MODERATING EFFECT OF PURPOSE OF TRAVEL ON PASSENGER SATISFACTION BEFORE AND DURING PANDEMIC COVID-19

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Abstrak

Since COVID-19 was declared as a pandemic, there have been major changes at the airports which can affect passenger satisfaction on service quality. This study examined key drivers of passenger satisfaction before and during the COVID-19 pandemic based on the airport service quality framework by Airport Council International (ACI) and the moderating effect of passenger purpose of travel on relationship between airport service quality and passenger satisfaction. The population was domestic flight passengers who departed through Adi Soemarmo International Airport on the period of May 2018 – December 2021. The data were analyzed using PLS-SEM Multi Group Analysis. The result showed that airport environment and airport facilities were the key drivers of passenger's satisfaction for both of group, while security is key driver only for passenger during pandemic and find your way for passenger before pandemic only. This study also show that purpose of travel is moderating the effect on passenger satisfaction of airport environment and facilities on passenger before pandemic and security on passenger during pandemic.

Kata Kunci: Airport Service Quality, Passengers Satisfaction, PLS-SEM Multi Group Analysis, Key Drivers, Moderating Variables

PENDAHULUAN

In recent years, the aviation industry has experienced a positive growth. Based on International Civil Aviation Organization (ICAO), the global passenger traffic from 2016 – 2019 has increased year over year. However, since the World Health Organization (WHO) has declared the coronavirus (COVID-19) as a pandemic on March 2020, the aviation industry experienced an unprecedented decrease in passenger and aircraft movements. Adi Soemarmo Airport is one of the airports that experienced the most significant impact related to the decline in aircraft and passenger movements among airports managed by PT Angkasa Pura I. Nearly 2.2 million passengers movement per year through Adi Soemarmo Airport before pandemic but since the pandemic the passenger traffic was only 493.000 per year. The decrease in passenger movement was greatly influenced by regulations related to the prohibition on mobilization issued by the government as well as the number of new COVID-19 cases per day and people tend to mobilize less and only travel when there is an urgent need. In addition, people will tend to use private transport compared to public transport such as airplanes. Those decline in passenger movement directly affects the airport's aeronautical revenue. However, airport still needs to provide a safe and comfortable airport as a form of implementing the 3S + 1C principle (safety, security, service, and compliance) and maintaining passenger satisfaction. This leads to a trade-off between efficiency and passenger satisfaction, both of

which are key performance indicators for airport operations.

Airports need to prioritize customer satisfaction because it can be used as input for the needs of airport operations and maintenance based on passenger's perspective, resulting in a great passenger experience so as to get them back to the airport, and improve the airport's competitiveness, especially if there are some alternative airports available in the region so that passengers can choose an airport based on their experience [1]. Adi Soemarmo Airport is geographically included in the multiple airport region because it is adjacent to several other airports. In addition, currently, the choice of transport modes is increasingly diverse and the operation of Trans Java toll road increases the dynamics of competition in the transportation industry. Therefore, it is crucial for Adi Soemarmo Airport management to measure, analyze and obtain relevant information regarding passenger satisfaction and service quality provided so that they can retain their existing passengers and even get new passenger segments. However, unlike in the manufacturing industry where zero defects can be achieved, service failures of the service providers such as airports is inevitable, and failures with these service attributes may have an impact on overall customer satisfaction despite the impact may vary [2]. According to the Airport Council International (ACI), airport service quality is the best way to enhance customer satisfaction [3] and is a critical element for customer satisfaction [4].

This study examined key drivers of passenger satisfaction before and during the COVID-19 pandemic at Adi Soemarmo International Airport and conducted tests to determine whether there is an effect of passenger purpose of travel on the relationship between service quality dimensions and passenger satisfaction before and during the pandemic. Understanding the key drivers of airport service quality on passenger satisfaction is expected to assist airport management in determining the focus of work programs to improve passenger satisfaction, especially during the COVID-19 pandemic so as to achieve key performance indicators for the operation of airport more effectively and efficiently.

LANDASAN TEORI

2.1 Customer Satisfaction

At airports, customer satisfaction is most often measured through passenger satisfaction. Passenger satisfaction is associated with the passenger experience at the airport and is an important factor related to the performance of non-aeronautical businesses [5]. This is because customer satisfaction is linked to customer loyalty and intention to purchase [5], [6]. To increase passenger satisfaction, airports need to provide a positive experience to passengers while at the airport (Wattanacharoensil in Tseng, 2020). Based on several studies that have been conducted, there are several important factors related to the services provided by airports that affect passenger satisfaction. For example, based on the results of research by Allen [7], it is known that the dimension of environmental services is the dimension that most affects passenger satisfaction, with the most influential service attributes in the environmental service dimension, namely related to cleanliness.

2.2 Airport Service Quality

Service quality is a core aspect of a business, especially for service provider companies [5] because service quality can be an important source of competitive advantage for a company [2], [8]. Increased competition between airports globally makes the service and performance a very important aspect of airports [9]. Airport service quality is a catalyst for competitiveness among airport operators to improve their value proposition

to passengers [10]. Therefore, airport management needs to be committed to making efforts to improve airport service quality to increase passenger satisfaction. When airport service quality does not meet the expectations of passengers, it will make passengers dissatisfied [2], [11], [12]. Knowing the factors that have the most influence on passenger satisfaction can help airport operators achieve more effective financial performance [7].

Airports are a complex industry, where each airport is unique. There are also not only airport operators who carry out activities in the airport, but there are many stakeholders who may have conflicting goals and have different views on how to provide service quality to service users [2]. This makes the process of maintaining airport service quality a challenging thing. Before the COVID-19 pandemic, airport operators experienced challenges to maintain airport service quality standards due to the continuous increase in passenger numbers. However, since the COVID-19 pandemic, airport operators need to make adjustments related to the COVID-19 protocol in providing their services. In addition, the COVID-19 pandemic also makes aircraft passengers have high expectations regarding the services provided by airports and passengers will easily choose other transportation alternatives when they are not satisfied with the services provided by airports [2]. In today's changing business conditions, airports need to measure airport service quality and make continuous improvements to their service performance [8]. There is an increasing urgency felt by airport operators to differentiate by fulfilling customer needs in a better way than competitors [10]. Evaluation and improvement of airport service quality is the main focus for airports today [10]. An important point that needs to be done so that this can be achieved is to identify service attributes that can provide the greatest satisfaction (Tseng, 2020).

The most widely used benchmarking programme for airport service quality measurement is the airport service quality (ASQ) developed by Airport Council International (ACI). Using the framework, passengers will provide performance ratings on service elements and overall satisfaction [5]. The ASQ measurement mechanism by ACI is carried out by asking passengers in the departure lounge to fill out questionnaires distributed by agents, where these agents are usually airport operator personnel. Passengers then make an assessment of the airport's service performance and overall satisfaction with the airport [13]. Passengers provide ratings using a Likert scale of 1 - 5 on attributes related to the dimensions of access, check-in, security, find your way, passport/identity control, airport facilities, airport environment, and overall satisfaction.

2.3 Moderating Variable of Passengers Purpose of Travel

Moderating variables are variables that are thought to affect the strength or direction of the relationship between latent variables in a model. In this study, a moderating variable is used with a categorical variable type in the form of passenger types based on travel destinations classified into business and non-business. As in the research conducted by [14], the passenger purpose of travel variable is moderating the relationship between processing/non-processing domain and passenger satisfaction. That research also showed that purpose of travel was moderating the relation between processing domain and passenger affective image. Business group had higher relation than non-business passengers related to processing domain-passenger on image satisfaction.

METODE PENELITIAN

3.1 Sampling, Sampling Method & Data Collection

The population in this study are all passengers who depart domestic flights from Adi Soemarmo Airport during the period May 2018 - December 2021. The number of passengers departing during this period was 2,102,504 passengers. In this study, an error tolerance of 5% is used, so it is known that the minimum sample size required is 400 samples. The data result ASQ ACI questionnaire during the period May 2018 - December 2021 were obtained from the airport operator management. The sampling technique used is the quota sampling technique. In this case, the sample for each flight number in one day cannot exceed 10 passenger samples as the provisions of the Airport Council International (ACI).

Based on the data from the results of filling out the questionnaire by passengers that have been obtained, testing is then carried out to determine the key drivers of passenger satisfaction in each data group and the effect of passenger types based on the purpose of the travel on the relationship between airport service quality and passenger satisfaction. To determine the key drivers of service quality dimensions on passenger satisfaction and the effect of passenger type on the relationship between airport service quality and customer satisfaction in each data group, the PLS-SEM Multi Group Analysis method is used.

3.2 Measuring Instruments

Access variables are used to represent accessibility to the airport terminal service area which is described through land transport to/from the airport, parking facilities, parking facility prices, and the availability of luggage trolleys. The check in variable consists of factors related to the passenger check in process in the airport area which is measured using waiting time in the check in queue, the efficiency of the check in officer, and the politeness and dexterity of the check in officer. Passport/identity control variables are used to describe matters relating to the process of checking the identity of passengers before entering the airport terminal area which is described through waiting time for inspection and the courtesy and dexterity of the inspection officer. The security variable consists of factors related to the security check process at the screening check point area in the airport terminal area. This variable is measured using indicators of politeness and dexterity of security officers in the screening check point area, thoroughness of security checks, waiting time for security checks, and feeling safe and comfortable when experiencing the inspection process. The finding your way variable describes things related to the instructions needed by passengers while in the airport terminal area. This variable is described by indicators of the ease of finding a destination within the airport, the availability of flight information screens, walking distance within the terminal, and the ease of connecting with other flights. Airport facility variables consist of matters related to enhancing facilities in the airport terminal area which are described through an assessment of restaurant facilities, restaurant facility prices, bank/ATM/money changer availability, shopping facilities, shopping facility prices, internet/Wi-Fi access, business/executive lounges, bathroom/toilet availability, bathroom/toilet cleanliness, waiting area/gate comfort, and courtesy and dexterity of officers other than check-in officers and identity and security control officers). Airport environment variables consist of factors related to general airport terminal conditions as measured using indicators of airport terminal cleanliness and airport atmosphere.

HASIL DAN PEMBAHASAN

4.1 Demographic Statistics

Based on the sample obtained, it was found that out of a total of 1,890 respondents, 1,110 respondents were passengers in the pre-pandemic period and 780 during the pandemic.

63.44% of the respondents were male and most of them were in the age range of 26 - 34 years. It is known that respondents with business travel destinations have more numbers for both passenger groups. However, during the pandemic, business travel destinations dominated with a percentage of 80.64% compared to the pre-pandemic where the percentage of travel purpose tended to be balanced with a composition of 56.58% business destinations and 43.42% non-business purpose. While based on the frequency of travel in the last 12 months, it was dominated by passengers who travelled between 3 - 5 times with a percentage of 31.90%.

4.2 Measurement Model

The results of testing the measurement model indicate that the model is valid and reliable. Based on Table 1, it is known that all variables have a Cronbach Alpha value and composite reliability> 0.7 so that all these variables have a high level of internal consistency reliability [15].

Table 1 Alpha Cronbach, Composite Reliability, Average Variance Extracted Test

Variable	Before Pandemic			During Pandemic			Overall		
	AC	CR	AVE	AC	CR	AVE	AC	CR	AVE
Access	0.903	0.932	0.77	0.88	0.918	0.737	0.927	0.948	0.82
Check in	0.911	0.944	0.85	0.906	0.941	0.842	0.932	0.956	0.88
Airport Facilities	0.944	0.952	0.64	0.947	0.954	0.655	0.96	0.965	0.713
Security	0.932	0.951	0.83	0.926	0.948	0.819	0.947	0.962	0.863
Passport/identity control	0.876	0.941	0.89	0.913	0.959	0.92	0.912	0.958	0.919
Airport Environment	0.904	0.954	0.91	0.906	0.955	0.914	0.924	0.963	0.929
Finding Your Way	0.906	0.934	0.78	0.91	0.937	0.787	0.931	0.951	0.828

Based on the results of testing the outer loadings, it is known that all indicators have a value> 0.7 as shown in Table 2 so that they fulfill convergent validity.

Table 2 Outer Loadings Test

Variable	*Outer Loadings*		
	Before Pandemic	During Pandemic	Overall
A1 <- Access	0.849	0.781	0.877
A2 <- Access	0.905	0.886	0.927
A3 <- Access	0.896	0.907	0.923
A4 <- Access	0.869	0.854	0.894
B1 <- Check in	0.913	0.916	0.933
B2 <- Check in	0.943	0.936	0.953
B3 <- Check in	0.908	0.901	0.927

Variable	Outer Loadings		
	Before Pandemic	During Pandemic	Overall
C1 <- Passport/identity control	0.943	0.959	0.959
C2 <- Passport/identity control	0.943	0.96	0.959
D1 <- Security	0.913	0.911	0.931
D2 <- Security	0.918	0.922	0.937
D3 <- Security	0.91	0.919	0.931
D4 <- Security	0.901	0.867	0.917
E1 <- *Finding your way*	0.88	0.883	0.909
E2 <- *Finding your way*	0.891	0.886	0.913
E3 <- *Finding your way*	0.872	0.9	0.905
E4 <- *Finding your way*	0.89	0.879	0.914
F1 <- Airport Facilities	0.765	0.786	0.823
F2 <- Airport Facilities	0.828	0.822	0.862
F3 <- Airport Facilities	0.806	0.82	0.856
F4 <- Airport Facilities	0.789	0.777	0.84
F5 <- Airport Facilities	0.816	0.795	0.848
F6 <- Airport Facilities	0.793	0.803	0.84
F7 <- Airport Facilities	0.783	0.793	0.825
F8 <- Airport Facilities	0.801	0.796	0.841
F9 <- Airport Facilities	0.824	0.829	0.86
F10 <- Airport Facilities	0.811	0.839	0.85
F11 <- Airport Facilities	0.795	0.838	0.842
G1 <- Airport Environment	0.953	0.954	0.963
G2 <- Airport Environment	0.958	0.958	0.966

Convergent validity testing is also carried out using AVE and it is known that all variables have an AVE value> 0.5. Meanwhile, based on the results of discriminant validity testing using Fornell-Larcker test, all variables fulfil discriminant validity where the square root value of the AVE is greater than the highest correlation value with other construct variables. [15]. The results of discriminant validity testing are listed in Table 3.

Table 3 Discriminant Validity Test

Variable	Access	Check in	Airport Facilities	Security	Passport/ Identity Control	Airport Environment	Find Your Way
Access	**0.905**						
Check In	0.778	**0.938**					
Airport Facilities	0.833	0.806	**0.865**				
Security	0.756	0.815	0.839	**0.929**			

Passport/Identity Control	0.756	0.813	0.809	0.838	**0.959**		
Airport Environment	0.693	0.699	0.825	0.758	0.713	**0.964**	
Find Your Way	0.794	0.769	0.844	0.814	0.785	0.743	**0.91**

4.3 Measurement Invariance

After ensuring that the measurement model is fulfilled, MICOM testing is then carried out. The first MICOM test is conducted through configural invariance testing which will be fulfilled when all data have the same indicators, are treated in the same way, and use the same algorithm settings [15]. All groups of sample data, both for passenger data in the pre-pandemic period, have the same indicators, are treated in the same way, and have used the same algorithm settings, so the configural invariance requirement has been met. Compositional invariance can occur when the composite score correlation between data groups =1 [16]. Based on Table 4, it is known that the p-value for all variables is> 0.05 in the compositional invariance test, which means that the correlation of composite scores between passenger data groups before the pandemic and during the pandemic = 1. Thus, for these data groups, partial invariance has been fulfilled and multi group analysis can be carried out. Meanwhile, the p-value of each variable in the composite equality test for both the mean and variance is less than 0.05 so that Ho is rejected, which means that there is a statistically significant difference in the mean and variance of the composite score between the passenger data groups before the pandemic and during the pandemic, so the comparison between data groups is only carried out on the path coefficient because it only meets the requirements of partial invariance in multi group analysis [16].

Table 4 Compositional Invariance and Composite Equality Test

Variable	p-Value		
	Compositional Invariance	***Composite Equality***	
		Means	**Variance**
Access	0.19	0	0
Check In	0.137	0	0
Airport Facilities	0.053	0	0
Security	0.863	0	0
Passport/Identity Control	0.315	0	0
Airport Environment	0.659	0	0
Find Your Way	0.774	0	0

4.4 Structural Model

The Table 5 shows the collinearity test results for the pre-pandemic passenger data group and it is known there is no collinearity problem as the VIF values are all <5.

Table 5 Collinearity Test

Variable	VIF Before Pandemic	VIF During Pandemic
Access	2.968	2.087
Check In	3.148	1.005
Airport Facilities	4.665	3.953
Security	3.878	3
Passport/Identity Control	3.458	2.777
Airport Environment	2.519	2.586
Find Your Way	3.534	3.348

The coefficient of determination value for the passenger group during the pandemic is 0.69, which means that 69% of customer satisfaction variables are explained by exogenous variables and 31% are explained by other exogenous variables that are not accommodated in this study. In the passenger group during the pandemic, it is known that the R2 value is not much different from the passenger group before the pandemic, which is 0.615, which explains that 61.5% of the customer satisfaction variable is explained by the exogenous variables. The value of R2 both in the passenger group indicates that the effect of the combination of exogenous latent variables on the endogenous latent variable of customer satisfaction is at a moderate level. Based on Table 6, it is known that the value of Q2> 0 so that the model is relevant for predicting the endogenous variable of passenger satisfaction.

Table 6 R2 and Q2 Test

Endogen Variable	R^2	Q^2
Passenger Satisfaction Before Pandemic	0,69	0.684
Passenger Satisfaction During Pandemic	0,615	0.592

Table 7 is the result of the path coefficient for the model in the passenger group before the pandemic where it is known that from the 7 structural model relationships there are only 3 statistically significant relationships to customer satisfaction, namely the airport environment, airport facilities, and find your way. In the passenger group during the pandemic, it is known that of the 7 structural model relationships, there are only 3 statistically significant relationships to customer satisfaction, namely the airport environment, security, and airport facilities.

Table 7 Path Coefficient Test

Variable	Before Pandemic				During Pandemic			
	Path Coefficients	**p-Value**	**t-Value**	**Remarks**	***Path Coefficients***	**p-Value**	**t-Value**	**Remarks**
Airport Environment -> Passenger Satisfaction	0.435	0	12.937	Significant	0.469	0	6.233	Significant
Airport Facilities -> Passenger Satisfaction	0.277	0	6.748	Significant	0.149	0.049	1.969	Significant
Find Your Way -> Passenger Satisfaction	0.076	0.042	2.029	Significant	0.015	0.838	0.205	Not Significant
Access -> Passenger Satisfaction	0.054	0.095	1.668	Not Significant	0.001	0.983	0.022	Not Significant
Check In -> Passenger Satisfaction	0.041	0.193	1.301	Not Significant	0.028	0.351	0.933	Not Significant
Passport/Identity Control -> Passenger Satisfaction	0.022	0.515	0.651	Not Significant	0.002	0.979	0.002	Not Significant
Security -> Passenger Satisfaction	0.018	0.651	0.453	Not Significant	0.225	0.001	3.458	Significant

Tests were also carried out to determine whether the passenger purpose of travel variable which was divided into business and non-business had an influence on the strength or direction of the relationship between service quality and passenger satisfaction before and during the pandemic. Table 8 shows the results of testing the effect of moderation variables on the pre-pandemic passenger data group. The moderation variable only has a statistically significant effect on the relationship between airport facilities and airport environment variables on passenger satisfaction. This can be seen from the p-value <0.05 only found in the airport environment and facilities. In testing this moderation variable, a value of 0 in the travel destination variable indicates a sample of passengers with non-business purposes and a value of 1 indicates business purposes. In the airport facilities variable, passengers with non-business travel destinations have a greater positive influence on passenger satisfaction which can be seen through the value in the Original Sample column which is positive. While on the airport environment variable, passengers with business travel destinations have a greater positive influence. The relationship of the other variables on passenger satisfaction during the pre-pandemic period is not influenced by the type of passenger based on the purpose of travel.

Table 8 Moderating Effect on Pre-Pandemic Passenger

Variable	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Purpose of Travel X Access -> Passenger Satisfaction	0.02	0.018	0.03	0.648	0.517
Purpose of Travel X Check In -> Passenger Satisfaction	-0.043	-0.042	0.03	1.422	0.155
Purpose of Travel X Passport/Identity Control -> Passenger Satisfaction	0.035	0.035	0.03	1.183	0.237

Variable	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Purpose of Travel X Security -> Passenger Satisfaction	-0.011	-0.012	0.036	0.311	0.756
Purpose of Travel X *Finding Your Way* -> Passenger Satisfaction	-0.01	-0.009	0.036	0.267	0.789
Purpose of Travel X Airport Facilities -> Passenger Satisfaction	0.09	0.09	0.032	2.783	0.005
Purpose of Travel X Airport Environment -> Passenger Satisfaction	-0.111	-0.11	0.034	3.279	0.001

Table 9 shows the results of testing the effect of moderating variables on passengers during the pandemic. In the table, it is known that the moderating effect only exists on the security variable, which is indicated p-value <0.05. Passengers with non-business travel purposes have a greater positive influence on the relationship between the security variable and passenger satisfaction than passengers with business travel purposes. The relationship of other variables to passenger satisfaction is not known to be influenced by the type of passenger based on the purpose of travel.

Table 9 Moderating Effect on Pandemic Passenger

Variable	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Purpose of Travel X Access -> Passenger Satisfaction	-0.005	-0.007	0.045	0.104	0.917
Purpose of Travel X Check In -> Passenger Satisfaction	-0.016	-0.013	0.042	0.394	0.694
Purpose of Travel X Passport/Identity Control -> Passenger Satisfaction	-0.021	-0.024	0.056	0.367	0.714
Purpose of Travel X Security -> Passenger Satisfaction	0.097	0.094	0.045	2.176	0.03
Purpose of Travel X *Finding Your Way* -> Passenger Satisfaction	-0.028	-0.02	0.068	0.413	0.68
Purpose of Travel X Airport Facilities -> Passenger Satisfaction	0.009	0.013	0.048	0.191	0.848
Purpose of Travel X Airport Environment -> Passenger Satisfaction	0.046	0.044	0.082	0.559	0.576

4.5 Multi Group Analysis

Multi group analysis was conducted to test the differences between passenger data groups before the pandemic and during the pandemic in assessing the airport service quality and their influence on passenger satisfaction. Analysis was carried out based on Bootstrap MGA testing and Welch-Satterthwait testing. In Bootstrap MGA and Welch-Satterthwait tests, if the p-value of the variable is <0.05, it indicates that there is a statistically significant difference between groups of passenger data before and during the pandemic. The results in Table 10 show that statistically significant differences related to the effect of airport service quality on passenger satisfaction between passenger groups before and during the pandemic is only found in the security variable. The negative beta value on the security variable indicates that the relationship of the security variable to passenger satisfaction

is lower in the pre-pandemic passenger group than during the pandemic.

Table 10 Multi Group Analysis

Variable	p-*Value*		Beta	Remarks
	***Bootstrap* MGA**	**Welch-Satterthwait**		
Airport Environment -> Passenger Satisfaction	0.986	0.987	0.001	Not Significant
Airport Facilities -> Passenger Satisfaction	0.986	0.985	-0.002	Not Significant
Find Your Way -> Passenger Satisfaction	0.235	0.236	0.097	Not Significant
Access -> Passenger Satisfaction	0.203	0.201	0.069	Not Significant
Check In -> Passenger Satisfaction	0.376	0.373	0.062	Not Significant
Passport/Identity Control -> Passenger Satisfaction	0.713	0.713	0.026	Not Significant
Security -> Passenger Satisfaction	0.026	0.025	-0.181	Significant

4.6 Discussion and Implications

Based on Table 7, it is known that the variables of access, check-in, and passport/identity control, have a positive relative importance value on passenger satisfaction but tend to be low and based on testing the significance of the relationship, it is known that these variables are not statistically significant influence in predicting customer satisfaction in both passenger groups before and during the pandemic. The access variable being an insignificant variable can occur because the condition of Adi Soemarmo Airport which is a small airport and not too complex as is also the result of research conducted at Guarulhos Airport (Bezzera and Gomes, 2015). Check in variable is measured using several indicators consisting of waiting time in the check in queue, the efficiency of the check in officer, and the politeness and dexterity of the check in officer. Along with the development of technology applied at airports, currently the check-in process can be done by passengers without going through the check in counter where passengers can utilize kiosks to self-check in with a process that tends to be faster and passengers do not need to interact with the check in officer. Therefore, there is a possibility that passengers do not feel the experiences listed in the indicators that make up the check in variable and make passengers feel that this variable is not an important focus in relation to passenger satisfaction. The passport/identity control variable is measured through two indicator variables, namely the waiting time for passport/identity checks and the politeness and dexterity of the inspection officers. In this study, the passengers who were sampled were passengers for domestic travel, so the checks carried out were only in the form of checking the suitability of personal identity with those listed in the ticket when the passenger would

enter the check-in area and when the passenger would carry out the boarding process into the aircraft. In addition, Adi Soemarmo Airport itself is included in the category of small airports in terms of passenger size with a low number of passengers during peak hours, so that the process tends to run with a relatively short time which can make this process not an important focus for passengers. Research by [17] states that this variable needs to be improved based on input and feedback from passengers. In some previous studies such as in Isa et al [5], Chonsalasin [18], Bezzera and Gomes [1], and Hong et al [13] showed that the security variable is a good predictor of the passenger satisfaction variable. However, the passenger group before the pandemic showed contradictory results to previous studies. This can be caused because under normal conditions or conditions before the pandemic period, passenger interactions with security officers only occur when checking the initial identity before entering the check-in area, and passenger screening check points when passengers heading to the waiting room. In addition, Adi Soemarmo Airport is classified as a small class airport so that it is very rare for excessive passenger accumulation during the inspection process so that the waiting time for inspection tends to be short and the officers can be more thorough in carrying out security checks on passengers. Security variables are important for passengers during the pandemic because during this time there are several additional processes that passengers go through related to checks on the fulfilment of the COVID-19 regulations which are carried out by airport security officers on the first and second lines, such as checking the completeness of e-HAC, the completeness of the vaccine letter, and the completeness of COVID-free test results such as PCR or antigen, where this can be related to indicators of politeness and dexterity of security officers, as well as the thoroughness of security officers. In addition, in the security variable, there are also indicators related to waiting time for security checks, where during a pandemic people become more wary of being close to, interacting with, and crowding with many people for too long. This can be the reason why the security variable is an important variable for passenger groups during the pandemic.

Based on the results of research Allen [7], it is known that the availability of information and signposting in the airport terminal makes airport services more accessible and at the same time can increase the satisfaction of passengers while in the terminal. This is in line with the research results that for passengers before the pandemic, the variable finds your way was one of the variables that became the key drivers of satisfaction. However, there is a contradiction in passenger data during the pandemic where this variable does not have a statistically significant effect on passenger satisfaction. This can occur because Adi Soemarmo Airport is downsizing the terminals operated by up to 50% of the pre-pandemic condition area, thus making the operating airport areas tend to be close together and passengers are easier to get to the terminal areas with a relatively short walking distance. The airport facility variable is one of the variables that has a statistically significant effect in predicting the endogenous latent variable of customer satisfaction both on passengers. However, there are several indicators on this variable that were removed because they did not meet the outer loading in the measurement invariance test, namely indicator variables related to the politeness and dexterity of airport officials other than check-in, passport control and security officers. This can be due to the non-specificity of airport personnel who need to be assessed by passengers due to the large number of personnel from various instances with diverse roles of responsibility involved in airport operational activities, so it is recommended to make this variable explain more specifically which personnel need to be assessed. In addition, there

are other indicator variables that were deleted, namely related to shopping facilities and toilet cleanliness. Shopping facilities are allegedly not a focus for passengers because passengers do not make the airport a place to do shopping activities as their main activity. While related to toilet cleanliness, although this should be important for passengers, especially during a pandemic, but because not all passengers use toilet facilities while at the airport, it can cause passengers to assess toilet cleanliness is not their main focus related to service satisfaction provided by the airport. In research Allen [7] and Isa et al [5] stated that this airport environment variable is the most influential variable on passenger satisfaction. This variable is measured using two indicators, namely airport terminal cleanliness and airport atmosphere. Passengers spend most of their time doing activities inside the airport terminal so that this can result in environmental variables measured by terminal cleanliness and airport atmosphere becoming the main focus for passengers related to the satisfaction of services provided by the airport. In the passenger during the pandemic, it is known that the path coefficient of this variable on passenger satisfaction is higher than that of the passenger group before the pandemic even though the difference is not statistically significant. This can happen because one of the airport environment variables is measured using the airport terminal cleanliness indicator, where the occurrence of the COVID-19 pandemic causes the needs and expectations of passengers related to airport cleanliness to increase in order to prevent contracting the COVID-19 virus while in the airport area.

Based on Table 8 and Table 9, it is known that the passenger type variable based on purpose of travel only moderates the relationship between the dimensions of airport service quality and passenger satisfaction on several variables. In the passenger group before the pandemic, the travel destination variable only moderates the relationship between environmental variables and airport facilities on passenger satisfaction. Passengers with business travel destinations have a greater positive influence on the relationship between the airport environment and passenger satisfaction. This is in accordance with the research of Antwi [14] which states that variables related to processing domain and non-processing domain on passenger satisfaction are greater in passenger groups with business travel destinations. However, different things happen to facility variables where passengers with non-business travel destinations have a greater positive influence on passenger satisfaction. This can occur because passengers with non-business travel purpose usually have a longer time while at the airport terminal so that they use the facilities provided by the airport more, both main facilities and supporting facilities. In the passenger data group during the pandemic, it is known that the type of passenger only moderates the relationship between the security variable and the passenger satisfaction variable. Passengers with non-business travel purposes have a greater positive influence than passengers with business travel purposes. This security variable is measured using indicators of politeness and dexterity of security officers, waiting time for security checks, and thoroughness of security officers. During the COVID-19 pandemic, there has been an increase in processes related to indicators on security variables and a significant decrease in the number of people travelling using aircraft transportation modes for non-business travel purposes. Therefore, security variables are important for passengers with non-business purposes related to security variables because these types of passengers tend to travel on their own and expect a guaranteed feeling of safety while at the airport even in pandemic conditions, efficient services related to the security provided, and not spending a lot of time queuing related to the security check process which can cause crowds.

PENUTUP

Kesimpulan

The COVID-19 pandemic has had an impact on various business including the air transport industry. There are several process changes that occur at airports during the COVID-19 pandemic to comply to the regulations. These process changes can cause changes in the perception of passengers to the service quality provided by airports. Based on the analysis that has been carried out, it is known that all variables have a positive relative importance value to passenger satisfaction. However, there are only a few variables that have a statistically significant effect. There are differences in variables that are key drivers of passenger satisfaction in passenger groups before and during the pandemic. For passengers before the pandemic, it is known that the variables of the airport environment, airport facilities, and finding your way are key drivers of passenger satisfaction. Meanwhile, for passengers during the pandemic, the dimensions of service quality that are key drivers of passenger satisfaction consist of the airport environment, airport facilities, and security. Security variables is variable that have statistically significant differences between passenger groups before and during the pandemic with the relationship of security variable to passenger satisfaction being lower in the pre-pandemic passenger group. The passenger purpose of travel only moderates the airport environment and airport facilities variables in the pre-pandemic passenger group and moderating security on passenger satisfaction in pandemic passenger group. Passengers with business travel destinations have a greater positive influence on the relationship between the airport environment and passenger satisfaction before pandemic group. But in facility variables, passengers with non-business travel destinations have a greater positive influence than business passengers on passenger satisfaction. In the passenger data group during the pandemic, passengers with non-business travel purposes have a greater positive influence on the relationship between security and passenger satisfaction than passengers with business travel purposes. The variables that become key drivers can be used by Adi Soemarmo Airport management as a consideration for determining work programmes to be more effective and efficient in efforts to increase passenger satisfaction. Airport environment and facilities variables are key drivers for both passengers before and during the pandemic, so Adi Soemarmo Airport management can focus on these dimensions to increase passenger satisfaction through efforts to improve indicators that describe the dimensions of the airport environment and airport facilities. Assessment of service quality by passengers needs to be carried out periodically by the airport. This is due to rapid changes, changes in conditions from normal to pandemic and now adapting to the new normal, changes in economic conditions as a result of the pandemic, and changes in relevant regulatory changes that can influence passenger satisfaction. In addition, the scope of this research is only on passengers at Adi Soemarmo Airport so that further research can be carried out at other airports with different airport classes based on the number of passengers per year. The results of this study can also be developed for further research related to the preparation of appropriate strategies for Adi Soemarmo Airport to increase passenger satisfaction based on the key drivers of service quality dimensions that have been identified.

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