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The Influence of Career Development and Job Satisfaction on Employee Productivity at PT Angkasa Pura Indonesia at Soekarno-Hatta Airport

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Abstract*: Employee productivity is one of the important aspects in supporting organizational effectiveness, especially in service companies that require optimal service quality. This study aims to analyze the influence of career development and job satisfaction on employee productivity of PT Angkasa Pura Indonesia at Soekarno-Hatta Airport. The study uses a quantitative approach with an associative research type. The study population was 162 employees with a sample of 116 respondents determined using purposive sampling and the Slovin formula. The research instrument was a questionnaire, while data analysis used SPSS version 26 through validity, reliability, classical assumptions, linear regression, correlation coefficient, determination coefficient, t-test, and F-test. The results showed that career development had a positive and significant effect on employee productivity with a calculated t of 6.265 and a significance of 0.000. Job satisfaction also had a positive and significant effect with a calculated t of 5.530 and a significance of 0.000. Simultaneously, both variables had a positive and significant effect with a calculated F of 78.146 and a significance of 0.000, and explained 58.1% of the variation in productivity. In conclusion, increasing career development and job satisfaction together can increase employee productivity.*

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Introduction

Human resources are a crucial asset within an organization because they play an important role in achieving company goals, including productivity, efficiency, and the realization of organizational vision and mission. Organizational success is largely determined by the ability to manage human resources effectively and efficiently, as employee quality is closely related to productivity (Idrus et al., 2023). In an increasingly competitive business environment, employee productivity is an important indicator of organizational performance. High productivity can contribute to increased profits, cost efficiency, and a positive work ethic, while also providing opportunities for employee promotion and personal development (Nur Muhammad Ali Wildani et al., 2024). Therefore, organizations need to pay

attention to factors associated with employee productivity, including career development and job satisfaction.

This issue is particularly relevant to PT Angkasa Pura Indonesia at Soekarno-Hatta Airport, where operational activities and public services require employees to maintain adequate productivity. The high volume of passenger and flight activities makes effective human resource management essential for supporting service quality and organizational effectiveness. In this context, career development and job satisfaction are two relevant factors to examine because they concern employees' opportunities for professional growth and their perceptions of various aspects of their work. Understanding the relationship between these factors and employee productivity can provide an empirical basis for evaluating human resource management practices in the organization.

Preliminary surveys involving 30 employees indicated potential problems in employee productivity, career development, and job satisfaction. Regarding employee productivity, the survey results showed that an average of 40.02% of respondents agreed with the statements presented, while 59.98% disagreed. The disagreement percentages were 53.3% for work ability, 63.3% for improvement in work results, 63.3% for work enthusiasm, 66.7% for self-development, and 53.3% for efficiency. These percentages represent the proportions of the 30 preliminary survey respondents who expressed disagreement with the relevant statements. The findings suggest that some employees perceived shortcomings in these productivity-related aspects, indicating the need for further investigation. Career development also presented potential concerns, with an average agreement rate of 22.02% and a disagreement rate of 77.98%. The survey covered fair treatment in career development, supervisors' concern, information about promotion opportunities, opportunities for promotion, and satisfaction with career development. These preliminary findings suggest that employees' perceptions of career development opportunities may be an issue relevant to their productivity. In line with this concern, Nugraha and Hartanto (2021) found a positive relationship between career development and employee productivity, whereas Fauzi and Lestari (2021) reported that career development did not always have a significant relationship with productivity, particularly in the transportation sector. The difference between these findings indicates that the relationship between career development and employee productivity may vary across organizational contexts and warrants further empirical examination.

Job satisfaction is another factor that may be associated with employee productivity because it reflects employees' evaluations of their work, compensation, relationships with colleagues and supervisors, career opportunities, and working conditions. The preliminary survey of 30 employees showed that an average of 30% agreed with the job satisfaction statements, while 70% disagreed. These results indicate potential concerns regarding the suitability of work assignments to employee abilities, salary and benefits, workplace relationships, opportunities for career development, and the comfort of the working environment. Although these findings provide an initial indication of employee perceptions, they do not independently establish a statistical relationship between job satisfaction and productivity. Furthermore, the relationship between job satisfaction and productivity needs to be examined alongside career development to determine whether both variables are statistically associated with productivity when considered together. Thus, the preliminary survey provides an empirical reason to investigate these relationships within the organizational context of PT Angkasa Pura Indonesia at Soekarno-Hatta Airport.

Previous research has examined career development and job satisfaction in relation to employee outcomes, but the findings concerning career development and productivity have not been consistent. Nugraha and Hartanto (2021) reported a positive relationship, whereas Fauzi and Lestari (2021) found that the relationship was not always statistically significant. This inconsistency provides a research gap that requires further examination. In addition, the preliminary survey identifies potential concerns in all three variables among employees at PT Angkasa Pura Indonesia at Soekarno-Hatta Airport. The present study addresses this gap by examining career development and job satisfaction both individually and simultaneously in relation to employee productivity within this organizational setting. Its contribution lies in integrating the two independent variables into one empirical model and examining their relationships with productivity using data collected from employees in the airport service environment, rather than claiming novelty solely on the basis of the research location.

Based on the identified research problem and research gap, this study aims to analyze the relationship between career development and employee productivity, examine the relationship between job satisfaction and employee productivity, and determine the simultaneous relationship of career

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development and job satisfaction with employee productivity at PT Angkasa Pura Indonesia at Soekarno-Hatta Airport. Using a quantitative approach, this study is expected to provide empirical evidence regarding the individual and combined relationships of these variables. The findings may also serve as a consideration for management in evaluating career development practices and employee job satisfaction as part of efforts to support employee productivity and service quality.

Research methods

This study uses an associative research method with a quantitative approach. Associative research is used to determine the influence or relationship between two or more variables (Sugiyono, 2023). A quantitative approach is used to examine a specific population or sample by collecting data using research instruments and analyzing the data quantitatively or statistically to test predetermined hypotheses (Sugiyono, 2023). This study uses an empirical quantitative method because the research findings are obtained through statistical procedures or other means related to quantification or measurement (Sujarweni, 2020). The study was conducted at PT Angkasa Pura Indonesia at Soekarno-Hatta Airport, Tangerang, Banten, with a focus on analyzing the influence of career development and job satisfaction on employee productivity.

The research instrument was a questionnaire used to obtain data on career development, job satisfaction, and employee productivity. Primary data collection was conducted through observation and distribution of questionnaires to employees of PT Angkasa Pura Indonesia at Soekarno-Hatta Airport. The research instrument was compiled based on indicators of each variable, namely career development which includes fair treatment in career, concern from direct superiors, information about various promotion opportunities, interest in being promoted, and level of career satisfaction; job satisfaction which includes satisfaction with the job itself, salary and benefits, relationships with coworkers and superiors, career development opportunities, and comfortable working conditions; and employee productivity which includes ability, improving results achieved, work enthusiasm, self-development, and efficiency.

Data analysis was carried out using SPSS version 26. The analysis stages include descriptive analysis, validity test, reliability test, classical assumption test consisting of normality test, multicollinearity, autocorrelation, and heteroscedasticity, then simple linear regression analysis and multiple linear regression, correlation coefficient, determination coefficient, and hypothesis testing through t test and F test. The normality test uses the Kolmogorov-Smirnov method, while the reliability test uses Cronbach's Alpha.

The study population was 162 employees of PT Angkasa Pura Indonesia at Soekarno-Hatta Airport. The sample was determined using probability sampling with a purposive sampling approach. Purposive sampling is used based on certain considerations and criteria according to the research needs (Sugiyono, 2023). The sample size was determined using the Slovin formula with a 5% error rate. Based on this calculation, the value obtained was 115.30, which was then rounded up to 116 respondents.

The research was conducted in stages, starting from proposal preparation and title determination, proposal registration, proposal seminar, proposal revision based on input obtained, submission of thesis guidance, thesis guidance, and the defense. After the proposal was prepared and refined, the researcher prepared the research instruments used to collect data. Primary data was then obtained through observation and distribution of questionnaires to employees who became research respondents. The collected data were then processed using SPSS version 26 through the stages of descriptive analysis, instrument testing, classical assumption testing, regression analysis, correlation analysis, coefficient of determination, and hypothesis testing to determine the effect of career development and job satisfaction on employee productivity.

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Results and Discussion

Respondent Characteristics

Table 1. Characteristics Based on Gender

Age Range	Amount	Percentage
Man	64	55.2%
Woman	52	44.8%
Total	116	100%

Source: Data processed with SPSS version 26.0 (2026)

Based on the data above, it can be seen that the majority of respondents were male, at 64 (55.2%), while the majority of respondents were female, at 52 (44.8%). Therefore, it can be concluded that the majority of employees in this study were male, at 64 (55.2%).

Table 2. Characteristics Based on Age

Age Range	Amount	Presentation
20 – 30 years	51	44%
30 – 40 years	38	32.8%
40 – 50 years	27	23.3%
Total	116	100%

Source: Data processed with SPSS version 26.0 (2026)

Based on the data on respondent characteristics based on age, it is known that of the total 116 respondents who were the object of the study, the majority were in the 20–30 years age range, namely 51 people or 44%. Furthermore, respondents aged 30–40 years numbered 38 people or 32.8%, while respondents aged 40–50 years numbered 27 people or 23.3%. Based on this distribution, it can be concluded that the majority of respondents in this study were in the 20–30 years age group, so that this age group dominated the characteristics of the respondents studied.

Table 3. Respondent Characteristics Based on Education

Education	Amount	Presentation
High School/Vocational School	22	19%
D3	40	34.5%
S1	54	46.6%
Total	116	100%

Source: Data processed with SPSS version 26.0 (2026)

Based on Table 3, it can be seen that of the 116 respondents who were the objects of the study, respondents with a high school/vocational school education level numbered 22 people or 19%, respondents with a D3 education numbered 40 people or 34.5%, and respondents with a bachelor's degree education numbered 54 people or 46.6%. From these data, it can be concluded that the majority of respondents in this study had a bachelor's degree, namely 54 people, or 46.6% of the total respondents. This indicates that the majority of employees have a bachelor's degree, which supports the implementation of their duties and responsibilities.

Table 4. Respondent Characteristics Based on Length of Service

Length of work	Amount	Presentation
15 years	53	45.7%
5 – 10 years	36	31%
10 – 15 years	27	23.3%
Total	116	100%

Source: Data processed with SPSS version 26.0 (2026)

Based on Table 4, it can be seen that of the 116 respondents who were the object of the study, the majority had a work period of 1–5 years, namely 53 respondents (45.7%). Furthermore, respondents with a work period of 5–10 years numbered 36 respondents (31%), while respondents with a work period of 10–15 years numbered 27 respondents (23.3%). From this data, it can be concluded that the majority of respondents in this study had 1–5 years of service. This indicates that most employees are still in the mid-career category and have sufficient experience in carrying out their duties and understanding the company's work environment.

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Table 5. Respondent Response Interval Table

ReipotatoesScale	Keiteicriteria / criteria	Abbreviated
1.00 – 1.79	Strongly Disagree / Strongly Disagree	STS / STB
1.80 – 2.59	NoSeituju / NoGood	TS / TB
2.60 – 3.39	Not enoughSeituju / Not enoughGood	KS / KB
3.40 – 4.19	Seitgood / good	S/B
4.19 – 5.00	VerySeituju / VeryGood	SS / SB

Source: Sugiyono (2020)

Table 6. Respondents' Answers to Career Development Variable (X1)

No	Statement	Answer Options					Amount	Total	Mean Score	Note
		SS	S	KS	TS	STS				
		5	4	3	2	1				
1	I feel that I receive fair treatment in career development opportunities in the company.	36	52	21	4	3	116	462	3.98	B
2	I feel that I receive fair treatment in career development opportunities in the company.	36	51	23	4	2	116	463	3.99	B
3.	My boss shows interest in my career development.	34	58	19	4	3	116	466	4.01	B
4.	My boss gave me direction or input that helped my career develop.	44	42	23	5	2	116	469	4.04	B
5.	The company provides clear information regarding job promotion opportunities.	39	49	20	5	3	116	464	4.00	B
6.	I always get notified when there are career development opportunities.	38	51	21	2	4	116	465	4.09	B
7.	I feel the company provides space for employees who are interested in being promoted.	36	50	20	5	5	116	455	3.92	B
8.	The company considers employee interest and readiness in the promotion process.	44	46	19	5	2	116	473	4.07	B
9.	I am satisfied with my career development so far.	38	51	20	5	2	116	466	4.01	B
10.	My career has developed as expected while working at this company.	42	48	20	4	2	116	472	4.06	B
	Total	387	498	206	41	30	1,160	4,657	Average	
	Percentage %	33.9%	42.5 %	17.7 %	3.6 %	2.9 %	100 %	Average	3.93	B

Source: Processed data, 2026

The responses of 116 respondents indicate that Career Development (X1) is generally in the good category. The lowest score was found in statement number 7 in the interest in promotion indicator, which concerns the space the company provides for employees interested in pursuing promotions, with an average score of 3.92. This score is still considered good, but its lowest position indicates that the opportunity to express interest in promotions is not as strong as other aspects of career development.

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Table 7. Respondents' Answers to Job Satisfaction Variable (X2)

No	Statement	Answer Options					Friday lah	Total	Mean Score	Note
		SS	S	KS	TS	STS				
		5	4	3	2	1				
1	I feel that the job I am currently doing suits my abilities.	30	59	20	5	2	116	458	3.94	B
2.	I enjoy the tasks that are my daily responsibilities.	39	45	26	2	4	116	461	3.97	B
3.	I feel that the salary I receive is in accordance with my workload.	39	50	19	5	3	116	465	4.09	B
4.	The benefits provided by the company help increase my job satisfaction.	39	46	23	6	2	116	462	3.98	B
5.	I have a good working relationship with my coworkers.	37	46	24	5	4	116	455	3.92	B
6.	My boss builds positive work communication.	33	54	23	4	2	116	460	3.96	B
7.	I feel the company gives me the opportunity to grow.	34	52	20	8	2	116	456	3.93	B
8.	The career opportunities available make me more satisfied in my work.	42	44	25	2	3	116	468	4.08	B
9.	My work environment is comfortable to support productivity.	38	43	29	3	3	116	458	3.94	B
10.	The available work facilities help me work more effectively.	42	38	29	5	2	116	461	3.97	B
	Total	331	477	238	45	27	1,160	4,394	Average	
	Percentage %	28.8%	41.7 %	20.4 %	3.4 %	2.1 %	100 %	Average	3.79	B

Source: Processed data, 2026

The responses of 116 respondents indicate that Job Satisfaction (X2) is generally within the good criteria. The lowest score was found in statement number 5 in the relationship indicator with coworkers and superiors, which concerns good working relationships with coworkers, with an average score of 3.92. This value is still within the good criteria, but it indicates that the quality of relationships between employees is the aspect of job satisfaction that needs the most attention compared to other aspects.

Table 8. Respondents' Answers to Employee Productivity Variable (Y)

No	Statement	Answer Options					Friday lah	Total	Mean Score	Note
		SS	S	KS	TS	STS				
		5	4	3	2	1				
1	I am able to complete work according to the established standards.	20	87	6	1	2	470	116	4.05	B
2.	I can understand new tasks quickly.	9	91	14	1	1	454	116	3.91	B
3.	I always try to improve my work results from time to time.	42	70	2	1	1	499	116	4.48	SB
4.	I can meet the work targets set by the company.	7	63	40	4	2	417	116	3.59	B

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No	Statement	Answer Options					Friday lah	Total	Mean Score	Note
		SS	S	KS	TS	STS				
		5	4	3	2	1				
5.	I have high work enthusiasm when carrying out my duties.	10	83	21	1	1	448	116	3.86	B
6.	I stay motivated to work even when facing pressure.	19	86	9	1	1	469	116	4.04	B
7.	I actively participate in training or activities that support my work skills.	21	88	5	1	1	475	116	4.09	B
8.	I am trying to develop new skills to support my work.	55	53	6	1	1	508	116	4.37	SB
9.	I can finish the work on time.	36	76	2	1	1	116	479	4.25	B
10.	I use work resources effectively and efficiently.	32	70	12	1	1	116	479	4.12	B
	Total	251	767	137	13	12	1,160	4,772	Average	
	Percentage %	21.63%	61.8 %	11.8 %	1.12 %	1.3 %	100 %	Average	4.11	B

Source: Data processed with SPSS version 26.0 (2026)

The responses of 116 respondents indicated that Employee Productivity (Y) was generally considered good. The lowest score was found in statement number 4 of the indicator for improving results, which concerns employees' ability to meet company-set work targets, with an average score of 3.59. This score remains good, but indicates that achieving work targets remains the weakest aspect of productivity compared to other aspects.

Research Data Instrument Testing

Table 9. Results of the Validity Test of the Career Development Variable (X1)

No	Cakeisoner	r count	r table	Toleransi
1	I feel that I receive fair treatment in career development opportunities in the company.	0.813	0.182	Valid
2	I feel that I receive fair treatment in career development opportunities in the company.	0.792	0.182	Valid
3	My boss shows interest in my career development.	0.763	0.182	Valid
4	My boss gave me direction or input that helped my career develop.	0.781	0.182	Valid
5.	The company provides clear information regarding job promotion opportunities.	0.822	0.182	Valid
6.	I always get notified when there are career development opportunities.	0.804	0.182	Valid
7.	I feel the company provides space for employees who are interested in being promoted.	0.843	0.182	Valid
8.	The company considers employee interest and readiness in the promotion process.	0.850	0.182	Valid
9.	I am satisfied with my career development so far.	0.781	0.182	Valid
10.	My career has developed as expected while working at this company.	0.820	0.182	Valid

Source: Processed data, 2026.

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Based on the validity test results in the table above, all statement items in the career development variable (X1) showed a calculated r value > r table (0.215). This indicates that all questionnaire items are valid and suitable for use in research.

Table 10. Results of the Validity Test of the Job Satisfaction Variable (X2)

No	Cakeisoneir	r count	r table	Toiterangan
1	I feel that the job I am currently doing suits my abilities.	0.798	0.182	Valid
2	I enjoy the tasks that are my daily responsibilities.	0.766	0.182	Valid
3	I feel that the salary I receive is in accordance with my workload.	0.804	0.182	Valid
4	The benefits provided by the company help increase my job satisfaction.	0.814	0.182	Valid
5.	I have a good working relationship with my coworkers.	0.712	0.182	Valid
6.	My boss builds positive work communication.	0.774	0.182	Valid
7.	I feel the company gives me the opportunity to grow.	0.757	0.182	Valid
8.	The career opportunities available make me more satisfied in my work.	0.825	0.182	Valid
9.	My work environment is comfortable to support productivity.	0.823	0.182	Valid
10.	The available work facilities help me work more effectively.	0.802	0.182	Valid

Source: Processed data, 2026.

Based on the validity test results in the table above, all statement items in the job satisfaction variable (X2) showed a calculated r value > r table (0.215). This indicates that all questionnaire items are valid and suitable for use in research.

Table 11. Results of Validity Test of Employee Productivity Variable (Y)

No	Cakeisoneir	r count	r table	Toiterangan
1	I am able to complete work according to the established standards.	0.713	0.182	Valid
2	I can understand new tasks quickly.	0.646	0.182	Valid
3	I always try to improve my work results from time to time.	0.649	0.182	Valid
4	I can meet the work targets set by the company.	0.770	0.182	Valid
5.	I have high work enthusiasm when carrying out my duties.	0.568	0.182	Valid
6.	I stay motivated to work even when facing pressure.	0.619	0.182	Valid
7.	I actively participate in training or activities that support my work skills.	0.696	0.182	Valid
8.	I am trying to develop new skills to support my work.	0.715	0.182	Valid
9.	I can finish the work on time.	0.565	0.182	Valid
10.	I use work resources effectively and efficiently.	0.730	0.182	Valid

Source: Processed data, 2026.

Based on the validity test results in the table above, all statement items in the employee productivity variable (Y) showed a calculated r value > r table (0.182). This indicates that all questionnaire items are valid and suitable for use in research.

Table 12. Reliability Test Results

Reliability Statistics

Cronbach's Alpha	N of Items
.940	10

Reliability Statistics

Cronbach's Alpha	N of Items
.932	10

Reliability Statistics

Cronbach's Alpha	N of Items
.863	10

Source: Processed data, 2026. Bottom of Form

Based on the test results in the table above, it is known that the Career Development variable (X1) obtained a Cronbach's Alpha value of 0.940, the Job Satisfaction variable (X2) of 0.932, and the employee job satisfaction variable (Y) of 0.863. All of these variables are declared reliable because they have a Cronbach's Alpha value greater than 0.600. Thus, the research instrument used has met the reliability criteria and is suitable for use in collecting research data.

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Table 13. Results of Normality Test with Kolmogorov-Smirnov Test
One-Sample Kolmogorov-Smirnov Test

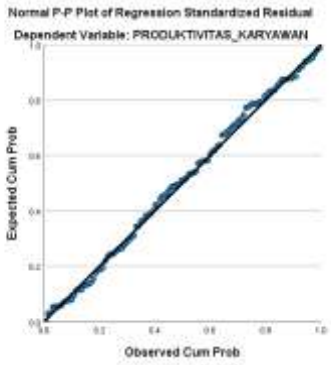
		Unstandardized Reisidual
N		116
Normal Parameiteirsa,b	Meian	.0000000
	Std. Deviation	2.75990957
Most EIxtremeD i f f e i r e i n c e i s	Absolute	.050
	Positive	.034
	Negativei	-.050
Theist Statistics		.050
Asymp. Sig. (2-taileid)		.200d

a. Theist distribution is Normal.
b. Calculateid from data.
c. Lillieifors Significancei Correiction.

Sumbeir: Data processed,2026.

Based on the test results in the table above, a significance value of 0.200 was obtained, which is greater than 0.050. These results indicate that the residual data is normally distributed, thus meeting the normality assumption in the regression model.

In addition to using the Kolmogorov-Smirnov test, data normality can also be assessed using a Normal Probability Plot (PP Plot). In this graph, data is considered normally distributed if the residual points are spread around the diagonal line and follow the direction of the line. Based on data processing using SPSS version 26, the distribution pattern of the points on the graph indicates conditions that meet the criteria for normality, as shown in the following figure:



Source: Processed data, 2026.

Figure 1. PP Plot Graph of Normality Test Results

Based on the Normal Probability Plot graph above, it can be seen that the residual points are spread around the diagonal line and follow the direction of the diagonal line. This distribution pattern indicates that the residual data is normally distributed. Therefore, it can be concluded that the regression model used meets the assumption of normality and is suitable for further analysis.

Table 14. Multicollinearity Test Results

Model		Unstandardizeid Coeifficieints		Standardizeid Coeifficieints			Collinearity Statistics	
		B	Std. EIrror	Beita	t	Sig.	Tolerance	VIF
1	(Constant)	13,367	2,194		6,094	.000		
	Career Development (X1)	.350	.035	.620	9,986	.000	.962	1,040
	Job Satisfaction (X2)	.333	.038	.581	9,364	.000	.962	1,040

a. Dependent Variable: Employee Productivity (Y)

Sumbeir: Data processed,2026.

Based on the results of the multicollinearity test in the table above, it is known that the career development variable has a tolerance value of 0.962 and the job satisfaction variable is 0.962. In

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addition, the Variance Inflation Factor (VIF) value for the career development variable is 1.040 and the job satisfaction variable is 1.040. A tolerance value above 0.10 and a VIF value less than 10 indicate that there are no symptoms of multicollinearity between the independent variables. Thus, the regression model used in this study has met the multicollinearity assumption.

Table 15. Durbin-Watson Test Interpretation Guidelines

Criteria	Information
< 1,000	There is autocorrelation interference
1,100 – 1,550	Without conclusion
1,550 – 2,460	No autocorrelation disturbance
2,460 – 2,900	Without conclusion
> 2,900	There is autocorrelation interference

Source: Sugiyono (2020)

The results of the correlation test are as follows:

Table 16. Correlation Test Results with Durbin-Watson

Model Summary

Model	R	R Squarei	Adjusteid R Squarei	Std. EIrror of thei EIstimatei	Durbin-Watson
1	.762a	.581	.574	2,784	2,019

a. Predictors: (Constant), Job Satisfaction (X2), Career Development (X1)

b. Deipeindeint Variablei: Employee Productivity (Y)

Sumbeir: Data processed,2026.

Based on the autocorrelation test results in the table above, the Durbin-Watson value was 2.019. This value is in the range of 1.550–2.460, thus concluding that the regression model does not exhibit autocorrelation. Therefore, the autocorrelation assumption in the regression model has been met, and the model is suitable for further analysis.

Table 17. Results of Heteroscedasticity Test with Glejser Test

Coefficientsa

Model		Unstandardizeid Coeifficieints		Standardizeid Coeifficieints		
		B	Std. EIrror	Beita	t	Sig.
1	(Constant)	1,001	1,267		790	.431
	Work Motivation (X1)	.035	.020	.162	1,709	.090
	Beiban Keirja (X2)	-.004	.021	-.019	-.200	.842

a. Deipeindeint Variablei: ABS_RES

Sumbeir: Data processed,2026.

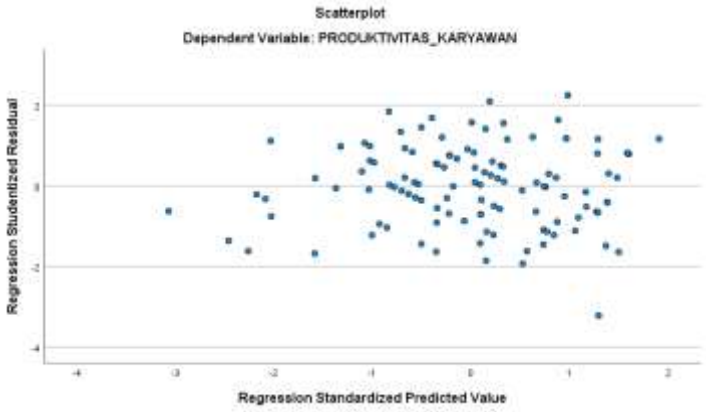
Based on the test results in the table above, the Glejser test on the model shows that the Career Development variable (X1) obtained a significance value of 0.090 and the Job Satisfaction variable (X2) obtained a significance value of 0.842. Both significance values are greater than 0.05 (Sig. > 0.05). Thus, it can be concluded that the regression model does not experience symptoms of heteroscedasticity, so the regression model is suitable for use in this study.

Heteroscedasticity testing can also be done by looking at the scatterplot graph between the predicted value of the dependent variable (ZPRED) and its residual value (SRESID) with the following conditions:

a. If the points are spread randomly and do not form a particular pattern, then heteroscedasticity does not occur.
b. If the points form a certain pattern, such as a wavy, widening, or narrowing pattern, then heteroscedasticity occurs.

The results of the heteroscedasticity test using a scatterplot graph are as follows.

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Source: Processed data, 2026.

Figure 2. Scatter Plot Graph of Heteroscedasticity Test Results

Based on the scatterplot graph above, it can be seen that the residual points are randomly distributed around the zero axis and do not form a specific pattern, whether tapered, widened, or wavy. This condition indicates that the residual variance is constant at each predicted value. Therefore, it can be concluded that the regression model does not experience heteroscedasticity, thus fulfilling the classical assumptions and is suitable for use as an analytical tool in this study.

Table 18.Simple Linear Regression Test Results of Career Development Variable (X1) on Employee Productivity (Y)

Coefficientsa

Model		Unstandardizeid Coeifficieints		Standardizeid Coeifficieints	t	Sig.
		B	Std. EIrror	Beita		
1	(Constant)	29,150	1,863		15,648	.000
	Career Development (X1)	.286	.046	.506	6,265	.000

a. Dependent Variable: Employee Productivity (Y)

Sumbeir: Data processed,2026.

Based on the test results in the table above, the following simple regression equation was obtained:

Y = 29,150 + 0.286X1

Based on the regression equation, it can be explained as follows:

a. The constant value of 29.150 indicates that if the Career Development variable (X1) is considered constant or has a value of zero, then Employee Productivity (Y) has a value of 29.150.
b. The regression coefficient value for the Career Development variable (X1) is 0.286 and is positive. This indicates that every one-unit increase in the Career Development variable (X1) will increase Employee Productivity (Y) by 0.286 units. Therefore, the better the career development an employee receives, the more employee productivity tends to increase.

Table 19. Results of Simple Linear Regression Test of Job Satisfaction Variable (X2) on Employee Productivity (Y)

Coefficientsa

Model		Unstandardizeid Coeifficieints		Standardizeid Coeifficieints	t	Sig.
		B	Std. EIrror	Beita		
1	(Constant)	30,179	1,921		15,710	.000

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	Job Satisfaction (X2)	.263	.048	.460	5,530	.000

a. Deipeindeint Variablei: Employee Productivity (Y)

Sumbeir: Data processed,2026.

Based on the test results in the table above, the following simple regression equation was obtained:

Y = 30.179 + 0.263X2

Based on the regression equation, it can be explained as follows:

a. The constant value of 30.179 indicates that if the Job Satisfaction variable (X2) is considered to have no change or has a value of zero, then Employee Productivity (Y) has a value of 30.179.
b. The regression coefficient value for the Job Satisfaction variable (X2) is 0.263 and is positive. This indicates that every one-unit increase in the Job Satisfaction variable (X2) will increase Employee Productivity (Y) by 0.263 units. Therefore, the higher the level of employee job satisfaction, the more likely employee productivity will increase.

Table 20.Results of Multiple Regression Test of Career Development Variables (X1) and Job Satisfaction (X2) on Employee Productivity (Y)

Coefficientsa

Mod	eil	Unstandardizeid Coeifficieints B	Std. EIrror	Standardizeid Coeifficieints Beita	t	Sig.
1	(Constant)	13,367	2,194		6,094	.000
	Career Development (X1)	.350	.035	.620	9,986	.000
	Job Satisfaction (X2)	.333	.036	.581	9,364	.000

a. Dependent Variable: Employee Productivity (Y)

Sumbeir: Data processed,2026.

Based on the test results in the table above, the following multiple regression equation was obtained:

Y = 13.367 + 0.350X1 + 0.333X2

Based on the regression equation, it can be explained as follows:

a. The constant value of 13.367 shows that if the Career Development (X1) and Job Satisfaction (X2) variables are considered constant or have a value of zero, then Employee Productivity (Y) has a value of 13.367.
b. The regression coefficient value of the Career Development variable (X1) is 0.350 and is positive. This indicates that every one unit increase in the Career Development variable (X1), assuming the Job Satisfaction variable (X2) remains constant, will increase Employee Productivity (Y) by 0.350 units.
c. The regression coefficient value of the Job Satisfaction variable (X2) is 0.333 and is positive. This indicates that every one unit increase in the Job Satisfaction variable (X2), assuming the Career Development variable (X1) remains constant, will increase Employee Productivity (Y) by 0.333 units.

Based on these results, it can be concluded that Career Development (X1) and Job Satisfaction (X2) have a positive influence on Employee Productivity (Y). This means that the better the career development and the higher the job satisfaction felt by employees, the more likely employee productivity will increase.

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Table 21. Correlation Coefficient Interpretation Guidelines

Correlation Coefficient Value Interval	Relationship Level
0.000 to 0.199	Very Beautiful
0.200 to 0.399	Rebeautiful
0.400 to 0.599	Seefield
0.600 to 0.799	Strong
0,800 to 1,000	Very strong

Source: Sugiyono (2020).

The results of data processing are as follows:

Table 22. Results of the Partial Correlation Coefficient Test of Career Development (X1) on Employee Productivity (Y)

Correlations

		Career Development (X1)	Employee Productivity (Y)
Career Development	Pearson Correlation	1	,506**
	Sig. (2-tailed)		,000
	N	116	116
Employee Productivity	Pearson Correlation	,506**	1
	Sig. (2-tailed)	,000	
	N	116	116

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Processed data, 2026.

Based on the test results in the table above, a correlation coefficient value of 0.506 was obtained, where this value is in the interval 0.400 – 0.599, meaning that the two variables have a moderate/fairly strong level of relationship.

Table 23. Results of the Partial Correlation Coefficient Test of Job Satisfaction (X2) on Employee Productivity (Y)

Correlations

		Job satisfaction	Employee Productivity
Job satisfaction	Pearson Correlation	1	,460**
	Sig. (2-tailed)		,000
	N	116	116
Employee Productivity	Pearson Correlation	,460**	1
	Sig. (2-tailed)	,000	
	N	116	116

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Processed data, 2026.

Based on the test results in the table above, a correlation coefficient value of 0.460 was obtained, where this value is in the interval 0.400 – 0.599, meaning that the two variables have a moderate/fairly strong level of relationship.

Table 24. Results of the Simultaneous Correlation Coefficient Test of Career Development (X1) and Job Satisfaction (X2) on Employee Productivity (Y)

Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	,762a	,581	,574	2,784

a. Predictors: (Constant), Job Satisfaction (X2), Career Development (X1)

Source: Processed data, 2026.

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Based on the test results in the table above, a correlation coefficient of 0.762 was obtained, falling within the 0.600–0.799 range. This means that career development and job satisfaction have a strong relationship with employee productivity.

Table 25. Results of the Partial Determination Coefficient Test of Career Development (X1) on Employee Productivity (Y)

Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	,506a	,256	,250	3,694

a. Predictors: (Constant), Career Development (X1)
Source: Processed data, 2026.

Based on the test results in the table above, the coefficient of determination (R Square) value was obtained at 0.256. This shows that the Career Development variable (X1) is able to explain the Employee Productivity variable (Y) by 25.6%, while the remaining (100% - 25.6%) = 74.4% is influenced by other factors not included in this study.

Table 26. Results of the Partial Determination Coefficient Test of Job Satisfaction (X2) on Employee Productivity (Y)

Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	,460a	,212	,205	3,803

a. Predictors: (Constant), Job Satisfaction (X2)
Source: Processed data. 2026.

Based on the test results in the table above, the coefficient of determination (R Square) value was obtained at 0.212. This shows that the Job Satisfaction variable (X2) is able to explain the Employee Productivity variable (Y) by 21.2%, while the remaining (100% - 21.2%) = 78.8% is influenced by other factors not included in this study.

Table 27. Results of the Simultaneous Test of the Determination Coefficient of Career Development (X1) and Job Satisfaction (X2) on Employee Productivity (Y)

Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	,762a	,581	,574	2,784

a. Predictors: (Constant), Job Satisfaction (X2), Career Development (X2)
Source: Processed data, 2026.

Based on the test results in the table above, the coefficient of determination was obtained at 0.581. Therefore, it can be concluded that the variables of Career Development and Job Satisfaction have an effect on the Employee Productivity variable by 58.1%, while the remaining (100% - 58.1%) = 41.9% is influenced by other factors not studied in the study.

Table 28. Hypothesis Test (t-Test) of Career Development Variable (X1) on Employee Productivity (Y)

Coefficientsa

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	29,150	1,863		15,648	,000
	Career Development	,286	,046	,506	6,265	,000

a. Dependent Variable: Employee Productivity (Y)
Source: Processed data, 2026.

Based on the test results in the table above, the calculated t value was 6.265 while the t table was 1.980. This shows that the valuet_{count} > t table(6.265 > 1.980) with a significance value of 0.000 < 0.05. Thus, H0 is rejected and H1 is accepted, so it can be concluded that there is a positive and significant influence between Career Development (X1) on Employee Productivity (Y).

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Table 29. Hypothesis Test (t-Test) of Job Satisfaction Variable (X2) on Employee Productivity (Y)

Coefficientsa

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	30,179	1,921		15,710	,000
	Job satisfaction	,263	,048	,460	5,530	,000

a. Dependent Variable: Employee Productivity (Y)

Source: Processed data, 2026.

Based on the test results in the table above, the calculated t value was 5.530 while the t table was 1.980. This shows that the valuet_{count} > t table5.530 > 1.980) with a significance value of 0.000 < 0.05. Thus, H0 is rejected and H1 is accepted, so it can be concluded that there is a positive and significant influence between Job Satisfaction (X1) on Employee Productivity (Y).

Table 30. Results of Simultaneous Hypothesis Testing (F Test) of Career Development (X1) and Job Satisfaction (X2) on Employee Productivity (Y)

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1215,344	2	607,672	78,390	,000b
	Residual	875,967	113	7,752		
	Total	2091.310	115			

a. Dependent Variable: Employee Productivity (Y)
b. Predictors: (Constant), Job Satisfaction (X2), Career Development (X1)

Source: Processed data, 2026.

Based on the test results in the table above, the calculated F value is obtained > F table or (78.390 > 3.08). This is also strengthened by a significance value smaller than 0.05, namely 0.000 < 0.05. Thus, H0 is rejected and Ha is accepted, so it can be concluded that there is a positive and significant influence simultaneously between Career Development (X1) and Job Satisfaction (X2) on Employee Productivity (Y).

Discussion of Research Results

1. The Influence of Career Development (X1) on Employee Productivity (Y)

Based on the analysis results, the regression equation Y = 29,150 + 0.285X1 was obtained. The correlation coefficient (R) value of 0.506 indicates that the relationship between Career Development and Employee Productivity is in the moderate category. The determination coefficient (R^2) value of 0.256 or 25.6%, which means that Career Development is able to explain Employee Productivity by 25.6%, while the remaining 74.4% is influenced by other factors not examined in this study.

The results of the hypothesis test show that the calculated t value of 6.265 is greater than the t table of 1.980 (6.265 > 1.980) with a significance value of 0.000 < 0.05. Thus, H0 is rejected and H1 is accepted, which means that Career Development has a positive and significant effect on Employee Productivity.

The results of this study indicate that the better the career development provided by the company, the higher the employee productivity. Opportunities for development, training, job promotions, and superior support in competency development can increase employee motivation and work enthusiasm, thereby impacting work productivity. These results align with Hasibuan's (2021) theory, which states that "career development is an effort to improve employees' abilities and opportunities for development, thereby improving work performance." Furthermore, these results also support the research of Nora Yolinza and Doni Marlius (2023), which concluded that career development has a positive and significant impact on employee performance.

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2. The Influence of Job Satisfaction (X2) on Employee Productivity (Y)

Based on the analysis results, the regression equation Y = 30.179 + 0.263 X2 was obtained. The correlation coefficient (R) value of 0.460 indicates that the relationship between Job Satisfaction and Employee Productivity is in the moderate category. The determination coefficient (R^2) value is 0.212 or 21.2%, which means that Job Satisfaction contributes 21.2% to Employee Productivity, while the remaining 78.8% is influenced by other factors outside the research.

The results of the hypothesis test show that the calculated t value of 5.530 is greater than the t table of 1.980 (5.530 > 1.980) with a significance value of 0.000 < 0.05. Thus, H0 is rejected and H1 is accepted, so it can be concluded that Job Satisfaction has a positive and significant effect on Employee Productivity.

These results indicate that employees who are satisfied with their jobs will have higher work morale, be more responsible in completing tasks, and be able to produce better performance, thereby increasing work productivity. These research findings align with Hasibuan's (2021) opinion, which states that "job satisfaction is an emotional state characterized by a sense of enjoyment and love for one's work, leading to employees working with good work morale, discipline, and performance. This condition can ultimately drive increased employee productivity."

3. The Influence of Career Development (X1) and Job Satisfaction (X2) on Employee Productivity (Y)

Based on the results of multiple regression analysis, the equation Y = 13.367 + 0.350 X1 + 0.333 X2 was obtained. The correlation coefficient (R) value of 0.762 indicates that the relationship between Career Development and Job Satisfaction on Employee Productivity is in the strong category. The determination coefficient (R^2) value of 0.581 or 58.1%, which means that Career Development and Job Satisfaction together are able to explain Employee Productivity by 58.1%, while the remaining 41.9% is influenced by other factors not studied.

The results of the F test show that the calculated F value of 78.146 is greater than the F table of 3.08 (78.146 > 3.08) with a significance level of 0.000 < 0.05. Thus, H0 is rejected and Ha is accepted, so it can be concluded that Career Development and Job Satisfaction simultaneously have a positive and significant effect on Employee Productivity.

The results of this study indicate that increased employee productivity is influenced not by a single factor, but by a combination of strong career development and high levels of job satisfaction. Employees who receive development opportunities and feel satisfied with their jobs are more motivated to perform optimally, thereby increasing overall work productivity.

Conclusion

This study shows that career development has a positive and significant effect on employee productivity at PT Angkasa Pura Indonesia at Soekarno-Hatta Airport. The test results show a calculated t value of 6.265 greater than the t table of 1.980 with a significance of 0.000 <0.05, while career development contributes 25.6% to employee productivity. Job satisfaction also has a positive and significant effect on employee productivity, with a calculated t value of 5.530 > 1.980 and a significance of 0.000 <0.05 and a contribution of 21.2%. Simultaneously, career development and job satisfaction have a positive and significant effect on employee productivity, indicated by a calculated F value of 78.146 > 3.08 with a significance of 0.000 <0.05. Both variables together are able to explain 58.1% of the variation in employee productivity, while 41.9% is influenced by other factors not examined.

The limitation of this study lies in the scope of variables that only cover career development and job satisfaction, so that there is still 41.9% of the variation in employee productivity originating from other factors outside the study. Therefore, further research is recommended to consider other factors potentially related to employee productivity and expand the scope of the study to obtain a more comprehensive understanding. Practically, the results of this study can be a consideration for the management of PT Angkasa Pura Indonesia to increase productivity through more targeted career development, providing more open training and promotion opportunities, and increasing job satisfaction through awards, communication between superiors and subordinates, and the creation of a comfortable

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work environment. These efforts are expected to support increased productivity and the quality of company services.

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