

The Influence of Efficiency and Effectiveness on the Performance of Apron Movement Control in Supervising Aircraft Movement at Sultan Thaha Saifuddin Airport Jambi

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Abstract

The success of employees in carrying out their duties can be measured through the timeliness in servicing the aircraft that will park on the apron that will use the Aviobridge because at Sultan Thaha Saifuddin Airport Jambi the operation of the Aviobridge is carried out by Apron Movement Control (AMC) personnel. When the number of service delays decreases, the target achieved will be optimal. The case that the researchers observed was that currently the personnel in the Apron Movement Control (AMC) unit of Sultan Thaha Saifuddin Jambi Airport did not meet the number specified in the nomenclature. In accordance with the directors' regulation no PD.01.01/08/2018/0070 regarding the Airside operation formation, it is explained that the number of personnel that should be there is 11 people. Meanwhile, there are only 6 personnel in the Apron Movement Control (AMC) unit. The purpose of this study was to find out how much influence efficiency and effectiveness have on the performance of Apron Movement Control (AMC) in supervising aircraft movements on the apron of Sultan Thaha Jambi Airport. Data collection was carried out through distributing questionnaires in quantitative research with purposive sampling techniques and a sample of 40 respondents. Using SPSS 25. Based on the results of the study, it showed that the independent variables (efficiency and effectiveness) had an effect on the dependent variable (AMC performance) in supervising aircraft movements at Sultan Thaha Saifuddin Airport, Jambi. The R Square value of 0.751 means that the efficiency and effectiveness variables affect the performance of Apron Movement Control (AMC) by 75.1%.

Keywords: Efficiency, Effectiveness, Personnel Performance, AMC, Sultan Thaha



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INTRODUCTION

Indonesia is an archipelagic country which has five major islands, namely Sumatra, Java, Kalimantan, Sulawesi and Papua where to travel between one island and the other you need to use transportation because the distance is very far and you have to cross the ocean. For good and efficient transportation used in traveling distances between these islands using what is called a mode of air transportation, namely airplanes. Air transportation travel is made faster and also saves time. In carrying out flight operations, an airport is needed. Airports consist of domestic airports, international airports, Helicopter Bases and regional airports. The airport itself is divided into two sides, namely the land side and the air side.

Sultan Thaha Saifuddin Airport is one of the airports located in Jambi province where this airport was previously managed by the Jambi Province Transportation Service, but in 2007 it was managed by PT Agkasa Pura II. Currently operating at Sultan Thaha Saifuddin Airport, Jambi, there are seven airlines which make flights an average of 14 times a day, including (Batik Air, Lion Air, Garuda Indonesia, Citilink Indonesia, Wings Air, Susi Air and Super Air). Jet). The unit responsible for security on the air side and supporting services at the

airport which is very influential is the Apron Movement Control (AMC). This unit is in charge of managing and supervising all movements on the Air Side starting from the movement of vehicles, the movement of people and anything on the Air side as well as providing services to aircraft when maneuvering on the ground such as on the apron, Taxi-way and Run-way.

Work efficiency is the best comparison between a job carried out and the results achieved by the work according to the target both in terms of quality and results. Efficiency is very closely related to the concept of productivity. Efficiency is carried out by using a comparison between the output produced and the input used. Performance can be said to be efficient when work results can be achieved with low resources. Effectiveness according to Mardiasmo (2017) is a measure of success or failure in achieving the goals of an organization. If an organization achieves its goals then the organization has been running effectively. The effectiveness indicator describes the range of consequences and the impact (outcome) of the output of the program in achieving the program's objectives. The greater the contribution of the resulting output to the achievement of the specified goals or objectives, the more effective the work process of an organizational unit.

According to Mangkunegara (2014) company performance is the result of work that can be achieved in quality and quantity by an employee in carrying out tasks according to the responsibilities given. Good performance, namely performance that is in accordance with organizational standards that support the achievement of organizational goals. A good organization is an organization that aims to improve the capabilities of its human resources, because human resources are one of the factors to improve employee performance. The success of employees in carrying out their duties can be measured through the timeliness in servicing the aircraft that will park on the apron that will use the Aviobridge because at Sultan Thaha Saifuddin Airport Jambi the operation of the Aviobridge is carried out by Apron Movement Control (AMC) personnel. When the number of service delays decreases, the target achieved will be optimal. In addition, this can also be measured through the completion of the task of supervising VIP guests who will go to the VIP room by using a vehicle from the VIP room that has obtained permission from the Apron Movement Control (AMC) unit.

In this study, the researchers saw that currently the personnel in the Apron Movement Control (AMC) unit of Sultan Thaha Saifuddin Airport, Jambi, did not meet the number specified in the nomenclature. In accordance with the directors' regulation no PD.01.01/08/2018/0070 regarding the Airside operation formation, it is explained that the number of personnel that should be there is 11 people. While the personnel in the Apron Movement Control (AMC) unit are currently only 6 people, so with this lack of personnel, can the existing tasks be completed to the fullest and achieve the performance expected by the company. The purpose of this study is: To find out how efficiency affects the performance of Apron Movement Control (AMC) in supervising the movement of aircraft on the apron of Sultan Thaha Saifuddin Airport, Jambi. Knowing how the influence of effectiveness on the performance of Apron Movement Control (AMC) in supervising the movement of aircraft on the apron of Sultan Thaha Saifuddin Airport, Jambi. Knowing how much influence efficiency and effectiveness have on the performance of Apron Movement Control (AMC) in supervising aircraft movements on the apron of Sultan Thaha Jambi Airport.

Theoretical Basis

Airport

According to law No. 1 of 2009 concerning aviation, an airport is an area on land and waters that has certain boundaries and is used as a place for aircraft to take off, land, board passengers, load and unloading of goods, as well as places for intra and intermodal

transportation. Where this place is equipped with aviation safety and security facilities, as well as other supporting facilities. Whereas in Annex 14 of ICAO (International Civil Aviation Organization) an airport is a certain place on land or water which is designated either in whole or in part for the arrival, departure and movement of aircraft.

Efficiency

According to Soekartawi (2015) the notion of work efficiency is an effort to use the smallest possible input for maximum production income. This comparison is seen from the point of view of time, a job is said to be more efficient if the results of the work are in accordance with the desired target to obtain something good and maximum and in terms of performance, namely the results of work in quality and quantity achieved by an employee in carrying out his duties in accordance with given responsibility. Based on the description above, efficient work methods are methods that do not in the least reduce the results to be achieved, such as the easiest, fastest, cheapest, lightest, and shortest way.

Effectiveness

In the world of economics, especially in the science of management, the meaning of effectiveness according to experts is as follows: According to Gibson et al (2013) effectiveness is the level of achievement achieved by a person or organization in certain ways in accordance with the goals to be achieved. This means that the more achievements that are achieved in accordance with the plan, the more effective a person or individual is. Effectiveness according to Mardiasmo (2017) is a measure of success or failure in achieving the goals of an organization. If an organization achieves its goals then the organization has been running effectively. The effectiveness indicator describes the range of consequences and the impact (outcome) of the output of the program in achieving the program's objectives.

Performance

In the opinion of Ilyas (2014) said that the notion of performance is appearance, the work of personnel both in quality and quantity of individual performances and work group personnel, the appearance of works is not limited to personnel holding functional or structural positions but also to the entire range of personnel within the organization . According to Hani Handoko (2013) said that performance appraisal can be used to: Improve performance, feedback on work implementation allows managers and personnel departments to improve their activities to improve performance. Salary adjustments, performance evaluations assist decision makers in determining wage increases, bonuses and other forms of salary. Placement, promotion and transfer decisions are usually based on past performance. Promotions are often a form of reward for past performance. Planning for training and development needs Poor performance may indicate a need for training. Vice versa, good performance may reflect potential that must be developed. Career planning and development, achievement feedback directs career decisions, that is, about a particular career path that must be researched. Detecting job design errors, poor performance may be a sign of an error in job design. Performance appraisal helps diagnose these errors. Looking at external challenges, sometimes a person's achievements are influenced by factors outside the work environment, such as family, health and other personal issues. Based on the performance appraisal, the personnel department may be able to offer assistance. Given informational inaccuracies, poor performance may indicate errors in job analysis information, human resource plans or other components, such as management information systems. Relying on

inaccurate information can lead to inappropriate personnel decisions. Ensuring fair opportunity, accurate performance appraisal will ensure internal placement decisions are taken without discrimination.

Apron Movement Control (AMC)

Based on the regulation of the General of Civil Aviation Number KP 038 of 2017 concerning Apron Management Service. Apron Movement Control is the unit tasked with determining the aircraft parking stand after receiving the estimated time from the ATC unit. When determining the aircraft parking stand, the Apron Movement Control (AMC) unit must coordinate with the Airline or the Operator so that the loading and unloading process can run smoothly. After that, the Apron Movement Control (AMC) unit immediately provided information to the ATC unit. In general, the Apron Movement Control (AMC) unit is an Airport Service unit whose role is in monitoring all movements on the apron, which includes the placement of aircraft parking stands, traffic of people, vehicles, regulation and supervision of Ground Handling or Ground Support Equipment, as well as data administration. airside flights and also permitting vehicles operating on the apron.

AMC Standard Operating Procedures

Standard Operating Procedures are a series of procedures that must be owned by an agency or company, which is used as a guide in achieving the desired results. According to Ekotama (2015) Standard Operating Procedures are a system created to facilitate, tidy up and publish work. In this system contains the sequence of processes of doing work from start to finish. Meanwhile, Tambunan (2013) believes that Standard Operating Procedures are written documents that contain complete, gradual, regular, and systematic work procedures. SOP (Standard Operating Procedures) within the company can ensure that every action or decision taken can run effectively and efficiently in accordance with the main objectives that have been made by the company. According to Tathagati (2014) Standard Operating Procedures or what is known as "procedure" is a clearer and more detailed document to describe the methods used in implementing and carrying out organizational policies and activities as stipulated in the guidelines. Every company is required to have a Standard Operating Procedure because it is a guideline for how a company will carry out the process of a work function that can run well, can be a reference when finding things that are not optimal, in this case, are not effective and efficient.

Relevant Research

Table 1. Relevant Research Results

No	Name	Title	Year	Result
1.	Muhammad Fajrin	Analysis of the performance of the Apron Movement Control Unit for Safety at Husein Sastranegara International Airport	2020	All operational tasks carried out by the AMC unit are closely related to safety. The AMC unit at Husein Sastranegara International Airport has a major role as airside operations in conducting surveillance on the air side to prevent ground collisions. this shows that the performance created by the AMC unit is good and has an impact on safety in airside operational activities.
2.	Dhimas Dwiki Ian	The role of Apron Movement	2021	The role of the Apron Movement Control (AMC) unit officers at the Tunggal Wulung Cilacap Airport is in

	Adrian	Control (AMC) officers in supervising flight activities to support the safety of the air side of the Tunggul Wulung Cilacap Airport.		accordance with the SOP and Minister of Transportation regulation No. PM 36 of 2017 concerning job maps and job descriptions within the Directorate General of Civil Aviation. The obstacle at the Tunggul Wulung Cilacap Airport is the act of having markings/signs guiding the line of trainer aircraft from the flying school. This causes a buildup of aircraft queues that will park on the apron and for a solution to this obstacle, Apron Movement Control (AMC) officers go directly to the field to arrange the parking of training aircraft without neglecting safety.
3.	Shofiana Syam	The Effect of Work Effectiveness and Efficiency on Employee Performance at the East Banggae District Office	2020	<ol style="list-style-type: none"> 1. There is a significant effect of effectiveness on employee performance at the Banggae Timur District Office, partially. 2. There is a significant effect of work efficiency on employee performance at the East Banggae District Office, partially. 3. There is a significant influence between work effectiveness and efficiency on employee performance at the Banggae Timur sub-district office simultaneously. <p>These results indicate that the values of these two variables affect the achievement of optimal employee performance.</p>

Hypothesis

The hypothesis is a conjecture or temporary answer in this study aims to determine whether there is an effect of efficiency and effectiveness on the performance of Apron Movement Control (AMC) in supervising aircraft movements on the apron of Sultan Thaha Jambi Airport. Provisional estimates for the results of this study are:

H01 : There is no effect of efficiency on AMC performance

Ha1 : There is an effect of efficiency on AMC performance

H02 : There is no effect of effectiveness on AMC performance

Ha2 : There is an effect of effectiveness on AMC performance

RESEARCH METHODS

Research Design

In this study the method used is to use quantitative research. As explained by Sugiyono (2019) that quantitative research is research based on the philosophy of positivism, used to examine certain populations or samples, data collection uses research instruments, data analysis is quantitative/statistical in nature, with the aim of testing established hypotheses.

Population

According to Sugiyono (2019) population is a generalization area which consists of: objects/subjects that have certain quantities and characteristics determined by researchers to study and then draw conclusions. The population in this study are all units that work with Apron Movement Control (AMC) with the aim of supervising the movement of aircraft so that nothing hinders the movement of the aircraft.

Sample

According to Sugiyono (2019) the sample is part of the number and characteristics possessed by the population. The sampling procedure used in this research is non-probability

with purposive sampling technique. Sugiyono (2019) suggests that the purposive sampling technique is a sampling technique with certain considerations. The consideration used was that the sample was taken from employees who worked for more than two months at Sultan Thaha Saifuddin Airport, Jambi. In determining the sample, Sugiyono (2019) suggests that an appropriate sample size in research is between 30 and 500. If the research is to carry out multivariate analysis (correlation or multiple regression), then the number of sample members is at least 10 times the number of variables studied. In this study, the samples to be taken were 40 employees who worked on the airside of Sultan Thaha Saifuddin Airport, Jambi.

Research Instruments

According to Sugiyono (2019) research instruments are measuring tools such as questionnaires, interview guidelines and observation guidelines used to collect data in a study. The instrument used in quantitative research with primary data is a questionnaire, which will be filled in from a portion of the population selected as the sample. Sugiyono (2019) stated that data collection techniques are the most important step in research to obtain data. The technique used in this study namely:

1. Questionnaire. According to Sugiyono (2019) a questionnaire is a data collection technique that is carried out by giving questions or statements to respondents to answer. The instrument used in this study was a closed questionnaire in which the answers were provided so that the respondents only had to choose.
2. Observation. Sugiyono (2019) suggests that observation is a complex process, a process composed of various biological and psychological processes. Two of the most important are the processes of observation and memory. Data collection techniques by observing the performance of duties and responsibilities of the related Apron Movement Control (AMC) unit, with standard operating procedures (SOP) monitoring the movement of aircraft on the apron.
3. Likert scale. According to Sugiyono (2019) the Likert scale is used to measure attitudes, opinions, and perceptions of a person or group of people about social phenomena. The questionnaire distributed in this study is by using a Likert scale.

RESEARCH RESULTS AND DISCUSSION

Effect of Efficiency (X1) on AMC Performance (Y)

Based on the results of the research that has been tested, the results show that Ha1 is accepted and H01 is rejected, namely the efficiency variable has a significant effect on the performance variable. Thus the hypothesis is accepted, which means that the efficiency variable affects the performance of Apron Movement Control (AMC) in supervising the movement of aircraft on the apron of Sultan Thaha Saifuddin Airport, Jambi. Efficiency is one of the important things in carrying out work where efficiency itself is the result of work in terms of quality and quantity achieved by an employee in carrying out their duties in accordance with the responsibilities given without reducing the results to be achieved such as the easiest, fastest, cheapest, lightest, and most efficient way. shortest. This is proven in hypothesis testing which can be seen in the results of the t test analysis shown in the following SPSS "Coefficients" output table.

Table 2. T Test Results

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

1	(Constant)	8.393	3.558		2.359	.024
	Efficiency	.127	.101	.289	2.257	.037
	Effectiveness	.364	.156	.350	2.328	.025
a. Dependent Variable: Performance						

Source: SPSS Test Results v25, 2023

In making a decision, it can be seen from its significant value, if the significance value is <0.05 then the hypothesis is accepted, which means that the independent variable has a significant effect on the dependent variable. Based on table 4.9 it is known that the significance value (Sig) of the efficiency variable is 0.037. Because the value of Sig. 0.037 $<$ probability of 0.05, it can be concluded that H_{a1} is accepted and H_{01} is rejected, namely the efficiency variable has a significant effect on the performance variable. Thus the hypothesis is accepted, which means that efficiency affects AMC performance in supervising aircraft movements on the apron.

In this variable, the highest questionnaire value from the answers of 40 respondents was in question X1.2 with a total of 138. Because in this question, there were more answers with the highest scale value, namely at number 4 with 20 respondents, 18 respondents chose the scale at number 3, and the remaining 2 respondents chose the scale at number 2. The number of respondents who voted strongly agreed with the statement that AMC officers coordinate with the ATC, Airline and Ground Handling units when planes arrive and depart as well as RTA/RTB and divert aircraft. Then this question item has the highest value in variable X1.

While the smallest value is found in question X1.6 with a total of 127, in this question, only 10 respondents answered with a scale value at number 4, 27 respondents chose the scale at number 3 where this scale was the most chosen by respondents, and the rest 3 respondents chose the scale at number 2. With the number of respondents choosing number 3 with the statement that AMC officers contacted the Briefing Office, Pertamina, Catering Service and others within 10 minutes of receiving the information. So it is this question item that has the smallest value in variable X1.

Effect of Effectiveness (X2) on AMC Performance (Y)

Based on the results of the research that has been tested, the results show that H_{a2} is accepted and H_{02} is rejected, namely the effectiveness variable has a significant effect on the performance variable. Thus the hypothesis is accepted, which means that the effectiveness variable affects the performance of Apron Movement Control (AMC) in monitoring the movement of aircraft on the apron of Sultan Thaha Saifuddin Airport, Jambi. Effectiveness is also important in carrying out work where effectiveness itself is a measure of success or failure in achieving the goals of an organization. If an organization achieves its goals then the organization has been running effectively. This is proven in hypothesis testing which can be seen in the results of the t test analysis shown in the following SPSS "Coefficients" output table.

Table 3. T Test Results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.393	3.558		2.359	.024
	Efficiency	.127	.101	.289	2.257	.037
	Effectiveness	.364	.156	.350	2.328	.025
a. Dependent Variable: Performance						

Source: SPSS Test Results v25, 2023

In making a decision, it can be seen from its significant value, if the significance value is <0.05 then the hypothesis is accepted, which means that the independent variable has a significant effect on the dependent variable. Based on table 4.10, it is known that the significance value (Sig) of the efficiency variable is 0.025. Because the value of Sig. 0.025 $<$ probability of 0.05, it can be concluded that Ha2 is accepted and H02 is rejected, namely the effectiveness variable has a significant effect on the performance variable. Thus the hypothesis is accepted, which means that effectiveness affects AMC performance in monitoring aircraft movements on the apron.

In this variable, the highest questionnaire value from the answers of 40 respondents was in question X2.2 with a total of 151. Because in this question, there were more answers with the highest scale value, namely at number 4 with 31 respondents, 9 respondents chose the scale at number 3. With the number of respondents who chose to strongly agree with the statement that AMC officers were able to carry out direct supervision swiftly when more than 3 aircraft entered the apron. Then this question item had the highest value in variable X2.

While the smallest value is in question X2.1 with a total of 143, in this question, 25 respondents answered with a scale value at number 4, 13 respondents chose the scale at number 3, and the remaining 2 respondents chose the scale at number 2. With a statement that AMC officers already understand what things are done when handling aircraft that are not served by Ground Handling and when pilots ask for help. So it is this question item that has the smallest value in variable X2.

Effect of Efficiency and Effectiveness on Performance

The characteristics of respondents who are influential based on gender are more dominated by men as much as 100%, for the characteristics of respondents who are influential based on age are more dominated by employees aged 26-45 years by 55% totaling 22 employees, for the characteristics of respondents based on length of work are more dominated by employees who worked > 1 year as much as 87.5%, totaling 35 employees. Seen from the SPSS "Model Summary" output table on the coefficient of determination test (R²) The results shown from the multiple linear regression equation are positive results between the variables efficiency, effectiveness and performance variables, which means efficiency and effectiveness affect performance, where the AMC unit performs efficiency and effectiveness in carrying out tasks to the fullest then the performance will be further increased. The following table proves the results of the R² test.

Table 4. Table of Determination Coefficient Test

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.866 ^a	.751	.729	1.621
a. Predictors: (Constant), Effectiveness, Efficiency				

Source: SPSS Test Results v25, 2023

Based on the table above, it can be seen that the R² value or the coefficient of determination solves the third formula with an R Square (R²) value of 0.751, meaning that the efficiency and effectiveness variables affect the performance of Apron Movement Control (AMC) by 75.1% while the remaining 24.9% is influenced by variables other than this regression equation or variables not examined in this study. The results of this study are supported by previous research conducted by Syam (2020) entitled Effects of Work Effectiveness and Efficiency on Employee Performance at the Banggae Timur District Office, in

this study it was stated that Work Efficiency and Effectiveness have a significant effect on Employee Performance.

CONCLUSION

The efficiency variable in this study has a significant effect on performance. This is proven from the partial T-test of the SPSS output table "Coefficients" which has a Significance (Sig) value of 0.037. Because the Sig value is $0.037 < \text{probability } 0.05$, it can be concluded that there is a significant effect of efficiency (X1) on performance (Y). The effectiveness variable in this study has a significant effect on performance. This is proven from the partial T-test of the SPSS output table "Coefficients" which has a Significance (Sig) value of 0.025. Because the Sig value is $0.025 < \text{probability } 0.05$, it can be concluded that there is a significant effect of effectiveness (X2) on performance (Y). Based on the results of the R2 test, the efficiency and effectiveness variables have an effect of 75.1% on the performance of Apron Movement Control (AMC) in monitoring the movement of aircraft on the apron, as evidenced by the results of the analysis of the coefficient of determination (R2) of 0.751. This states that the effect of efficiency and effectiveness on the performance of AMC in supervising aircraft movements on the apron is 75.1% while the remaining 24.9% is influenced by other variables outside the regression equation or variables not examined in this study.

Based on the research results and conclusions above, the suggestions that can be put forward by researchers are as follows: For the AMC unit, based on the results of this study, it is known that the coefficient of determination/R Square is 0.751 or equal to 75.1%. This figure means that the efficiency and effectiveness variables together influence the performance variable by 75.1%. While the remaining 24.9% is influenced by other variables outside the regression equation or variables that are not examined. So it can be said that AMC's performance in supervising aircraft movements on the apron is influenced by the efficiency and effectiveness assessed by units that work with AMC in supervising aircraft movements on the apron. And it would be nice for the AMC unit to also see how competency, culture, motivation, work environment and others besides the variables above because there are still 24.9% in this study are influenced by other variables. For further research, future research is expected to be able to add independent variables such as competence, culture, motivation, work environment and others to see further their influence on the performance of the AMC unit.

BIBLIOGRAPHY

- Adrian, Dhimas Dwiki Ian. 2021. Peran Petugas Apron Movement Control (AMC) Dalam Pengawasan Aktivitas Penerbangan Untuk Menunjang Keselamatan Sisi Udara Bandar Udara Tunggul Wulung Cilacap. Program Studi D-IV Manajemen Transportasi Udara Sekolah Tinggi Teknologi Kedirgantaraan, Yogyakarta.
- Arisandi, Suci. 2018. Efektivitas dan Efisiensi Pelaksanaan Anggaran Belanja Dinas PU Bina Marga dan Pengelolaan Sumber Daya Air Kota Palembang Tahun 2012-2015. Akuntansi. Fakultas Ekonomi. Universitas Sriwijaya.
- Ekotama, S. 2015. Pedoman Mudah Menyusun SOP. MedPress. Yogyakarta.
- Fajrin, Muhammad. 2020. Analisis kinerja unit Apron Movement Control Terhadap Safety di Bandar Udara Internasional Husein Sastranegara. Program Studi D-IV Manajemen Transportasi Udara Sekolah Tinggi Teknologi Kedirgantaraan, Yogyakarta.
- Ghozali, Imam. 2018. Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25. Badan Penerbit Universitas Diponegoro.

- Gibson, Et al. 2013. Organisasi. Elangga. Jakarta.
- Handoko, T.Hani. 2013. Manajemen. Rahma. Jakarta Pusat.
- ICAO Annex 14 Volume 1. 2009. Aerodrome Design And Operations, Fifth Edition.
- Ilyas, Yasis. 2014. Kinerja teori, Penilaian dan Penelitian. Jakarta.
- Mardiasmo. 2017. Efisiensi dan Efektivitas. Andy. Jakarta.
- Peraturan Direksi Nomor PD.01.01/08/2018/0070 Tanggal 13 Agustus 2018. Formasi Personel Airside Operation. Nomenclatur Unit Apron Movement Control. 2018. Jambi
- Peraturan Direktur Jenderal Perhubungan Udara Nomor KP 326 Tahun 2019 Standar Teknis dan Operasional Peraturan Keselamatan Penerbangan Sipil Bagian 139 (Manual Of Standard CASR Part 139) Volume I Bandar Udara (Aerodorme). 12 Desember 2019. Pusat Data dan Informasi Kementerian Perhubungan Republik Indonesia Tahun 2019. Jakarta
- Putra, Komang Satria Mahendra. 2021. Analisis kinerja unit apron Movement Control (AMC) terhadap pangaasan operasional Ground Support Equipment Di Bandar Udara International I Gusti Ngurah Rai Bali. Program Studi D-IV Manajemen Transportasi Udara Sekolah Tinggi Teknologi Kedirgantaraan, Yogyakarta.
- Robbins, Stephen P. 2016. Perilaku Organisasi. Salemba Empat. Jakarta
- Soekartawi. 2015. Teori Ekonomi Produksi. Rajawali Pers. Jakarta
- Standar Operating Procedure Apron Movemen Control Nomor AOA0/12/2022/001 Tahun 2022. Pengawasan Pergerakan Pesawat Di apron. 10 Maret 2022. Jambi.
- Sugiyono. 2019. Metode Penelitian Kuantitatif Kualitatif dan R&D. Alfabeta. Bandung.
- Syam, Shofian. 2020. Pengaruh Efektifitas dan Efisiensi Kerja Terhadap Kinerja Pegawai Pada Kantor Kecamatan Banggae Timur. Politeknik Informatika Nasional. Makassar.
- Tambunan, R. M. 2013. Standard Operating Procedures (SOP). Maestas Publishing. Jakarta.
- Tathagati, Arini. 2014. Step by Step Membuat SOP Standard Operating Procedure. Efata Publishing. Jakarta
- Undang-Undang Republik Indonesia Nomor 1 Tahun 2009 Tentang Penerbangan. 12 Januari 2009. Lembaran Negara Republik Indonesia Tahun 2009 Nomor 4956. Jakarta.
- Yusuf, A.Muri. 2017. Metode Penelitian: Kuantitatif, Kualitatif, Dan Penelitian Gabungan. Kencana. Jakarta.