INFLUENCE OF AVIATION SECURITY SERVICES AT SECURITY CHECK POINT 1 AGAINST FLIGHT SAFETY AT HALU OLEO AIRPORT KENDARI

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ABSTRACT
This study aims to determine the influence of Aviation Security (AVSEC) personnel services at Security Check Point 1 (SCP 1) on flight safety at Halu Oleo Kendari Airport. This study uses an associative quantitative approach with a questionnaire as an instrument and involves 44 respondents. The data were analyzed using validity, reliability, and simple linear regression tests. The results indicate that AVSEC personnel services significantly influence aviation security with a significance value of 0.00 < 0.05. The coefficient of determination (R^2) of 0.781 shows that 78.1% of aviation security is influenced by AVSEC services, with the regression equation Y = 12.885 + 0.684X.
Keywords: Aviation Security Services, Aviation Safety, Security Check Point.

1. INTRODUCTION
Halu Oleo Airport (ICAO code: WARR, IATA code: KDI) is a domestic airport located in Kendari City, Southeast Sulawesi, Indonesia. The airport serves eight airlines, including Garuda Indonesia, Citilink Indonesia, Batik Air, Super Air Jet, Lion Air, Wings Air, and Rimbun Air, with an average of 11 flights per day. The high volume of air traffic, particularly during peak hours, directly impacts airport operations, especially in terms of security. One of the key aspects that must be maintained in these operational activities is the increasing awareness of security (security awareness) within the airport premises.

High passenger traffic demands optimal aviation security measures. To this end, the Indonesian government, through the Ministry of Transportation, has issued Regulation of the Minister of Transportation of the Republic of Indonesia (PM) No. 9 of 2024 as an update to PM 51 of 2020 on National Aviation Security. One of the mandates of this regulation is the implementation of a security system based on passenger volume classification. Halu Oleo Airport, which recorded 585,959 departing passengers in 2024 or an average of 1,606 passengers per day, is categorized as an airport with a Class E security system.

Based on observations and interviews conducted by researchers during the On-the-Job Training (OJT) period from January 6 to February 28, 2025, a gap was found between the ideal and actual conditions at SCP 1. During peak hours, long queues formed due to insufficient personnel, reduced effectiveness of the two X-ray machines, and inadequate supervision of carry-on items. This has led to a decrease in the effectiveness of inspections, with some dangerous items

even managing to pass through the initial screening. These findings indicate a decline in the quality of Aviation Security (AVSEC) personnel services, which could potentially threaten aviation security.

Previous studies such as [1], [2], and [3] have examined AVSEC performance and services, but they have focused more on customer satisfaction. There have not been many studies that directly examine the influence of AVSEC services on aviation security itself. Therefore, this study is important to fill the research gap and provide empirical evidence regarding the contribution of AVSEC to operational safety at airports.

The objective of this study is to determine how the service provided by Aviation Security (AVSEC) personnel at Security Check Point 1 (SCP 1) affects aviation safety at Halu Oleo Kendari Airport.

2. METHOD

The research method is a series of systematic steps taken to discover the truth in a study, starting from the emergence of an idea or thought which is then formulated into a problem and initial hypothesis. This process is supported by previous research findings and perspectives, so that the data obtained can be analyzed and processed to produce a conclusion [4].

2.2 Research Variables

The research method used in analyzing this journal article is quantitative associative causative. Associative causal research is research that aims to determine the influence between two or more variables. This research explains the influencing and influenced relationships between the variables to be studied [5]. In this journal, aviation security services are used as the independent variable and flight safety as the dependent variable.

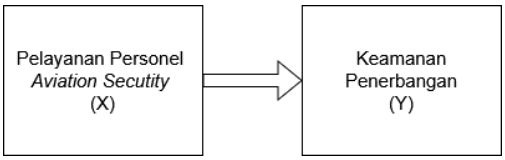

Figure 1 Resereach Variables

In this study, the researcher took a sample of passengers at Halu Oleo Airport in Kendari. with an average of 1,606 passengers per day over a one-year period. The researcher took a sample of 44 passengers using random sampling, including flight crew who passed through security checks at Security Check Point 1 (SCP 1) at Halu Oleo Airport in Kendari. The formula is expressed as follows:

$$n = \frac{N}{N\,.\,d^2 + 1}$$

$$n = \frac{1606}{1606 \times (0{,}15)^2 + 1}$$

$$n = \frac{1606}{37{,}135}$$

$$n = 44$$

2.3 Resereach Instrument

After the statement is made, the next process is to use a Likert scale to distribute questionnaires to measure the results of respondents' answers from questionnaires in the form of scores from 1 to 4.

2.4 Data Analysis Technique

In this study, the author used data analysis techniques such as:

1. Validity Testing

Validity testing refers to the level of accuracy or precision of an instrument in performing measurements [6]. This validity test uses (1) content validity and (2) empirical

validity. This validity test is conducted on each question item. (1) The empirical validity test method used by the researcher in this study employs the Pearson Product Moment validity test, utilizing the SPSS version 27 software obtained from field observations. The calculated r result will be compared with the table r where df = n- 2 with a significance level of 5%. The higher the validity of the instrument, the more accurate the measuring tool is in measuring data. (2) Meanwhile, the researcher conducted content validation with validators, specifically aviation security (AVSEC) experts at the Surabaya Aviation Polytechnic.

2. Reliability Test

The purpose of reliability testing is to evaluate the consistency of a measuring instrument, namely whether the measuring instrument used is reliable and remains consistent when the measurement is repeated [6].

3. Normality Testing

Normality testing is one of the important classical assumptions in quantitative data analysis. This assumption refers to the distribution of data that is normally distributed [7]. The basis for decision-making in normality testing is that if the Asymp. Sig. (2-tailed) value is greater than (>) 0.05, the data is considered normal.

4. Linearity Testing

Linearity testing refers to the clarity of the causal relationship between the observed variables. This assumption is particularly important in regression analysis [7]. Heteroscedasticity Testing

Heteroscedasticity test is performed to determine whether there are differences in variance between the residuals of one observation and another in the regression model [7]. To assess heteroscedasticity using the Glejser test, proceed as follows: If the significance value (Sig.) is greater than 0.05, there is no indication of heteroscedasticity in the regression model.

5. Simple Linear Regression Analysis

Simple linear regression analysis was performed to test how one independent variable affects the dependent variable. The requirements for this simple linear regression test must be valid and reliable and derived from primary data [8]. This test includes several tests, including: (1) Coefficient of determination test (2) Regression equation and (3) Hypothesis test. According to [9] states that the coefficient of determination (R Square) essentially aims to measure the extent to which the model is able to explain the variation in the dependent variable. The coefficient of determination value is between zero and one [9]. The basis for decision making in this hypothesis test is:

a) If the significance value is < 0.05, then H_1 is accepted and H_0 is rejected.
b) If the significance value is > 0.05, then H_0 is accepted and H_1 is rejected.

3. RESULT AND DISCUSSION

Data collection method using questionnaires distributed to 44 respondents who passed through Security Check Point 1 at Halu Oleo Airport in Kendari. Questionnaires were collected using random sampling from April to June 2025 online using Google Forms.

1. Validity Testing

Variabel	Indikator	Rhitung	>Rtabel	Sig.	<0.05	Ket
Variabel X	X.1	0.544	0.2973	<0.001	0.05	Valid
	X.2	0.827	0.2973	<0.001	0.05	Valid
	X.3	0.660	0.2973	<0.001	0.05	Valid
	X.4	0.539	0.2973	<0.001	0.05	Valid
	X.5	0.575	0.2973	<0.001	0.05	Valid
	X.6	0.631	0.2973	<0.001	0.05	Valid
	X.7	0.730	0.2973	<0.001	0.05	Valid
	X.8	0.652	0.2973	<0.001	0.05	Valid
	X.9	0.651	0.2973	<0.001	0.05	Valid
	X.10	0.647	0.2973	<0.001	0.05	Valid
	X.11	0.502	0.2973	<0.001	0.05	Valid
	X.12	0.761	0.2973	<0.001	0.05	Valid

Table 1 Results The Validity Test Of Variable X

Based on Table 1 above, it can be seen that all indicators of variable X have a calculated r value > table r (0.2973) and a significance value < 0.05. This indicates that all indicators are valid and suitable for use in research.

Variabel	Indikator	Rhitung	>Rtabel	Sig.	<0.05	Ket
Variabel Y	Y.1	0.764	0.2973	<0.001	0.05	Valid
	Y.2	0.628	0.2973	<0.001	0.05	Valid
	Y.3	0.631	0.2973	<0.001	0.05	Valid
	Y.4	0.610	0.2973	<0.001	0.05	Valid
	Y.5	0.663	0.2973	<0.001	0.05	Valid
	Y.6	0.522	0.2973	<0.001	0.05	Valid
	Y.7	0.533	0.2973	<0.001	0.05	Valid
	Y.8	0.608	0.2973	<0.001	0.05	Valid
	Y.9	0.541	0.2973	<0.001	0.05	Valid
	Y.10	0.525	0.2973	<0.001	0.05	Valid
	Y.11	0.603	0.2973	<0.001	0.05	Valid
	Y.12	0.612	0.2973	<0.001	0.05	Valid

Table 2 Results The Validity Test Of Variable Y

Based on Table 2 above, it can be seen that all indicators of variable Y have a calculated r value > table r (0.2973) and a significance value < 0.05. This shows that all indicators are valid and suitable for use in research.

2. Reliability Testing

Reliability Statistics	
Cronbach's Alpha	N of Items
.870	12

Table 3 Result Reliability Testing Variable X

Based on Table 3 the results of the Cronbach's Alpha reliability test obtained a reliability value for the Aviation Security (AVSEC) Personnel Service variable of 0.870, which means that this instrument is reliable.

Reliability Statistics	
Cronbach's Alpha	N of Items
.840	12

Table 4 Result Reliability Testing Variable Y

Based on Table 4, the results of the Cronbach's Alpha reliability test obtained a reliability value for the flight safety variable of 0.840, which means that this instrument is reliable.

3. Normality Testing

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		44
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	2,28406029
Most Extreme Differences	Absolute	.115
	Positive	.115
	Negative	-.102
Test Statistic		.115
Asymp. Sig. (2-tailed)[c]		.176
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.		

Table 5 Result Normality Testing

Based on Table 5 above, it can be seen that the Asymp Sig. (2-tailed) value of 0.176 is greater than (>) 0.05, so it can be concluded that the data is normally distributed.

4. Linearity Testing

ANOVA Table						
			df	Mean Square	F	Sig.
Keamanan Penerbangan * Pelayanan Personel AVSEC	Between Groups	(Combined)	35	28.306	7.077	.003
		Linearity	1	617.692	154.423	.000
		Deviation from Linearity	34	10.972	2.743	.068
	Within Groups			4.000		
	Total					

Table 6 Result Liniearity Testing

From Table 6 above, it can be seen that the sig. value of 0.068 is greater than (>) 0.05. Therefore, it can be concluded that there is a significant and linear relationship between AVSEC Personnel Services and Aviation Security.

5. Heteroscedasticity Testing

The test results using the gletjer test above obtained a sig. value of 0.116, which is greater than (>) 0.05. Therefore, it can be concluded that there is no indication of heteroscedasticity in this regression model.

6. Coefficient of determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.884[a]	.781	.775	231.109

a. Predictors: (Constant), Pelayanan Personel AVSEC

Table 7 Result Coefficient of Determination

Table 8 shows that the R Square value is 0.781 (78.1%), which indicates the extent of the influence of variable X on variable Y. The remaining 21.9% (100% - 78.1%) is influenced by other factors. In other words, the variation in Y that can be explained by variable X accounts for 78.1%, while the remaining 21.9% is influenced by other factors not included in this model. Therefore, it can be concluded that the influence of Aviation Security (AVSEC) Personnel Services at Security Checkpoint 1 on Aviation Security at Halu Oleo Kendari Airport is 78.1%, while the remaining 21.9% is influenced by other factors not included in this model.

7. Simple Linear Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.885	2.267		5.684	.000
	Pelayanan Personel AVSEC	.684	.056	.884	12.226	.000

a. Dependent Variable: Keamanan Penerbangan

Table 8 Results of Simple Linear Regression Analysis

Based on Table 9, the results of the simple linear regression analysis conducted using SPSS show that the simple linear regression equation obtained is as follows:

$Y = a + bX$

$Y = 12{,}885 + 0{,}684\ X$

The conclusion from the simple linear regression equation above is:

a) The constant value (a) is 12.885. This means that if there is no AVSEC personnel service, the aviation security value (Y) is 12.885 units.
b) The regression coefficient value of variable X is 0.684. This indicates that every one percent (1%) increase in AVSEC personnel services will increase the aviation security value by 0.684.
c) The regression coefficient is positive, so it can be said that the direction of the influence of variable X on variable Y is positive; the higher the level of Aviation Security (AVSEC) personnel services, the higher the aviation security at Halu Oleo Kendari Airport.

8. Hypothesis Testing

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.885	2.267		5.684	.000
	Pelayanan Personel AVSEC	.684	.056	.884	12.226	.000

a. Dependent Variable: Keamanan Penerbangan

Table 9 Result Hypothesis Testing

Table 10 shows the results of the hypothesis test above, namely a sig. value of 0.00 less than (<) 0.05. H_0 is rejected and H_1 is accepted, which means that there is an influence of Aviation Security (AVSEC) services at the Security Check Point (SCP 1)

on flight safety at Halu Oleo Airport in Kendari.

3.1 Discusion

Aviation Security (AVSEC) personnel services at Security Check Point (SCP 1) have a significant positive impact on flight safety at Halu Oleo Kendari Airport. After conducting a hypothesis test using simple linear regression as mentioned above, it was found that the higher the Aviation Security (AVSEC) personnel service at the Security Check Point (SCP 1), the higher the aviation security. Therefore, H_1 is accepted and H_0 is rejected.

4. CLOSING

4.1 Conclusion

Based on the results of data analysis, it can be concluded that the performance of Aviation Security (AVSEC) personnel at Security Check Point (SCP 1) has a significant positive impact on flight safety at Halu Oleo Airport in Kendari, meaning that the higher the performance of Aviation Security (AVSEC) personnel at Security Check Point (SCP 1), the higher the flight safety.

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