

THE INFLUENCE OF FLIGHT SAFETY FACILITIES AGAINST SECURITY IN THE CARGO TERMINAL MINANGKABAU INTERNATIONAL AIRPORT

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ABSTRACT

Minangkabau International Airport is an airport located in Padang Pariaman, West Sumatra (ICAO Code : WIEE ; IATA Code : PDG), has a Domestic Terminal, VIP Terminal, International Terminal, and Cargo Terminal. At the cargo terminal, problems were found that arose due to a lack of security facilities and personnel. So we need a study that can provide an explanation regarding aviation security facilities at the Minangkabau International Airport Cargo Terminal. The purpose of this study was to determine the effect of aviation security facilities on security at the cargo terminal capable of providing security for goods and cargo. The type of this research is descriptive quantitative using data obtained from observations, distributing questionnaires, and literature studies. Respondents from the questionnaire were Aviation Security and Angkasa Pura Cargo personnel, with a total sample of 61 people. The results of the discussion, there is an influence of variable X (aviation security facilities) on Y (security at the cargo terminal) has a relationship or correlation between variables with 0.78 (high, strong correlation) and the R square value is 0.608 or 60.8 % . There are things that need to be optimized in terms of the influence of aviation security facilities on security at the Minangkabau International Airport Cargo Terminal, the need to increase the number of Aviation Security personnel licensed by Junior Avsec to operate 1 x-ray machine with a minimum of 3 people and the need for security facilities is not yet adequate, such as the absence of a Walk Through Metal Detector.

Keywords: Security Facility; Aviation Security; Cargo Terminals.

1. INTRODUCTION

Minangkabau International Airport (ICAO Code: WIEE; IATA Code: PDG) or often abbreviated as BIM, is the main international airport in West Sumatra Province which serves flights to Padang City. This airport is about 23 km from the city of Padang, located in Ketaping District, Batang Anai District, Padang Pariaman Regency. BIM is the only airport in the world with an ethnic name. Apart from passenger flights, Minangkabau International Airport also offers cargo and postal services.

Flight routes to and from Minangkabau International Airport, such as Tabing Airport, connect Padang with Jakarta, Medan, Batam and Pekanbaru for domestic air traffic, while Singapore and Kuala Lumpur apply for international air traffic. In 2006, the Ministry of Religion designated this airport as the Hajj Airport to and from West Sumatra, Bengkulu and parts of Jambi Province. Because of this, in order to achieve aviation safety and security, it must be supported by Human Resources,

facilities, SOPs and applicable regulations. With these four points, if everything is fulfilled, in terms of flight security and safety, it can be achieved[1];[2];[3].

Air cargo is any goods transported by aircraft other than postal items, consumable items needed by the aircraft during flights, and baggage that has no owner or baggage that has been mishandled.[4];[5]. According to Law No. 1 of 2009 concerning Aviation article 219 paragraph (1) states that "Every airport business entity or airport operation unit is required to provide airport facilities that meet the requirements of aviation safety and security, as well as airport services in accordance with established service standards"[6]. So that the aviation security facilities at the airport must be maximized in each operating unit to ensure flight security and safety. One of the units that must be maximized in terms of security is the cargo terminal which is the loading and unloading place for cargo and post[7];[8].

In the International Civil Aviation Organization, Annex 9, "Facilitation", Second Edition, July 1989, SNI

03-7047-2004 (Indonesian National Standard) and KM Number 29 of 2005 it is explained that the cargo terminal is one of the main service facilities at the airport. to process shipments and receipts of air cargo, domestically and internationally with the aim of smoothing the cargo process and meeting aviation security and safety requirements[9];[10]. The cargo terminal is one of the main service facilities at the airport to process the delivery and receipt of air cargo, both domestic and international, which is useful for smooth cargo processing and fulfilling aviation security and safety requirements. Therefore the development of freight transport by air is very important to support the national logistics system so that security checks are needed at the cargo terminal[11]. According to PM 51 of 2020 concerning National Aviation Security, security inspection is the application of a technique or other method to identify or detect prohibited items that can be used to commit acts against the law.[12].

According to Tjiptono, the notion of facilities is physical resources that must exist before something is offered to consumers and is closely related to what consumers experience directly.[13]. According to Kotler, facilities are everything that is a physical device and is provided by service providers to support consumer convenience[14]. Whereas in article 349 of Law Number 1 of 2009 it is stated that "the provision of aviation security facilities is carried out in accordance with the needs by taking into account the effectiveness of the equipment; airport classification; as well as the level of threats and disturbances" and in Article 348 aviation security facilities include but are not limited to equipment: 1) explosives detectors; 2) detection of organic and non-organic materials; 3) metal detectors; 4) detection of nuclear, biological, chemical and radioactive materials ; 5) monitoring the traffic of people, cargo, posts, vehicles and aircraft on the ground; 6) delaying criminal attempts and delimiting limited security areas; 7) aviator security communications[6].

Air cargo is the cargo of an airplane accompanied by an air bill of lading or an air bill of lading including baggage sent through a cargo delivery procedure[15];[16];[17]. While the definition of cargo according to Suharto Abdul Majid & Eko Probo D. Warpani, cargo is all goods sent by air (airplane), sea (ship) or road (container) for exchange between regions and cities in the country and between countries (nationalities). economy) called export - import[18]. According to (IATA Tact Rules, 2009) cargo is divided into three major categories, namely general cargo, special cargo, and dangerous goods[19].

The cargo terminal is a place for loading and unloading of cargo and posts which must be maximized from a security perspective. Security can be carried out both from facilities and aviation security personnel at the cargo terminal. Based on the background and previous explanations, the formulation of the problem in this study was obtained, namely:

1. How do aviation security facilities affect security at the Minangkabau International Airport Cargo Terminal?
2. What are the efforts made by the airport management to improve security services at the Minangkabau International Airport Cargo Terminal?

2. METHODS

2.1. Research design

According to Sugiyono who explained that the research method is a scientific way of obtaining data for certain purposes and uses[20];. Science refers to research activities based on scientific characteristics, namely rational, empirical and systematic, as embodied in the philosophy of science. In this study, the author used quantitative research method. Quantitative research method is defined as a research method based on the philosophy of positivism, used to examine certain populations or samples, the sampling technique is usually performed randomly, Collect data using research instrument. [21];[22];[23].

2.2. Research variables

The definition of a variable is anything of any kind defined by the researcher to be studied to gain information about it and then draw conclusions. The independent variable (Variable X) is the variable suspected to be the origin of the dependent variable. The dependent variable (Variable Y) is either the response variable or the output variable. Dependent variable or dependent variable appear respectively because of the independent variables [24].

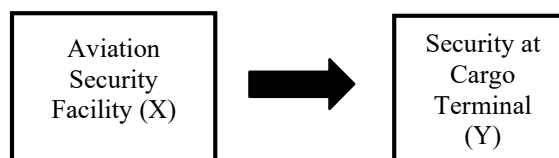


Figure 1. Research Variables

2.3. Population, Sample, and Research Object

Population is a generalized domain that includes objects or research subjects that exhibit certain qualities and characteristics that researchers need to study and then draw conclusions [24]. In this study, the population taken was from Aviation Security officers and Angkasa Pura Cargo officers at Minangkabau International Airport, a total of 145 people.

The sample is part of the number of characteristics possessed by the population[24]. The sample used must be representative and reflect the existing population. The slovin formula is used to determine the sample size of a known population, namely 145 people. For the level of precision set in the determination of the sample is 10% [25].

Formulas Slovin:

$$n = \frac{N}{1 + Ne^2}$$

Information :

n = Sample size

N = population size

e = Is the allowance for inaccuracy in sampling error which can be tolerated, then squared.

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{145}{1 + (145 \times (0,1)^2)}$$

$$n = \frac{145}{1 + (145 \times 0,01)}$$

$$n = 60,184$$

$$n \approx 61 \text{ people}$$

2.4. Research Instruments

2.4.1. Observations

According to Widoyoko, this observation is a systematic observation and recording of the elements that appear in a symptom of the object of research[26]. According to Sugiyono, observation is a complex process, one that includes many different biological and psychological processes. Two of the most important are the process of observing and remembering. [27].

2.4.2. Library Studies

According to Mestika Zed, literary or library research can be understood as a series of activities related to the methods of library data collection, reading, writing and processing of research materials. [28]. Literature study is a data collection technique by conducting a review study of books, literature, records, and reports that have to do with the problem being solved.

2.4.3. Questionnaires

To achieve this goal by using a questionnaire as a data collection tool. "Questionnaires are data collection techniques that are carried out by giving a set of questions or written statements to respondents to answer"[24]. A questionnaire is a list containing a series of questions regarding a problem or area to be studied, to obtain data in the form of opinions from research subjects as outlined in a questionnaire to obtain results that can be assessed.

The questionnaire used is a statement regarding the influence of Aviation Security Facilities on Aviation Security at the Minangkabau Padang International Airport Cargo Terminal. Questionnaires were distributed using a Likert Scale to be able to obtain overall answers from the number of respondents[29].

Table 1. Likert Scale Table

No.	symbols	Information	score
1.	SS	Strongly agreed	5
2.	S	Agree	4
3.	N	Neutral	3
4.	TS	Don't agree	2
5.	STS	Strongly Disagree	1

Based on the respondent's answer, one trend or respondent's answer will be obtained. Questionnaires were distributed using a Likert scale to obtain overall answers from the number of respondents.

2.5. Data analysis techniques

2.5.1. validity test

The validity test is used to determine the feasibility of the items in a list of questions defining a variable[30]. The validity test was carried out on each question item. The method that the researchers used in this study used the Corrected Item-Total Correlation validity test and the Pearson Product Moment validity test using SPSS (Statistical Product and Service Solutions) software.

2.5.2. Reliability Test

Reliability is a measurement that shows whether or not the answers to the questions in the questionnaire are consistent[30]. The requirement of a reliability test is that the questions in the questionnaire have been declared valid. The method that the researchers used to test the reliability of this study was to use the Split-Half reliability test and the Cronbach Alpha reliability test using SPSS (Statistical Product and Service Solutions) software.[31].

2.5.3. Hypothesis testing

The hypothesis test consists of the Normality Test, T Test, Simple Linear Regression Test, and Correlation Test. T test is used to show how far the influence of an explanatory variable individually in explaining the dependent variables[27]. According to Sugiyono a simple linear regression analysis used to determine the degree of influence or linear relationship between an independent variable and a dependent variable [22]. In this study, a simple linear regression equation is used to determine how much influence aviation security facilities (X) have on security at the cargo terminal (Y). Furthermore, to determine whether there is a relationship or correlation between these variables, the correlation coefficient formula is used. The KK correlation coefficient is an index or number used to measure the closeness (strong, weak, or absent) of the relationship between variables[32].

2.5.4. SWOT analysis

SWOT Analysis is a useful strategic planning technique for assessing an organization's strengths and weaknesses, opportunities and threats, both existing and new. This SWOT assessment helps to determine which priorities should be prioritized by the organization/company, whether it comes from internal or external factors of the organization/company. The aim is to uncover important aspects of strengths, weaknesses, opportunities, and threats within a company or organization. Through these four aspects, he can maximize strengths, minimize weaknesses, minimize threats and create future opportunities. [33];[34];[35];

3. RESULTS AND DISCUSSION

Observations were made by researchers at Miangkabau International Airport in the cargo terminal area starting from the time of On The Job Training (OJT) from 9 January to 31 March 2023. Researchers conducted field observations regarding how the influence of aviation security facilities in the cargo terminal limited security at the cargo terminal.

At the Minangkabau International Airport Cargo Terminal, cargo security measures are delegated to the Airport Business Entity. This is because at Minangkabau International Airport there are no Regulated Agents and/or Known Consignors. In delegating cargo terminal security measures, the Airport Business Entity delegates it to the Aviation Security unit. Aviation Security personnel carrying out the task of carrying out inspections of agents and cargo officers at the Minangkabau International Airport Cargo Terminal. The number of personnel in 1 shift is 3 personnel, consisting of 1 supervisor and 2 members. With a total of 3 Aviation Security personnel on duty at the cargo terminal, the following is the distribution of personnel services: 1) At the cargo post, 1 personnel who has a basic or junior avsec license; 2) At the air side border gate and cargo warehouse, 1 personnel who has a basic or junior avsec license; 3) On the x-ray inspection machine, 1 personnel who has a senior avsec license.

From the division of Aviation Security personnel at the cargo terminal there is a shortage in the number of personnel, especially for the operation of the x-ray machine. X-ray inspection is the main or primary check for the security of cago and postal shipments. In accordance with applicable regulations, namely PM 53 of 2017 article 47 paragraph (2). In PM 53 of 2017 article 47 paragraph (2) it is stated that at least 3 (three) people with Junior Avsec licenses per shift for 1 (one) x-ray machine. In addition to the lack of personnel, based on PM 53 of 2017 Article 47 paragraph (3), there are deficiencies in the absence of a metal detector gate facility (walk through metal detector). The Walk

Through Metal Detector (WTMD) functions to detect all items carried by officers and cargo agents found on clothing or bodies.

Therefore, Aviation Security at Minangkabau International Airport is mitigating to overcome the deficiencies that exist both in terms of facilities and personnel. In terms of facilities, there are deficiencies in the absence of a metal detector gate facility (walk through metal detector). Mitigation is carried out by manual body search inspections using a hand-held metal detector unit, checking identity and belongings of cargo transport agents, and filling out logbooks to regulate administration. As for the shortage of personnel, the mitigation that is carried out is by rotating personnel on each shift schedule at the cargo terminal. Where personnel who have a Senior Avsec license and Dangerous goods type A licensed personnel who also have a Junior Avsec license are seconded to operate and carry out inspections using x-ray machines at the cargo terminal. This is in order to meet the requirements for the number of personnel to carry out inspection and security of cargo and mail.

Furthermore, for the questionnaire, after obtaining the data in the form of the results of the sum of the Likert scale for each question on the variable x and variable y. Next, we must first look for the rank correlation[22]. By making the following table:

Table 2. Correlation Coefficient Data Range

X	Y	Rank X	Rank Y	d	d ²
275	285	6	4	2	4
277	286	3	3	0	0
258	273	10	10	0	0
278	281	2	5	-3	9
285	290	1	1	0	0
273	276	7	8	-1	1
272	281	8	5	3	9
263	274	9	9	0	0
276	288	4	2	2	4
276	278	4	7	-3	9
Total					36

$$rs = 1 - \frac{6\sum d^2}{n(n^2 - 1)}$$

$$rs = 1 - \frac{6 \times 36}{10(10^2 - 1)}$$

$$rs = 1 - \frac{10 \times 99}{216}$$

$$rs = 1 - \frac{990}{216}$$

$$rs = 1 - 0,22$$

$$rs = 0,78 \text{ (strong correlation, high)}$$

This value means that the relationship between the independent variable (X) and the dependent variable (Y) has a Spearman rank value of 0.78 or a strong, high correlation. So security at the Minangkabau International Airport Cargo Terminal is influenced by aviation security facilities. The coefficient of determination can be determined by squaring the correlation coefficient. From the examples above, the coefficient of determination is $r^2 = 0.608$. This value means that, 60.8% of the independent variable (X) can explain the dependent variable (Y).

T test is a test that shows how far the influence of one independent variable x individually or partially in explaining the dependent variable y. Provisions for evaluating the hypothesis if the significant probability value is less ($<$) than 0.05 (5%) or the value of t count is greater ($>$) than t table. So it can be said that an independent variable x has a significant effect on the dependent variable y (Sujarweni, 2019).

The value of t table is found in the distribution of t table values with the condition that $t \text{ table} = t (a/2 ; n - k - 1)$. The value of a is the significance level of 0.05, n is the number of samples, and k is the number of independent variables.

$$t \text{ table} = t (a/2 ; nk-1)$$

$$t \text{ table} = t (0.05/2 ; 61-1-1)$$

$$t \text{ table} = t (0.025 ; 59)$$

$$t \text{ table} = 2.001$$

Distribusi Nilai t tabel											
df	$t_{0.10}$	$t_{0.05}$	$t_{0.025}$	$t_{0.01}$	$t_{0.005}$	df	$t_{0.10}$	$t_{0.05}$	$t_{0.025}$	$t_{0.01}$	$t_{0.005}$
55	1.297	1.673	2.004	2.396	2.668	61	1.296	1.671	2.000	2.390	2.659
56	1.297	1.673	2.003	2.395	2.667	62	1.296	1.671	1.999	2.389	2.659
57	1.297	1.672	2.002	2.394	2.665	63	1.296	1.670	1.999	2.389	2.658
58	1.296	1.672	2.002	2.392	2.663	64	1.296	1.670	1.999	2.388	2.657
59	1.296	1.671	2.001	2.391	2.662	65	1.296	1.670	1.998	2.388	2.657
60	1.296	1.671	2.000	2.390	2.660	66	1.295	1.670	1.998	2.387	2.656

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.186	3.180		6.034	.000
	Fasilitas Keamanan Penerbangan	.601	.071	.742	8.514	.000

a. Dependent Variable: Keamanan di Terminal Kargo

Figure 2. T test results

The calculated t value and the significance obtained in the t test were obtained after being processed using the SPSS (Statistical Product and Service Solutions) software. It is known that the significance value obtained is 0.00 which is less than ($<$) 0.05 and the t-value of 8.514 is greater ($>$) than the t-table 2.001. So it can be concluded the hypothesis that there is an influence of aviation security facilities (independent variable x) on security at the cargo terminal (dependent variable y) partially or partially.

In this study data related to efforts to improve aviation security services at the Minangkabau International Airport cargo terminal were obtained through a SWOT analysis (strength, weakness, opportunity, threats) as follows. SWOT analysis (strength, weakness, opportunity, threats) is a method for preparing a corporate strategy by looking at the company's environmental conditions, both internal and external. SWOT analysis is used to see the strengths, weaknesses, opportunities and threats that will be faced by the company[36];[37].

The list of inventory results is classified into factors that support or hinder in achieving the goals to be achieved, classified into internal factors or external factors. After making observations on the implementation of On The Job Training (OJT), the researchers obtained internal and external factors for SWOT analysis at the Minangkabau International Airport Cargo Terminal.

Internal factors consist of strengths and weaknesses. The strengths possessed by the Minangkabau International Airport Cargo Terminal are:

- Minangkabau International Airport's cargo terminal has quite a large area;
- Facilities for cargo loading and unloading activities that are complete and adequate;
- Serving domestic and international cargo shipments;
- There is a Standard Operation and Procedure (SOP) for security at the airport cargo terminal;
- There are representative offices of the animal quarantine agency, plant quarantine agency, and customs and excise at the cargo terminal.

Minangkabau International Airport Cargo Terminal has a large area of about 3,500 m², which is an advantage because it can load quite a lot of cargo. In addition, there are adequate and complete loading and unloading facilities to support cargo shipments, both domestic and international. At the cargo terminal there are Standard Operations and Procedures (SOP) for security, as well as offices for agencies such as animal quarantine agencies, plant quarantine agencies, customs and excise which can support administrative procedures for air cargo shipments.

The weaknesses of the Minangkabau International Airport Cargo Terminal are:

- There are still deficiencies in the completeness of aviation security facilities at the cargo terminal;
- The number of Aviation Security personnel at the cargo terminal is not in accordance with the applicable regulations;

- c. Skills for handling special cargo and dangerous goods are still lacking;
- d. The location of the cargo terminal is quite far, about 22 km from the city center
- e. Security violations in cargo transportation and insider threats.

At the cargo terminal there are deficiencies in terms of flight security facilities and the number of Aviation Security personnel is not in accordance with applicable regulations. Lack of skills in handling special cargo and dangerous goods can also cause security violations in air cargo transportation. The location of the cargo terminal is also quite far from the center of Padang City, West Sumatra, about 22 km.

Table 3. Internal Factor Analysis (IFAS)

Internal Strength Factor (Strength)	Weight	Ratings	score
Minangkabau International Airport's cargo terminal has a large area	0.13	3	0.39
Facilities for cargo loading and unloading activities are complete and adequate	0.08	3	0.24
Serving domestic and international cargo shipments	0.13	4	0.52
There is a Standard Operation and Procedure (SOP) for security at the airport cargo terminal	0.08	2	0.16
There are representative offices of the animal quarantine agency, plant quarantine agency, and customs and excise at the cargo terminal	0.08	2	0.16
Weaknesses Internal Factors	Weight	Ratings	score
There are still deficiencies in the completeness of aviation security facilities at the cargo terminal	0.08	2	0.16
The number of Aviation Security personnel at the cargo terminal is not in accordance with applicable regulations	0.08	4	0.32
Skills for handling special cargo and dangerous goods are still lacking	0.08	3	0.39

The location of the cargo terminal is quite far, about 22 km from the city center	0.08	3	0.24
Security breaches in cargo transportation and insider threats	0.13	2	0.26
Total	1.00		2.84

External factors consist of opportunities and threats. Opportunities owned by Minangkabau International Airport, namely:

- a. Serving agricultural commodities for air cargo delivery;
- b. Has the potential for marine products such as shrimp and lobster;
- c. Cargo handling services and postal passengers for Hajj and Umrah pilgrims;
- d. Ornamental fish commodity export demand;
- e. Increase in partner airlines providing air cargo.

Minangkabau International Airport Cargo Terminal serves cargo shipments in the form of agricultural commodities, marine products, and ornamental fish exports. In addition to the delivery of natural products, the cargo terminal also handles cargo and passenger posts for pilgrims and Umrah pilgrims because it is the location of the embarkation of Hajj and Umrah. This has also encouraged the addition of airlines, the latest of which is the joining of Pelita Air.

Potential Threats (threats) owned by Minangkabau International Airport are:

- a. Examination of agents who enter the cargo terminal is still done manually;
- b. Cargo transportation agency officers who lack discipline and do not pay attention to Standard Operations and Procedures (SOP);
- c. The competition for shipping goods is quite tight, especially in terms of price competition;
- d. Air cargo is not the first choice;
- e. Reduced cargo transportation agent partners at the Minangkabau International Airport Cargo Terminal.

At the cargo terminal, agent officers who will enter the cargo terminal are still checked manually. In addition, there are still many agents who pay little attention to the Standard Operation and Procedure (SOP) for security. Air cargo is also not the main choice for shipping commodities such as agricultural and marine products, where land routes are still the main choice. This causes competition in the form of price competence, which causes a reduction in cargo transportation agent partners.

Table 4. External Factor Analysis (EFAS)

External Factors Opportunities	Weight	Ratings	score
Serving agricultural commodities for air cargo delivery	0.12	3	0.36
Has the potential for marine products such as shrimp and lobster	0.12	4	0.48
Cargo handling services and passenger posts for pilgrims and Umrah pilgrims	0.08	2	0.16
Ornamental fish commodity export demand	0.12	3	0.36
The addition of airline partners	0.08	2	0.16
External Factors Threats	Weight	Ratings	score
Examination of agent officers entering the cargo terminal is still done manually	0.12	2	0.24
Cargo transportation agency officers who lack discipline and do not pay attention to the security Standard Operation and Procedure (SOP) at the airport cargo terminal	0.12	2	0.24
The competition for shipping goods is quite	0.08	3	0.24

tight, especially in price competition			
Air cargo is not the first choice	0.12	3	0.36
Reduced cargo transportation agent partners at the Minangkabau International Airport Cargo Terminal	0.08	2	0.16
Total	1.00		2.76

SWOT analysis scores from the IFAS and EFAS matrices of the influence of aviation security facilities on security at the cargo terminal obtained the value: S (Strength) + O (Opportunity) = 1.47 + 1.52 = 2.99. Score: W (Weakness) + T (Threat) = 1.37 + 1.24 = 2.71. It can be seen that the value of S (Strength) + O (Opportunity) > W (Weakness) + T (Threat).

Table 5. SWOT Matrix of Improved Security Services at Cargo Terminals

Externals	Opportunities: <ol style="list-style-type: none"> 1. Serving agricultural commodities for air cargo delivery; 2. Has the potential for marine products such as shrimp and lobster; 3. Cargo handling services and postal passengers for Hajj and Umrah pilgrims; 4. Ornamental fish commodity export demand; 5. Increase in partner airlines providing air cargo. 	Threats: <ol style="list-style-type: none"> 1. Examination of agents who enter the cargo terminal is still done manually; 2. Cargo transportation agency officers who lack discipline and do not pay attention to Standard Operations and Procedures (SOP); 3. The competition for shipping goods is quite tight, especially in terms of price competition; 4. Air cargo is not the first choice; 5. Reduced cargo transportation agent partners at the Minangkabau International Airport Cargo Terminal.
Internals	Strengths (Strengths): <ol style="list-style-type: none"> 1. Minangkabau International Airport's cargo terminal has quite a large area; 	Strategy OS: <ol style="list-style-type: none"> 1. Increased capacity to serve air cargo shipments in the form of agricultural commodities, marine products and ornamental fish;
		ST strategy: <ol style="list-style-type: none"> 1. Maximizing existing cargo loading and unloading facilities while still paying attention to the Standard Operation and

<ol style="list-style-type: none"> 2. Facilities for cargo loading and unloading activities that are complete and adequate; 3. Serving domestic and international cargo shipments; 4. There is a Standard Operation and Procedure (SOP) for security at the airport cargo terminal; 5. There are representative offices of the animal quarantine agency, plant quarantine agency, and customs and excise at the cargo terminal. 	<ol style="list-style-type: none"> 2. Encouraging cooperation with MSME for agricultural products, marine products, and ornamental fish to use air cargo; 3. Establish cooperation with travel service providers for Umrah and Hajj services. 	<p>Procedure (SOP) for cargo loading and unloading.</p> <ol style="list-style-type: none"> 2. Promotion of attractive offers to attract interest in the use of air cargo; 3. Coordinate with cargo partners and agents regarding price competition.
<p>Weaknesses :</p> <ol style="list-style-type: none"> 1. There are still deficiencies in the completeness of aviation security facilities at the cargo terminal; 2. The number of Aviation Security personnel at the cargo terminal is not in accordance with the applicable regulations; 3. Skills for handling special cargo and dangerous goods are still lacking; 4. The location of the cargo terminal is quite far, about 22 km from the city center 5. Security violations in cargo transportation and insider threats. 	<p>WO Strategy :</p> <ol style="list-style-type: none"> 1. Adding aviation security facilities and Aviation Security personnel on duty at the cargo terminal in accordance with applicable regulations. 2. Propose education and training programs for Aviation Security and Angkasa Pura Cargo personnel for skills in handling special cargo and dangerous goods 	<p>WT Strategy:</p> <ol style="list-style-type: none"> 1. Provide education and outreach to officers and cargo agents regarding Standard Operation and Procedure (SOP); 2. Collaborating with cargo transportation companies, the private sector, the government and airport business entities to improve security at the cargo terminal

4. CLOSING

4.1. Conclusion

1. Aviation security facilities have an influence (individually or partially) on security at the Minangkabau International Airport Cargo Terminal, where there is a correlation between variable X (aviation security facilities) and variable Y (security at the cargo terminal) with a calculation result of 0.78 (high correlation, strong) and also obtained a determination coefficient (R square) of 0.608.
2. At the Minangkabau International Airport Cargo Terminal there are deficiencies in security inspection steps both in terms of personnel and facilities. In terms of facilities, there are deficiencies in the form of no walk through metal detector facilities and in terms of personnel there is a shortage of personnel to operate the x-ray machine, which is only operated by 1 person with a Junior Avsec license.

4.2. Suggestions

1. The need to increase the number of Aviation Security (Avsec) personnel at the cargo terminal, especially personnel with Junior Avsec licenses to operate x-ray machines. The number of personnel is at least 3 people with Junior Avsec licenses per shift for 1 x-ray machine in

accordance with applicable regulations, namely PM 53 of 2017 article 47 paragraph (2).

2. The need for additional aviation security facilities at the Minangkabau International Airport Cargo Terminal. The security facility is in the form of a metal detector gate (walk through metal detector) for inspection of people or officers at the cargo terminal, in accordance with applicable regulations, namely PM 53 of 2017 article 47 paragraph (1).
3. The need to maximize existing cargo loading and unloading facilities and provide education and outreach to officers and cargo agents regarding Standard Operation and Procedure (SOP) for loading and unloading of cargo at cargo terminals in accordance with relevant regulations, so as to prevent insider threats or the entry of dangerous goods threatens flight safety.

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