

# THE IMPACT OF WORK MOTIVATION AND AVAILABILITY OF TRAINER AIRCRAFT AS DETERMINANTS OF FLYING HOUR PRODUCTION (CASE STUDY AT THE INDONESIA AVIATION POLYTECHNIC CURUG)

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## Abstract

Investigating the connection between work motivation and the availability of training aircraft presents an unprecedented chance to study the way psychological and physical factors interact to determine how many hours of flight a person can produce. This research aims to comprehensively explore the connection between work motivation and the availability of training aircraft on the volume of flying hours. A qualitative method that employs a case study approach with a purposive sampling strategy will be employed to select 32 participants who are directly involved in the training of pilots and have a connection to the utilization of aircraft for this purpose. The results of this study indicate that work motivation and the availability of training aircraft have a significant impact on the total amount of flying time. The motivation of work and the availability of flight training both have an effect on the number of hours of flying, the availability of flight training is the most significant component of this increase.

**Keywords:** Work Motivation, Availability, Training Aircraft, Flying Hour Production.

## INTRODUCTION

Indonesia Aviation Polytechnic Curug is a organization that has a significant impact on the education of potential aviation professionals. As part of their training, students participate in practical flying sessions that are crucial to the development of their abilities. The volume and quality of flight hours is indirectly affected by the preparedness of the aviation industry in the Curug Regency area, Tangerang Province (Sonhaji, 2022) which is a formal aviation education program associated with the government.

Job satisfaction has a significant impact on commitment and performance. Motivation can come from multiple sources, including job satisfaction, incentives, working conditions, and personal goals of excellence. High levels of motivation can have a positive effect on the effectiveness of training programs, this is because students will receive a comprehensive and beneficial education as a result. The desire to work in the aviation industry, specifically for pilots and flight instructors, is a complex phenomenon that is attributed to multiple factors. These causes can include personal goals and professional aspirations, as well as more intrinsic reasons like a love of flight and the enjoyment of developing abilities. Understanding what inspires people in the aviation industry is important, this is because of the indirect effect it has on performance, learning and the amount of time spent. Motivational theories, such as Maslow's Hierarchy of Needs, Herzberg's Two-Factor Theory, and Deci and Ryan's Self-Determination Theory, can be utilized to understand these aspects in greater detail. Work motivation has been shown to have an effect on the way employees are

affected by environmental factors (Trépanier, et. al., 2020). Today, with the latest technology and in the pursuit of reducing the human resources of the aviation industry, it is technically possible for only one pilot to be on a commercial aircraft (Qinbiao, et. al., 2024).

From a practical perspective, the availability of training aircraft is important to the operation of schools that specialize in aviation or other organizations that possess a fleet of aircraft. This includes the number of aircraft and the degree to which flight readiness is measured based on the maintenance schedule, the efficiency of the repair and overhaul process, and the management of spare parts. The greater the number of aircraft that are available for training, the greater the number of people who will take flight hours. However, the availability of aircraft is also contingent on logistics, financial and regulatory issues that can be significant obstacles. The availability of training aircraft is dependent on the number of hours of flight per person. Aircraft training is essential to practical flight training, as it facilitates the practical application of theoretical knowledge in a real-world setting. The volume and condition of these aircraft has an effect on the frequency and quality of flight sessions. Adequate supplies are provided that provide students with enough time to fly without having to take too many breaks, however, limited supplies can negatively affect their development and the overall value of the training program.

Other than that, the manner in which flight training is conducted must be considered. This safety concern is primarily centered around the safety concerns of aviation. Other aspects of aviation safety are not solely responsible for a single individual, but instead are a collaboration between all parties involved: people, equipment and procedures (Widagdo, et. al., 2023). Investigating the link between work motivation and the availability of training aircraft provides an unprecedented opportunity to study the way psychological and physical factors interact in order to determine the maximum number of hours of flight that can be produced by a person. Despite the decades of study dedicated to teams, there is still ambiguity regarding the behavior of motivation in teams and the development of team-level motivation (Grenier and O'Neill, 2024). For example, high-endurance training and motivation can mitigate the negative effects of having a limited number of aircraft by utilizing resources more sparingly. Conversely, high aircraft availability can have a significant impact on the total number of flight hours if the employees' motivation is not addressed.

## **METHODS**

This research employs a qualitative method that involves the case study approach. Case studies are beneficial if the researcher wishes to comprehend a particular issue or situation in great detail and have the capacity to identify events that are rich with information, have a significant impact on a larger problem, and are typically studied through numerous examples of the phenomenon and its questions (Assyakurrohim, et. al., 2023).

A technique of purposive sampling will be employed to choose participants who are directly involved in the training of pilots and have a connection to the utilization of aircraft for the purpose of training. This approach guarantees that participants understand the causes of the production of flight hours. This time, participants were chosen from the operations and maintenance department of the aircraft, which had a total of 32 individuals.

A formal survey will be conducted to gauge the degree to which participants' work passion and attitudes towards the availability of aircraft training will be assessed. The survey will also take data on the number of hours of production. Regression Analysis, this method is employed to determine the association between work motivation and the availability of training aircraft (the independent variable), as well as the effect of flight hours on the dependent variable. This will facilitate the identification of the magnitude and orientation of this association.

**Table 1: Questionnaire Sheet**

No.	Aspect	Question	
1	Work Motivation	a.	I'm happy to have the ability to complete difficult jobs and achieve goals.
		b.	I'm able to utilize my abilities and act on my own.
		c.	I'm able to assume all of the responsibility.
		d.	I'm prepared to devote extra time if my job isn't completed on time.
		e.	The roles and responsibilities of the leadership are appropriate for my education and talents.
2	Availability of Trainer Aircraft	a.	My job is to follow goals and complete projects in accordance with the company's quality standards.
		b.	I accomplish the task professionally and thoroughly in accordance to the company's volume.
		c.	I have a dedicated approach despite the lack of a superior to observe me.
		d.	I'm enthusiastic about my job.
		e.	I can collaborate with my fellow employees and my supervisor.
3	Flying Hour Production	a.	The quality of my efforts is commensurate with expected standards.
		b.	The volume of my efforts is commensurate with pre-established norms.
		c.	I have a thorough approach to completing every task.
		d.	I have a high degree of punctuality in completing every task.
		e.	The atmosphere that I operate in is enjoyable.

The Likert scale is a beneficial instrument that can be employed to gauge the attitudes, perceptions and opinions of individuals or communities regarding a particular subject (Prayitno, et. al., 2023). This scale has two separate parts: positive questions that celebrate positive aspects, and negative questions that criticize negative aspects (Prayitno, et. al., 2024).

**Table 2: Likert Scale Responses Derived from Questionnaires**

No.	Descriptions	Score
1	Complete agreement	5
2	Agree	4
3	Neutral	3
4	Don't concur	2
5	strongly disagree	1

Multiple linear regression is employed to evaluate the association between multiple independent and dependent variables. The distinction between simple and multiple linear regression is based on the number of variables (Herlina, 2019).

## RESULTS AND DISCUSSIONS

### *Job Motivation*

Motivation is the desire to devote oneself to labor, for example, a significant salary, supportive leadership, sufficient space for work, a pleasant environment, and comfortable colleagues. (Jufrizen, 2021). The motivation of work in the aviation industry, specifically for pilots and flight instructors, is a complex phenomenon that is

influenced by multiple factors. These can be goals of a personal as well as professional nature. Importantly, the larger motivation literature demonstrates that each form of motivation has different effects (Smith, et. al., 2023).

Work motivation is a catalyst for enthusiasm or productivity. Inspiration causes people to engage in behavior that is intended to achieve specific goals (Sulila, 2019). The reported frequency and intended future value of knowledge sharing are both positively associated with the degree of cognitive work stress and job autonomy, respectively (Gagne, et. al., 2019).

### ***The Training of Aircraft***

According to the Civil Aviation Safety Regulation's Part 1, a training aircraft is any aircraft that is supported by the atmosphere other than the response of the atmosphere to the earth's surface. As the aviation industry seeks to minimize environmental impacts, including the entire life cycle, is essential for the industry's sustainable development (Rahn, et. al., 2024).

### ***Volunteer Hour of Production***

According to the Civil Aviation Safety Regulation Part 1, the number of production flight hours is the total duration from the time the aircraft first moves with the intention of taking off until it finally stops during flight.

### ***Discussing the Results of the Analysis using SPSS***

The participants' data was gathered through surveys that we sent them. Then, the information was collected by researchers using SPSS software.

**Table 3: The Calculated Results of the Model<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.465 <sup>a</sup>	.216	.162	.625
a. Predictors: (Constant), Availability of Trainer Aircraft (X2), Work Motivation (X1)				
b. Dependent Variable: Flying Hour Production (Y)				

This table describes the correlation between various variables. R is a simple direct relationship between Work Motivation (X1), the availability of training aircraft (X2), and the number of hours of flying per day (Y). With an R value of 0.465, it demonstrates a moderate or positive association between work motivation and the availability of training aircraft. The R<sup>2</sup> value is 0.216 or 21.6%, which means that the variable responsible for the work motivation and the availability of training aircraft together contribute to the increase or decrease in the total amount of flying hours produced by the variable, the remainder is affected by other variables that are not considered.

**Table 4: The Results of the ANOVA Test<sup>a</sup>**

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.125	2	1.562	3.994	.029 <sup>b</sup>
	Residual	11.344	29	.391		
	Total	14.469	31			
a. Dependent Variable: Flying Hour Production (Y)						
b. Predictors: (Constant), Availability of Trainer Aircraft (X2), Work Motivation (X1)						

The outcomes of simultaneous hypothesis testing demonstrate that the influence of variables on motivation and the availability of training aircraft has a significant value of  $0.029 < 0.05$  and has a  $F_{\text{Calculate}} \text{ of } 3.994 > F_{\text{Table}} \text{ } 3.09$ , which means that  $H_0$  is denied and  $H_a$  is admitted, which means that the variable of interest is the availability of

training aircraft. The training of aircraft. The quantity of flying hours is identical to the creation of flying hours.

**Table 5: The Results of the Calculations are Displayed<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.082	4.296		3.045	.005
	Motivasi Kerja (X1)	-.068	.170	-.067	-.402	.049
	Ketersediaan Pesawat Latih (X2)	.437	.155	.472	2.825	.008
a. Dependent Variable: Flying Hour Production (Y)						

From the equation, it's apparent that the importance of the work motivation variable (X1) is 0.049 (sign < 0.05). From the equation, it's apparent that the influence of the work motivation variable (X1) on the generation of flying hours is significant. In the variety of available training aircraft that is variable (X2), a significance value of 0.008 (sig < 0.05) was achieved, which means that the variety of available training aircraft had a significant impact on the production of flight hours.

## CONCLUSIONS

In this study, data was gathered through surveys distributed to participants. These data were then analyzed using SPSS software. Data analysis demonstrates that there is a positive association between work motivation, the availability of training aircraft, and the production of flight hours. Those variables that influence the creation of flying hours have a combined influence of 21.6%, the remainder are influenced by other variables that are not considered.

The outcomes of hypothesis testing demonstrate that the availability of training aircraft has a significant impact on flight hours and motivation for work. This is illustrated by a p value that is smaller than 0.05 and a higher frequency count that is greater than the table's frequency count. As a result, the number of different aircraft that can be trained is the primary concern in this research.

Ultimately, work motivation and the availability of training aircraft have a significant impact on the production of flying hours. Work motivation and the availability of flight training both have an effect on the increase in the number of flying hours, the availability of flight training being the most significant component of this increase.

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