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IMPACT OF APRON MOVEMENT CONTROL (AMC) MANAGEMENT EFFECTIVENESS AND OFFICER COMPETENCE ON FLIGHT OPERATIONAL SMOOTHNESS AT YOGYAKARTA INTERNATIONAL AIRPORT (YIA)

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Abstract

This study aims to determine the effect of AMC management effectiveness and officer competence on the flight operation smoothness at YIA airport. This type of research is quantitative research with a research method based on concrete data, the population in this study were unit officers (AMC) with a sample of 32 respondents taken using the sensus technique (saturated), this data collection technique was through a google form questionnaire, testing in this study used instrument tests, multiple linear regression tests, and hypothesis tests. In data management, researchers use Statistical Package for the Social Sciences (SPSS) application program. The results of the T test in this study indicate that the variable of AMC management effectiveness (X1) has a partial effect on flight operational smoothness (Y) where the calculated t value is 2.335> t table 2.045 and the competence of officers (X2) partially does not affect flight operational smoothness (Y) where the calculated t value is 1.745 <t table 2.045. The results of the F test show that the effectiveness of AMC management (X1) and the competence of officers (X2) simultaneously have a significant effect on flight operational smoothness (Y) where the calculated F value is 8.273> F table 3.33. The Adjusted R^2 value shows that the independent variables explain flight operational smoothness by 36.3%. Meanwhile, the strength of the relationship between independent variables simultaneously on flight operational smoothness obtained a coefficient value of 0.603 or moderate.

Keywords: *AMC Management Effectiveness, Officer Competence, Flight Operational Smoothness*

Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh efektivitas pengelolaan AMC dan kompetensi petugas terhadap kelancaran operasional penerbangan di bandara YIA. Jenis penelitian ini adalah penelitian kuantitatif dengan metode penelitian yang berlandaskan data kongrit, populasi dalam penelitian ini adalah petugas unit (AMC) dengan sampel 32 responden yang diambil menggunakan teknik sensus (jenuh), teknik pengumpulan data ini melalui kuesioner google form, pengujian dalam penelitian ini menggunakan uji instrument, uji regresi linear berganda, dan uji hipotesis. Dalam pengelolaan data peneliti menggunakan program

aplikasi SPSS (Statistical Package for the Social Sciences). Hasil uji T dalam penelitian ini menunjukkan, variabel efektivitas pengelolaan AMC (X1) berpengaruh secara parsial terhadap kelancaran operasional penerbangan (Y) dimana nilai t hitung 2,335 > t tabel 2,045 dan kompetensi petugas (X2) secara parsial tidak berpengaruh terhadap kelancaran operasional penerbangan (Y) dimana nilai t hitung 1,745 < t tabel 2,045. Hasil uji F menunjukan Efektivitas pengelolaan AMC (X1) dan kompetensi petugas (X2) secara simultan berpengaruh secara signifikan terhadap kelancaran operasional penerbangan (Y) dimana nilai F hitung 8,273 > F tabel 3,33. Nilai *Adjusted* R^2 menunjukkan bahwa variabel bebas menjelaskan Kelancaran Operasional Penerbangan sebesar 36,3%. Sedangkan kuatnya hubungan antara variabel independen secara simultan terhadap Kelancaran Operasional Penerbangan diperoleh nilai koefisien sebesar 0,603 atau sedang.

Kata kunci: *Efektivitas Manajemen AMC, Kompetensi pegawai, Kelancaran Operasi Penerbangan.*

Introduction

One of the airport managers in Indonesia is Yogyakarta International Airport (YIA) which is one of the airports built to support economic growth and tourism in the Special Region of Yogyakarta. The smooth operation of flights depends on various factors, one of which is the effectiveness of *Apron Movement Control (AMC)* management and the competence of officers.
According to Hasibuan in Saputri (2025), work effectiveness refers to the state of perfect work success in accordance with a predetermined plan. Work effectiveness can be achieved if the implementation of work meets the conditions required by the work, thus facilitating the division of labor and the achievement of organizational goals. The effectiveness of AMC management greatly determines the smooth and safe operation of the airport which has a significant effect on the efficiency of time, cost, and flight safety at the airport.

Officer competence is the ability that must be possessed by officers to carry out their duties properly. One of them that must be possessed by AMC unit officers is the competence in regulating and supervising the movement of aircraft, vehicles, and people on the *apron*, being able to ensure the safety, security, and order of the movement of aircraft, vehicles, passengers, and officers being able to ensure that every operation runs according to safety procedures and standards. Competent AMC officers can improve the efficiency, security, and safety of airport operations, as well as make a positive contribution to the smooth operation of flights at YIA airport.

The Apron Movement Control (AMC) Unit is an airport personnel who have licenses and ratings to carry out their duties as the person in charge of flight operations, supervision, and aircraft movements. Procedure from MOS

AMC/Decree of the Board of Directors of PT Angkasa Pura I. Number: KEP. DU.28/OM.07/2021 and Standard Operating Procedures (PM. SUB. AO. OA.03) which must be a guideline when *apron movement control (AMC)* officers carry out their duties and responsibilities when it is the role of *apron movement control (AMC)* officers in handling increased traffic for flight operations such as ensuring the readiness of *Apron Movement* and *Avio Bridge* facilities can be provided to *Airlines,* manage every personnel involved in *Apron Movement* and *Avio Bridge* activities to provide services in accordance with the service level agreement that has been set, coordinate with external parties, such as *airlines, ground handling*, and related parties, dealing with incidental situations or circumstances that occur in the field.

Theoretical Review

Airport

Based on Law Number 1 of 2009 concerning Aviation, an airport is an area on land or waters with certain boundaries that is used as a place for aircraft to land and take off, board and disembark passengers, load and unload goods, and place to move intra and intermodal transportation, which is equipped with aviation safety and security facilities, as well as basic facilities and other supporting facilities (Presiden Republik Indonesia, 2019)

According to Ministerial Regulation No. 69 (2013) concerning the national airport system, the functions and roles of airports can be described as follows. Airports, based on their function, are places where government activities are carried out, so airports are places where government agency work units carry out their duties and functions towards the community in accordance with laws and regulations in matters including:

1. Coaching aviation activities,
2. Customs
3. Keimigrasian,
4. Quarantine.

Airports as a place to carry out business activities are a place of business for:

1. Airport Maintenance Unit or Airport Business Entity,
2. Air transport business entities,
3. Indonesian Legal Entities or individuals through cooperation with Airport Operating Units or Airport Business Entities.

In Law Number 1 of (2019) concerning Aviation, it is stated that there are at least 6 types of airports, namely:

1. Public Airport, is an airport that is used to serve the public interest.
2. Special Airports, used to serve their own activities to support certain activities.
3. Domestic Airport, is an airport that only serves domestic flight routes.
4. International Airport, is an airport that is designated to serve domestic

flight routes as well as from and outside the country. Usually, international airports are equipped with *custom, immigration, and quarantine* (CIQ) facilities.
5. Collector Airport is an airport that has a wide service coverage from various airports that serve a large number of passengers or cargo and affects economic development nationally or provincially.
6. Feeder Airport is an airport whose purpose is to support or the feeder airport has a limited service scope or as one of the infrastructure to help local activities services.

Yogyakarta International Airport (YIA)

Yogyakarta International Airport (YIA) is located in Kapanewon Temon, Kulon Progo Regency, Special Region of Yogyakarta which was inaugurated by the President of the Republic of Indonesia Joko Widodo, Friday (28/8/2020). YIA Airport serves domestic flights to several cities in Indonesia as well as international flights to Kuala Lumpur and Singapore. YIA Airport stands on an area of 600 hectares and costs up to IDR 12 trillion. The *length of the airport runway YIA is 3,250 with* an apron *capacity* of 45 aircraft and is able to serve wide-body aircraft such as *Airbus* A380 and *Boing* 777. The airside area is about 358 hectares, the *landside area* is about 223 hectares, the terminal area is about 210,000 square meters and the hangar area is about 371,125 square meters.

Apron Movement Control (AMC)

According to the Regulation of the Director General of Civil Aviation KP 21 of 2015 in Hermawan (2023), one of the work units at the airport that has an important and crucial role on the air side is the Apron Movement Control (AMC) officer. In general, the Apron Movement Control (AMC) Unit is an airport service unit that plays a role in supervising all traffic movements on the apron which includes aircraft Parking Stand placement services, traffic of people, vehicles and Ground Handling arrangements, as well as airside area flight data administration (airside) as well as permits for vehicles operating on the apron.

Procedures from MOS AMC/Decree of the Board of Directors of PT Angkasa Pura I. Number: KEP.DU.28/OM.07/2021 and Standard Operating Procedures (PM.SUB.AO.OA.03) which must be a guideline when apron motion control (AMC) officers carry out their duties and responsibilities when they become apron motion control (AMC) officers in improving flight traffic operations such as helping Apron Movement and Avio Bridge can be provided to Airlines, helping every personnel involved in Apron Movement and Avio Bridge activities provide services in accordance with the established service level agreement, coordinating with external parties, such as airlines, ground handling, and other related parties, dealing with situations or circumstances of incidents that occur in the field.

Management Effectiveness

Management effectiveness is defined as an **empirical model of management team development**, emphasizing the importance of clear goals, effective communication, leadership and team structure as key elements in achieving organizational effectiveness. (Thomas Nesset Midelfart, 2021)

Officer Competence

Officer competency is *the ability to do a job properly*, which is the ability to carry out a job appropriately according to the set standards. Competence includes knowledge, skills, and attitudes that support role-specific work performance (Kuruba, 2019)

Flight Operational Smoothness

According to the Regulation of the Minister of Transportation Number 64 ((2011), it states that the smooth operation of flights depends on the maintenance and repair of aviation facilities as well as the training of aircraft technicians. This shows that adequate infrastructure and well-trained personnel are key to ensuring smooth operations.

Law No. 1 of 2009 on Aviation emphasizes that the smooth operation of flights must consider the safety of passengers and aircraft. This includes proper arrangements in the apron area, including aircraft parking arrangements and *traffic management* at the airport.

Research Method

This research uses a quantitative approach. Quantitative research is a research method based on the philosophy of positivism and is used to examine a specific population or sample. According to Sugiyono (2017), quantitative research is a research method based on concrete data (positivistic). Research data consists of numbers measured using statistics as a calculation test tool related to the problem being studied to produce a conclusion.

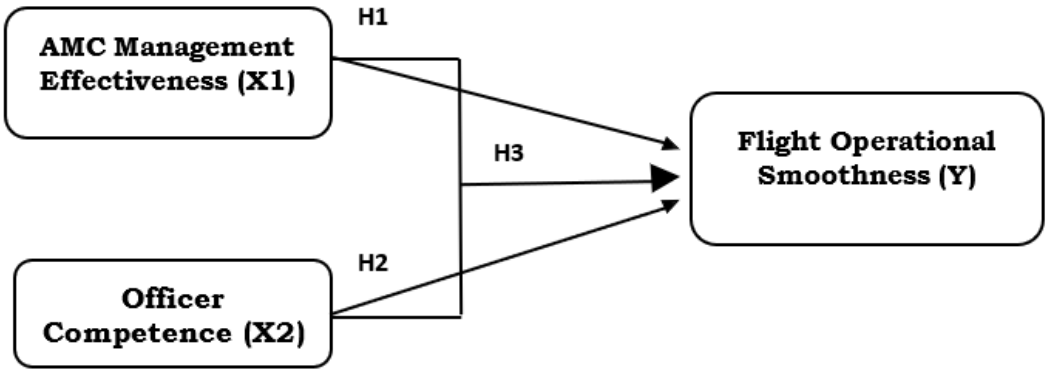

Figure 1 Research Outline

According to Sugiyono (2017), a hypothesis is a temporary answer to a research problem, where the research problem is stated in the form of a question. A hypothesis is a tentative statement about the relationship between two or more variables. The research hyphotheses are as follows :

1. It is suspected that the AMC management effectiveness variable (X1) partially influences the flight operational smoothness variable (Y) at Yogyakarta International Airport.
2. It is suspected that the officer competency variable (X2) partially influences the flight operational smoothness variable (Y) at Yogyakarta International Airport.
3. It is suspected that the management effectiveness variable (X1) and the competency variable (X2) simultaneously influence the flight operational smoothness variable (Y) at Yogyakarta International Airport.

The location of this research is at Yogyakarta International Airport (YIA), the time of this research is from February-March 2025. To obtain the data needed in this study, the researcher used data collection techniques in the form of: observation, documentation, literature study and questionnaire filling.

According to Sugiyono (2018), a population is a generalized area consisting of objects or subjects that have certain qualities and characteristics that are determined by researchers to be studied and then conclusions drawn. Meanwhile, according to Sugiyono (2018), a sample is part of the number and characteristics possessed by the population, a sample taken from the population must truly be able to represent the population being studied.

This study used a saturated sampling method. According to Sugiyono (2018), the saturated sampling method or total sampling is a sampling technique where all members of the population are used as samples. The sample taken in this study was the Apron Movement Control (AMC) unit officers at Yogyakarta International Airport (YIA), totaling 32 officers in the unit. The reason for using the entire population as a sample is because it represents the entire population because if the population is less than 100, then all of them are used as research samples. Therefore, the researcher took 32 samples taken from the AMC unit.

The technical data analysis used in this study are: validity test, reliability test, normality test, multiple linear regression analysis, hypothesis test, correlation coefficient (R) test, and determination coefficient test (R Square).

According to Ghozali ((2021), validity testing is used to measure the validity of a questionnaire. The calculation uses the Statistical Package for Social Science (SPSS) application. Data validity can be measured by comparing the calculated r with the table r. If the calculated r value is greater than the table r value with a significance level of 5%, the questionnaire is considered valid. If the calculated r value is less than the

table r value, the questionnaire is considered invalid. The standard formula for reading and determining the r value in a table is df = n – 2.

According to Sugiyono (2018), reliability testing is the extent to which measurement results using the same object will produce the same data. This reliability test is used to determine the extent to which questionnaire measurement results remain consistent when measurements are taken twice or more on the same symptoms using the same measuring instrument.

Reliability testing can be carried out simultaneously on all question items. If the calculated alpha is <0.60 then it is not reliable, if the calculated alpha is >0.60 then it is reliable. (Sujarweni, 2020)

According to Ghozali (2021)the normality test is carried out to test whether the confounding or residual variables are normally distributed.

The basis for decision making is as follows:

1) If the data is more than the significance level ≥ 0.05 then H0 is accepted and shows that the residual data is normally distributed.
2) If the data is less than the significance level < 0.05, then Ha is accepted and shows that the residual data is not normally distributed.

According to Ghozali (2021), multiple linear regression aims to test the effect of two or more independent variables on a single dependent variable. The steps of the Multiple Linear Regression method are as follows:

$$Y = a + b1X1 + b2X2 + \ldots + bnXn$$

In this study, there are 2 independent variables, namely Management Effectiveness (X1) and Competence (X2), so the form of the regression equation is:

$$Y = a + b1X1 + b2X2$$

The t-test is a hypothesis test used to determine whether there is a convincing difference between two sample means. The t-test is used to show the extent to which an independent variable individually (partially) explains the variation in the dependent variable (Ghozali, 2021).

The decision-making criteria are as follows:

1. If the significant t value is > 0.05, then there is no significant influence of the independent variable on the dependent variable, meaning it is rejected.
2. If the significance is t < 0.05, then there is a significant influence between the independent variable and the dependent variable, meaning it is accepted.

Or it can be done by comparing the calculated T value with the T table value, making the decision as follows:

1. If the calculated t value > t table, then there is an influence of the independent variable (X) on the dependent variable (Y) or it can be said that the hypothesis is accepted.
2. If the calculated t value < t table, then there is no influence of the independent variable (X) on the dependent variable (Y) or it can be said that the hypothesis is rejected.

According to Sugiyono (2018), the F test aims to determine the influence of independent variables simultaneously.

If the significant probability value is <5% then the hypothesis is accepted, meaning that simultaneously the independent variables are concluded to have an influence on the dependent variable, and if the significant probability value is >5% then the hypothesis is rejected, meaning that simultaneously the independent variables are concluded to have no influence on the dependent variable (Ghozali, 2021)

Correlation is a statistical technique used to test the presence or absence of a relationship and the direction of the relationship between two or more quantitative variables. The R value ranges from 0 to 1. The closer the value is to 1, the stronger the relationship. Conversely, the closer the value is to 0, the weaker the relationship. According to Sugiyono (2017), there are several correlation coefficient intervals, ranging from very weak, weak, moderate, strong, and very strong. These guidelines can be seen below:

1. Pearson correlation value of 0.00 to 0.20 = very weak correlation
2. Pearson correlation value of 0.21 to 0.40 = weak correlation
3. Pearson correlation value of 0.41 to 0.60 = moderate correlation
4. Pearson correlation value of 0.61 to 0.80 = strong correlation
5. Pearson correlation value of -.81 to 1.00 = very strong correlation

The coefficient of determination (R Square) is used to determine the extent to which capital is able to explain variations in the dependent variable. The coefficient of determination value is between 0 and 1. A small coefficient value means that the ability of the independent variables to explain the dependent variable is very limited. A value close to 1 means that the independent variables provide almost all the information needed to predict variations in the dependent variable. The greater the coefficient of determination value, the greater the ability of the independent variables to explain the dependent variable. Conversely, the smaller the coefficient of determination value, the smaller the ability of the independent variables to explain the dependent variable or is very limited (Sugiyono, 2018).

Results and Discussion

1. Respondent Characteristics

   Based on the questionnaire collected from 32 respondents, data obtained based on the respondent's gender is shown in the following table:

Table 1. Respondent Characteristics

Characteristics	Category	Frequency	Percentage
Gender	Women	1	3,1
	Men	31	96,9
Age	20 – 25 year	3	9,4
	26 – 30 year	16	50,0
	31 – 35 year	7	21,9
	36 – 40 year	4	12,5
	41 – 45 year	2	6,3
Years of service	1 – 5 year	9	28,1
	6 – 10 year	18	56,3
	11 – 15 year	3	9,4
	16 – 20 year	2	6,3
Education	SMA	10	31,3
	D3	10	31,3
	D4	2	6,3
	S1	9	28,1
	S3	1	3,1

Based on Table 1 above, it can be seen that 31 respondents were male, or 96.9%, while 1 respondent was female, or 3.1%. From this data, it can be concluded that the respondents' characteristics based on gender were dominated by males, at 31, or 96.9% of the total 32 respondents.

Based on Table 1 above, it can be seen that 3 respondents were aged 20-25, or 9.4%. 16 respondents were aged 26-30, or 50%. 7 respondents were aged 31-35, or 21.9%. 4 respondents were aged 36-40, or 12.5%. 2 respondents were aged 41-45, or 6.3%. So it can be concluded in this study that the characteristics of respondents based on age are dominated by respondents aged 26-30 years with the largest percentage, namely 50% of the 32 respondents.

Based on Table 1 above, it can be seen that 9 respondents, or 28.1%, had worked between 1 and 5 years. 18 respondents, or 56.3%, had worked between 6 and 10 years. 3 respondents, or 9.4%, had worked between 11 and 15 years. 2 respondents, or 6.3%, were aged 16 and 20. Therefore, it can be concluded that this study's characteristics based on work period are dominated by respondents with 6 and 10 years of work, representing the largest percentage, at 56.3% of the 32 respondents.

Based on Table 1 above, it can be seen that 10 respondents, or 31.3%, had a high school diploma or equivalent. 10 respondents, or

31.3%, had a diploma (D3) degree. 2 respondents, or 6.3%, had a diploma (D4) degree. 9 respondents, or 28.1%, had a bachelor's degree (S1) degree. There was 1 respondent with a doctoral degree (S3/Bachelor's degree), or 3.1%. Therefore, it can be concluded that this study shows that the characteristics of respondents based on their last education were dominated by respondents with a high school or equivalent education and a diploma (D3/Diploma) with the largest percentage of each, namely 31.3% of the 32 respondents.

2. Instrument Test

The validity test results for the instrument used were quite good. The calculated r value for all statement items exceeded the table r value, which was 0.361. Thus, all statement items in the research instrument were declared valid.

Table 2. Validity and Reliability Test

Effectiveness of AMC Management (X1)		Officer Competence (X2)		Smooth Flight Operations (Y)	
Item	*Pearson Correlation*	Item	*Pearson Correlation*	Item	*Pearson Correlation*
Per.1	0,603	Per.6	0,694	Per.11	0,681
Per.2	0,614	Per.7	0,702	Per.12	0,729
Per.3	0,623	Per.8	0,640	Per.13	0,627
Per.4	0,611	Per.9	0,706	Per.14	0,645
Per.5	0,738	Per.10	0,716	Per.15	0,631
Cronbach's Alpha					
0,630		0,726		0,663	

Table 3. Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		30
Normal Parameters[a,b]	Mean	0,0000000
	Std. Deviation	1,66143064
Most Extreme Differences	Absolute	0,141
	Positive	0,141

	Negative	-0,138
Test Statistic		0,141
Asymp. Sig. (2-tailed)		.132[c]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Based on the results of the normality test in table 3 above, it can be seen that the significance value or Exact Sig. (2-tailed) is 0.132, which means > 0.05, so it can be concluded that the residual value of this research data is normally distributed.

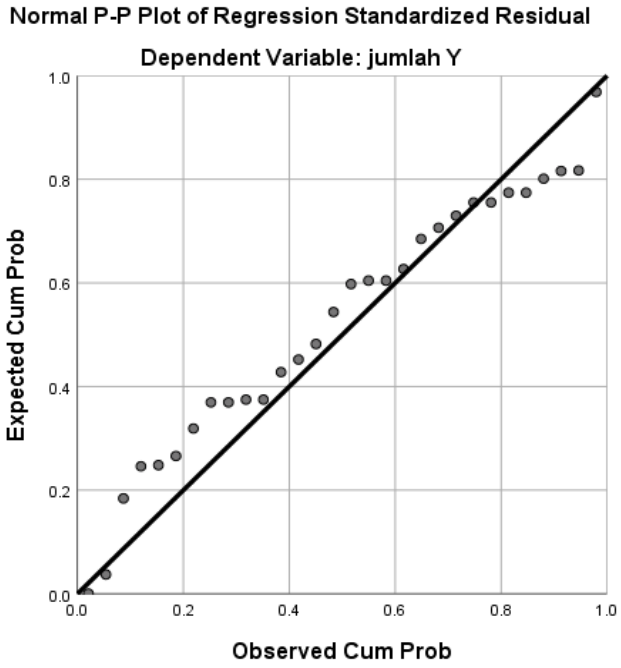

Figure 2. P-Plot

Based on Figure 2, the P-Plot test shows that the data is spread around the diagonal line and follows the direction of the diagonal line. Therefore, it can be concluded that the data is normally distributed.

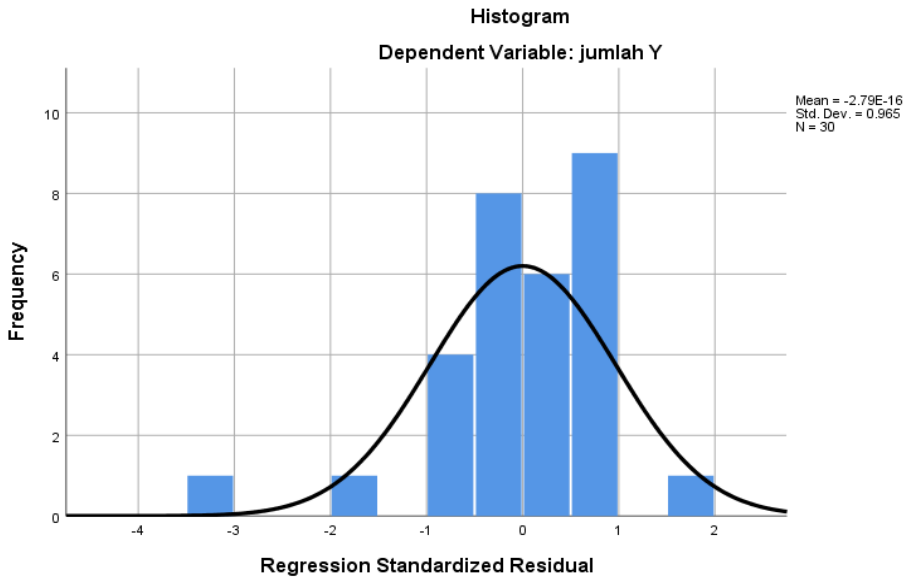

Figure 3. Histogram

Figure 3, The histogram graph above depicts a normal distribution pattern because it does not deviate to the left or right, but is right in the middle like a bell shape, so the results show that the data is normally distributed.

3. Multiple Regression Hypothesis Testing Results

The results of the multiple regression analysis obtained the following multiple linear regression equation:

Y = a + b1X1 + b2X2

Y = 3,504 + 0,475 X1 + 0,363 X2

Table 4. Multiple Regression Analysis Hypothesis

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.504	4.680		.749	.460
	Effectiveness of AMC Management (X1)	.475	.203	.398	2.335	.027
	Officer Competence (X2)	.363	.208	.297	1.745	.092
a Dependent Variable: number of Y						

Based on Table 4 above, the partial regression equation between the independent and dependent variables can be concluded as follows:

a. The constant value is 3.504, with a positive correlation, indicating that if the AMC Management Effectiveness (X1) and Officer Competence (X2) variables are equal to zero (no change), then the Flight Operational Smoothness (Y) value will be 3.504.
b. The regression coefficient for AMC Management Effectiveness (X1) in the equation is 0.475, with a positive correlation. This indicates that if the AMC Management Effectiveness (X1) variable increases by 1 unit, Flight Operational Smoothness (Y) will increase by 0.475 units, assuming the independent variable, Officer Competence (X2), remains constant (ceteris paribus).
c. The regression coefficient for Officer Competence (X2) in the equation is 0.363, with a positive correlation. This shows that if the Officer Competence variable (X2) increases by 1 unit, then the Smoothness of Flight Operations (Y) increases by 0.363 units assuming the independent variable AMC Management Effectiveness (X1) remains constant (ceteris paribus).

1) t-test (Partial)

Based on Table 4 above, the t-test uses a comparison of the t-table and the calculated t-value using the following formula:

df = n – k – 1

Where: n = Number of respondents

k = Number of independent variables (Sugiyono in Pratiwi (2021))

1 = Numerator

df = 32 – 2 – 1 = 29

Therefore, the t-table used is the df order of 29 (0.050), which is 2.045.

The results of the t-test using a comparison of the calculated t-value and the calculated t-value are as follows:

a) The Effect of the AMC Management Effectiveness (X1) Variable on Flight Operational Smoothness (Y) (Hypothesis 1)
Table 4 shows that the calculated t-value for the AMC Management Effectiveness (X1) variable is 2.335, where the calculated t-value is greater than the t-table value of 2.045, with a significance value of 0.027 <0.05. Therefore, it can be concluded that the AMC Management Effectiveness variable (X1) has a partial significant effect on the smoothness of flight operations (Y) at Yogyakarta International Airport (YIA).

b) The Effect of the Officer Competence Variable (X2) on the Smoothness of Flight Operations (Y) (Hypothesis 2)
Table 4 shows that the calculated t-value for the Officer Competence variable (X2) is 1.745, where the calculated t-value is < the t-table value of 2.045, with a significance value of 0.092

> 0.05. Therefore, it can be concluded that the Officer Competence variable (X2) does not have a partial significant effect on the Smoothness of Flight Operations (Y) at Yogyakarta International Airport (YIA).

2) F Test (Simultaneous)

Table 5. F-Test Results (Simultaneous)

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	46,398	2	23,199	8,273	.001[b]
	Residual	81,321	29	2,804		
	Total	127,719	31			
a. Dependent Variable: number of Y						
b. Predictors: (Constant), sum X2, sum X1						

Based on the F-test results in Table 5, the f-test using the comparison of the f-table and f-calculation uses the following formula:

df 1 = (Number of independent variables)
df 2 = n – k – 1
Where: n = number of data
k = number of independent variables (Sugiyono in Pratiwi (2021))
n = 32
k = 3
df 1 = 2
df 2 = 32 – 2 – 1 = 29

Therefore, the F-table value is at the intersection point (2.29). The F-table value of this study is 3.33.

It can be concluded that the calculated F-value of 8.273 is greater than the F-table value of 3.33, with a significance value of 0.001 <0.05. Therefore, it can be concluded that the variables AMC Management Effectiveness (X1) and Officer Competence (X2) simultaneously have a positive and significant effect on Flight Operational Smoothness (Y).

4. Correlation Coefficient (R) Test and R (Square) Determination Coefficient Test

Table 6. Correlation Coefficient (R) Test and R (Square) Determination Coefficient Test

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.603[a]	0,363	0,319	1,675
a. Predictors: (Constant), sum X2, sum X1				
b. Dependent Variable: number of Y				

Based on Table 6 above, it can be seen that the correlation coefficient (R) value is 0.603, indicating a moderate degree of correlation between the independent variables (AMC Management Effectiveness X1 and Officer Competence (X2) and the dependent variable, Smooth Flight Operations (Y).

Based on Table 6 above, it can be seen that the R^2 value is 0.363 or 36.3%. From these data, it can be explained that 36.3% of Flight Operations Smoothness (Y) is influenced by the variables AMC Management Effectiveness (X1) and Officer Competence (X2), while (100% - 36.3% = 63.7%) 63.7% is influenced by other variables not examined in this study, such as the Airport Operation Control Center (AOCC) unit, airport authority office (admin office), Aircraft Accident Management, Fire Fighting (PKP-PK), and others.

Conclusion and Recommendation

Conclusion

Based on the research results, the following conclusions can be drawn:

1. Based on a partial test, the variable AMC Management Effectiveness (X1) significantly influences Flight Operational Smoothness (Y). This is indicated by the calculated t-value of 2.335 > 2.045 (t-table) with a significance value of 0.027 < 0.05, thus accepting the first hypothesis (H1) in this study.
2. Based on a partial test, the variable Officer Competence (X2) does not significantly influence Flight Operational Smoothness (Y). This is indicated by the calculated t-value of 1.745 < 2.045 (t-table) with a significance value of 0.092 > 0.05, thus rejecting the second hypothesis (H2) in this study.
3. Based on the results of a simultaneous F-test, the variables AMC Management Effectiveness (X1) and Officer Competence (X2) significantly influence Flight Operational Smoothness (Y). This is shown by the calculated F value of 8.273 > 3.33 (F table) with a significance value of 0.001 < 0.05, so that the third hypothesis (H3) in this study is accepted.

Recommendation

This research still has limitations in previous research which were quite lacking in presenting the required data, and this research can be developed in the future by adding other factors that support the flights operational smoothness.

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