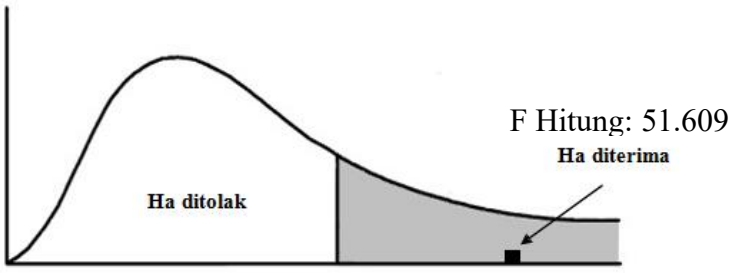
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	486.024	2	243.012	51.609	.000[b]
	Residual	353.155	75	4.709		
	Total	839.179	77			

a. Dependent Variable: Effectiveness

b. Predictors: (Constant), Connectivity,Service Quality

(Source: Data processed by the author using SPSS)



F Tabel: 3.12

Based on the spss output table obtained Fcount of 51.609 and then determine Ftable. The F distribution table is consulted at a significance level of α = 0.05, with N-k degrees of freedom, which in this case is 76 (calculated as 78 - 2). The value received from the F table is 3.12, which can be found in the distribution table. Based on the comparison of Fcount

(51.609) and Ftable (3.12), and the significant value of 0.000 (<0.05), it can be inferred that there is a considerable effect of both Service Quality and Connectivity on Effectiveness.

CONCLUSION

Based on the results of research on the effect of service quality and connectivity on the effectiveness of Soekarno-Hatta Airport commuter line passengers, the conclusion may be drawn that service quality has a favorable and substantial impact on the efficiency of passengers. Passengers feel that the services provided by officers on the commuter line train are satisfactory. Connectivity perceived by passengers also has a positive and significant influence on the effectiveness of their trip, where passengers feel that accessibility to and from Soekarno-Hatta Airport is optimal. Overall, both service quality and connectivity together have a positive and significant impact on the effectiveness of commuter line passengers at Soekarno-Hatta Airport.

Research limitations

The data collection methods in this study, questionnaires and observations, may have introduced participant response bias, potentially affecting the validity of the data. The limited time period also limits the depth of analysis and interpretation. In addition, the variables studied may not have covered all factors affecting service quality and connectivity, thus excluding other potentially significant variables. Lack of access to more comprehensive data sources poses challenges in achieving more accurate and representative results. Future research should consider a more diverse sample, use varied data collection methods, and include additional relevant variables to strengthen the findings.

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