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The Effect of Commitment and Compensation on Air Traffic Controller (ATC) Performance with Job Satisfaction as an Intervening Variable at the Air Nav Indonesia Palembang Branch

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A B S T R A C T

This study focuses on discussing the effect of work commitment, work compenstation on the performance of air traffic controller with job satisfaction as an intervening variable at the AirNav Indonesia, Palembang. The type of research used is quantitative with a causal study design. Data collection through questionnaires and analyzed using multivariate-Structural Equation Model analysis. The researcher employed job satisfaction as an intermediary variable to investigate the impact of commitment and compensation on ATC performance in this study. The data analysis revealed that ATC performance is positively and significantly influenced by job satisfaction and commitment, while compensation does not have a significant direct impact on ATC performance. Additionally, the data analysis results demonstrated that compensation has a substantial and beneficial effect on job satisfaction, which in turn indirectly influences ATC performance. As a result, it is feasible to conclude that compensation and commitment are indispensable variables that significantly impact ATC performance, both directly and indirectly, via employment satisfaction.

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INTRODUCTION

The sole alternative for transportation between islands and regions, particularly between remote areas on large islands outside of Java, is air transportation, which is rapid, economical, and efficient (Hikmah, 2009). Experts are required to supervise, direct, and regulate air traffic operations. Air Traffic Controllers (ATC) are the term used to refer to these professionals (Ardiansyah, 2015). The Indonesian Aviation Navigation Service Provider Public Company (LPPNPI), also known as Air Navigation (AirNav), is responsible for the oversight of Air Traffic Controller (ATC) operations in Indonesia (Suhendra et al., 2021).

ATC's primary objective is to prevent collisions between aircraft, prevent collisions between aircraft in the movement area due to obstructive conditions in the area, accelerate and maintain air traffic movements, provide advice and information that is beneficial for the safety and efficiency of air traffic management, and notify authorized organizations in the search for aircraft that require search and rescue in accordance with the required organizations, as outlined in Civil Aviation Safety Regulations (PKPS) chapter 170 (Stafyla et al., 2013).

The air traffic controller at the AirNav Indonesia Palembang Branch is dedicated to upholding and improving performance in order to consistently fulfill the company's flight navigation service objectives. In an effort to facilitate exceptional flight navigation services, this is implemented. According to Fahyan (2013) performance can be influenced by a variety of factors, including the quality and ability of employees, supporting facilities, and supra facilities. In the meantime, (Sedarmayanti, 2017) posits that (Mathis & Jackson, 2010) also support the following: 1) Attitude and mentality (work motivation, work discipline, and work ethics), 2) Education, 3) Skills, 4) Leadership management, 5) Income level, 6) Salary and health, 7) Social security, 8) Work climate, 9) Facilities and infrastructure, 10) Technology, and 11) Opportunities to achieve.

The potential for suboptimal performance to result in risks in flight navigation service guidance activities that are inconsistent with the aviation industry's philosophy of "the sky is vast but no room for error" is a noteworthy concern. The Air Traffic Control Personnel License and Rating Test must be passed with a minimum score of 70% (70 out of 100). In 2022 MOS69-01 PR 15, it is clarified that participants who are pronounced to have failed the test are permitted to take one (one) re-test (recheck) (*Peraturan Direktur Jenderal Perhubungan Udara Nomor: KP 650 Tahun 2015, 2015*).

Data from the 2020 Air Traffic Controller (ATC) Performance Check: The first semester consisted of 34 participants, with 30 of them passing and four failing the retest. Semester 2: A total of 40 participants participated, with 39 achieving a passing grade and 1 failing the retest. In the first semester of 2021, there were 42 participants, with 39 of them passing and 3 failing the retest. Semester 2: A total of 42 participants participated, with 39 achieving a passing grade and 3 failing the retest. In the first semester of 2022, there were 58 participants, 55 of whom passed, and 3 who failed the exam (re-exam). Semester 2: A total of 58 participants participated, with 56 achieving a

qualifying grade and 2 failing the retest. In an effort to remedy this phenomenon, The AirNav Palembang Branch conducts a rating test activity every six months or semester to ensure the performance of air traffic controllers. This test is beneficial for evaluating the quality of the abilities of air traffic controller personnel that impact performance.

The breakdown of separation (BOS) and breakdown of coordination (BOC) are indicators of the quality of air traffic control services, in addition to the aforementioned phenomena, in the operational performance standards of the airport (level of service) (User Service Standards - Airports - PERMENHUB No. 178 Year 2015, BN 2015 / NO. 1771 (2015). Which BOS is an occurrence in the air traffic control process that results in a separation (distance) that is less than the minimum standard established for each service classification? Despite the fact that BOC is an incident that arises from the disregard of the established coordination procedures between the Air Traffic Service (ATS) and affiliated entities.

One BOS was present at the AirNav Palembang Branch in 2022. This is undoubtedly a sign that the air traffic controller's performance in providing guidance has not been optimal. This must serve as a benchmark for the organization to enhance employee performance and achieve optimal performance while prioritizing flight safety. Consequently, it is crucial for the organization to be aware of the factors that influence the performance of its employees, specifically the air traffic controllers. In the event that this performance is susceptible to the form of organizational commitment, job satisfaction and compensation that ATC possesses.

This phenomenon is also corroborated by numerous studies conducted by (Aryani et al., 2020; Nurandini & Lataruva, 2014; Pangestu, 2014) who determined that employee performance is significantly and positively influenced by commitment. The field findings indicate that not all ATC employees exhibit a high level of commitment. This is exemplified by the presence of numerous employees who enjoy arriving late to work. According to research conducted by (Latifah et al., 2020) employee performance is partially positively and significantly influenced by job satisfaction. The majority of air traffic controllers are dissatisfied with their work, as the company has not fully reimbursed them for the benefits they have received. This is insufficient to account for the increased workload and hours that have returned to normal during the endemic period, as well as the presence of unreliable facilities that should be essential to the air traffic controllers' work. Where (Christian, 2018) believe that organizational culture has a positive and significant impact on organizational commitment and performance. This conclusion is supported by the results of initial observations. The provision of compensation that is considered capable of influencing employee performance or work quality is supported by research conducted by (Husin et al., 2021).

Using PLS-SEM as a method of data analysis, this research will employ a sample of up to 63 Air Traffic Controllers at the AirNav Palembang Branch, as opposed to the aforementioned description. The study was conducted to investigate the "Effect of Commitment and Compensation on ATC (Air Traffic

Controller) Performance with Job Satisfaction as an Intervening Variable at the AirNav Palembang Branch" in detail.

THEORETICAL REVIEW

Concept of Employee Performance

Human resources (HR) is a significant factor in an organization. In achieving its objectives, an organization requires human resources as a system manager (Meho & Christian, 2019) where their performance is a critical factor that must be taken into account by all members of an organization. Consequently, an employee's ability to deliver optimal performance is facilitated by individual awareness and the organization's support. According to (Rummler & Brache, 2012) there are three levels of employee performance: 1. Organizational Performance: this pertains to the organization's outcomes at the organizational level or unit of analysis. 2. Process performance, which refers to the performance of the process stages in the production of products or services, and 3. Individual Performance, in which job objectives, job design, and job administration, as well as individual characteristics, influence performance at this level, which is exclusively at the employee or job level.

Bernardin asserts that the results suggest that performance is the consequence. Murphy defines performance as behaviour that is conducive to the objectives of the organization in which individuals are employed (Sudarmanto, 2015). It is feasible to conclude that performance is the consequence of an individual's endeavours to execute their obligations and obligations in a practical manner.

The evaluation and determination of the value of an employee's performance are essential as a form of company concern for employees. This assessment is crucial because it serves as feedback to the air traffic controller regarding his success in attaining results (Silaen, 2021). Four criteria are employed to evaluate employee performance, as per (Mangkunegara, 2015), there are: 1) Work quality; it demonstrates the accuracy, relevance, and neatness of work results without disregarding the volume of work that yields optimal results. 2) Work quantity; it demonstrates the quantity or nature of work completed simultaneously in order to ensure that the company's objectives are met efficiently and effectively. 3) Reliability; the capacity to complete the necessary tasks with minimal supervision. Reliability encompasses reliable service and performance consistency, which are precise, correct, and accurate. 4) Attitude; it is a hypothetical construct, concept, or structure.

Concept of Commitment

Organizational commitment, as defined by Mathis & Jackson (2010) is the extent to which employees endorse and adopt organizational objectives and express a desire to remain with or depart the organization. Employee attrition rates and absenteeism ultimately serve as indicators of this commitment. The degree of commitment that employees possess is a significant factor in the attainment of an organization's objectives. Whereas (Robbins et al., 2019) elucidate that organizational commitment is a relative strength of individuals in identifying their involvement in a particular part of the organization, which is

characterized by the acceptance of organizational values and goals, the willingness to work for the organization, and the desire to maintain membership in the organization.

Organizational commitment is a state of being that individuals experience in order to remain loyal and obligated to the organization, thereby preventing them from seeking employment outside of the organization. (Robbins & Judge, 2021) propose three types of organizational commitment that can be employed to evaluate an employee's level of work commitment: 1. Affective commitment; emotional attachment to the organization and conviction in its principles. This can manifest as a feeling of admiration for an organization that results in a desire to stay, form social connections, and adhere to existing regulations. 2. Persistent dedication; the economic benefit of remaining in an organization rather than leaving. For instance, you might decide to stay in an organization after calculating the potential losses of leaving. 3. Normative commitment; the obligation to remain in the organization for moral or ethical purposes. The organization's belief that transitioning to another would be imprudent compels employees to stay with it.

Concept of Compensation

All employees are entitled to compensation upon completion of their responsibilities and workload in order to achieve the company's objectives. Where the company is required to provide compensation that is commensurate with the type of work, burden, and responsibilities of the employees. The company is obligated to supervise the implementation of the compensation system. As Husin et al. (2021) have stated, an effective compensation system will enable agencies to recruit, retain, and employ employees. This is an example of the company's endeavors to guarantee the well-being of its employees, as employees are a critical component of a company's ability to achieve its objectives.

According to (Yensy and Mulyadi, in Hidayat, 2021) , compensation that is effectively managed or implemented over the long term can serve as a beneficial instrument for employee morale. According to Paramitadewi (2017), compensation has a beneficial and substantial impact on employee performance. This implies that the performance of employees can be influenced by their compensation, whether it is high or low.

The guidelines for evaluating employee compensation, as developed by Sitompul & Simamora (2021), consist of four indicators: 1) Salaries and wages; these are receipts that serve as direct financial compensation from the company to employees for a specific position or service. These payments are typically provided on a weekly, monthly, or annual basis. 2) Incentives; it is supplementary compensation that goes beyond the remuneration or wages that the company provides. 3) Benefits; serve as programs that offer employees additional income, including meal allowances, old age allowances, and holiday allowances, and others. 4) Facilities; the company provides facilities as an additional kind of non-monetary compensation.

Concept of Job Satisfaction

Job satisfaction is believed to influence the character of an individual's work. In their research, Harahap et al. (2020) concluded that employment satisfaction has a significant and partially positive impact on employee performance. As elucidated by (Rivai & Mulyadi, 2006) job satisfaction is an assessment that encompasses an individual's emotions regarding their level of satisfaction or dissatisfaction with their employment.

Job satisfaction is the subjective evaluation and emotions of an individual with respect to their work, particularly in terms of the working conditions, and the extent to which their work aligns with their expectations, requirements, and aspirations (Umar, 2001). According to Rochka et al. (2019) there are numerous indicators that can be employed as benchmarks for evaluating employee satisfaction with their work, such as: 1) The job itself encompasses responsibility, interest, and opportunities for progress. 2) Supervisory quality, encompassing both technical assistance and social support. 3) Interpersonal dynamics with colleagues, encompassing amicable social interactions and mutual regard. 4) Promotion opportunities, including prospects for upward progression. 5) Compensation, in terms of sufficient remuneration and perceived fairness compared to others (perceived fairness amongst others).

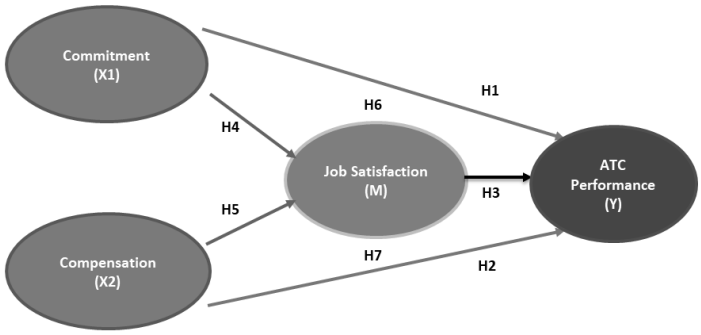

Figure 1. Conceptual Framework

METHODOLOGY

Quantitative research methodology is implemented to evaluate a hypothesis concerning variables' interrelationships (Tan, 2022). On this occasion, the research employed a causal study design to ascertain the causal relationship of existing variables (Creswell, 2013; Yusuf, 2016). The research's objective was to ascertain the impact of commitment and compensation on the performance of the Air Traffic Controller at the AirNav Indonesia Palembang Branch, with job satisfaction as an intervening variable. In the context of data collection in this investigation, a questionnaire was employed. When this questionnaire is disseminated in the form of questions, the responses provided by the respondents are transformed into research data. This data is subsequently analyzed using the Multivariate Analysis-Structural Equation Model (SEM-PLS).

The survey was conducted on a population of 63 Air Traffic Controller at the AirNav Indonesia Palembang Branch. There were a total of 63 respondents in this study. Where researchers employ questionnaires, documentation, and observation as data collection instruments. Two data analysis methodologies will be employed in this study: Descriptive Statistical Analysis and Structural Equation Model-Partial Least Squares (SEM-PLS).

RESULTS

Descriptive Analysis

The study included 63 respondents who were air traffic controllers at the AirNav Indonesia Palembang Branch. Male respondents comprised 40 respondents, which accounted for approximately 63.5% of the total. Female respondents comprised 23 respondents, which accounted for approximately 36.5% of the total. The respondents' average age was 32.3 years, with the lowest age range being 26 years and the highest being 48 years. Six respondents possessed the median age of 33 years. Respondents' median age was 32 years.

The respondents' educational backgrounds were also quite varied, ranging from Diploma education level to Bachelor's degree: Diploma (D-I, D-II, D-III, D-IV): D-III: 51 out of 63 individuals, or 81%; D-IV: 8 out of 63 individuals, or 12.7% and 4 out of 63 individuals, or 6.3%, possess a bachelor's degree. The diversity of competencies and expertise among employees is suggested by this variation in educational levels. The distribution of respondents' age, gender, and educational level is illustrated in the subsequent table.

Table 1. Respondent Demographics

No	Initial	Age	Gender	Education Level
1	A.P.R.	30	L	D.III
2	A.F.	33	L	D.III
3	A.S.P.	32	L	D.III
4	A.T.A.	34	P	D.III
5	A.D.C.	30	L	D.III
6	A.D.D.S.	28	L	D.III
7	A.B.	29	L	D.III
8	A.S.	32	P	D.III
9	A.G.R.	33	L	D.III
10	A.S.A.	33	L	D.III
11	B.W.R.	33	L	D.III
12	D.A.W.	28	L	D.IV
13	E.F.P.	39	L	D.IV
14	E.C.	28	L	D.IV
15	E.R.A.M.	26	P	D.III
16	F.	33	L	D.III
17	F.A.W.	28	P	D.III
18	F.S.P.	29	P	D.III
19	F.R.	34	P	D.III
20	F.J.P.M.	30	L	D.III
21	F.	40	P	S1
22	F.D.	32	P	D.III
23	F.A.	37	L	D.III
24	G.S.	27	L	D.III

25	H.Y.	30	L	D.III
26	H.A.	37	P	S1
27	H.	30	L	D.IV
28	I.R.	27	L	D.IV
29	I.R.S.	34	P	D.III
30	L.H.M.	31	L	D.III
31	L.I.N.	40	P	D.IV
32	M.K.	30	P	D.III
33	M.S.	31	P	S1
34	M.F.	29	L	D.III
35	M.A.A.G.	26	L	D.III
36	M.A.D.	33	L	D.III
37	N.G.	48	P	D.III
38	N.O.S.	29	P	D.III
39	P.F.K.	32	L	D.III
40	P.H.J.	35	P	D.III
41	R.A.	26	P	D.III
42	R.A.P.	28	L	D.IV
43	R.S.S.	27	L	D.III
44	S.K.	32	P	D.III
45	S.C.P.	29	P	D.III
46	S.D.R.	27	P	D.IV
47	S.L.A.I.	29	P	D.III
48	S.N.D.	27	L	D.III
49	S.C.R.	30	P	D.III
50	S.H.	27	L	D.IV
51	S.N.J.	28	L	D.III
52	T.A.N.	27	L	D.IV
53	T.H.	35	P	S1
54	V.L.	36	P	S1
55	Y.S.	36	L	D.IV
56	Y.D.	32	P	D.III
57	Y.P.	47	L	D.III
58	A.R.	34	L	D.III
59	E.P.E.	45	L	D.III
60	F.N.S.	28	P	D.III
61	I.T.S.	28	P	D.III
62	N.N.A.	29	P	D.III
63	R.A.S.	36	L	D.III

Descriptive Statistics

The statistical data presented below indicates the mean, median, minimum value (scale min), maximum value (scale max), and standard deviation of various variables that were employed in this investigation.

Table 2. Variable Description

Name	Mean	Median	Scale min	Scale max	Standard deviation
X1.1	3.651	4.000	1.000	5.000	0.780
X1.2	3.937	4.000	2.000	5.000	0.774
X1.3	3.762	4.000	2.000	5.000	0.791
X1.4	3.651	4.000	1.000	5.000	0.839
X1.5	3.825	4.000	1.000	5.000	0.952
X1.6	3.714	4.000	2.000	5.000	0.881
X2.1	3.825	4.000	1.000	5.000	0.935

X2.2	4.000	4.000	1.000	5.000	0.797
X2.3	4.111	4.000	1.000	5.000	0.857
X2.4	4.254	4.000	1.000	5.000	0.872
X2.5	3.937	4.000	2.000	5.000	0.871
Y1	3.937	4.000	2.000	5.000	0.814
Y2	4.159	4.000	2.000	5.000	0.672
Y3	4.206	4.000	1.000	5.000	0.780
Y4	4.381	5.000	1.000	5.000	0.785
Z1	4.127	4.000	1.000	5.000	0.678
Z2	4.302	4.000	1.000	5.000	0.705
Z3	3.984	4.000	1.000	5.000	0.864
Z4	4.365	4.000	1.000	5.000	0.762
Z5	4.079	4.000	1.000	5.000	0.741

Source: Processed (2024)

Evaluation of the Measurement Model

The measurement model in the research is a reflective measurement model, in which the variables of commitment, compensation, job satisfaction, and ATC performance are measured reflectively. Referring to Hair et al. (2021) which says that the evaluation of the reflective measurement model consists of a loading factor ≥ 0.70, composite reliability ≥ 0.70, Cronbach's alpha ≥ 0.70 and AVE (convergent validity) ≥ 0.50 and evaluation of discriminant validity, namely; Fornell and Lacker criteria, HTMT ≤ 0.90 and cross loading.

Table 3. Outer Loading, Cronbachs' Alpha, Composite Reliability and Average Variance Extracted

Variable	Measurement Item	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE
Job Satisfaction	Y1	0.832	0.909	0.915	0.787
	Y2	0.908			
	Y3	0.935			
	Y4	0.871			
Performance	Z1	0.878	0.925	0.931	0.770
	Z2	0.877			
	Z3	0.800			
	Z4	0.923			
	Z5	0.902			
Commitment	X1.1	0.755	0.863	0.872	0.592
	X1.2	0.750			
	X1.3	0.795			
	X1.4	0.853			
	X1.5	0.708			
	X1.6	0.746			
Compensation	X2.1	0.749	0.867	0.881	0.716
	X2.2	0.851			
	X2.3	0.882			
	X2.4	0.896			

Source: Processed (2024)

As shown in the table above, the commitment variable is evaluated by six valid items, with an outer loading value of 0.708-0.853. This suggests that the six measurement items are substantially associated with the description of

air traffic controller commitment. Composite reliability of 0.872 and Cronbach's alpha of 0.863 both exceed 0.70, indicating that the reliability of the work commitment variable is satisfactory. The AVE score of 0.592> 0.50 suggests that there is a high degree of convergent validity. A total of 59.2% of the commitment variable measurement items are variable. The six measurement items exhibited the highest outer loading (0.795) and (0.853) for X1.3 and X1.4, respectively. This suggests that these items are the most effective at capturing the variation in data measurement from the job commitment variable.

Four valid elements are then used to evaluate compensation. As a result of its invalid outer loading value of <0.70, Hair et al. (2021) eliminated item X2. 5. Air traffic controllers' job satisfaction is significantly predicted by the four valid items, as evidenced by their outer loading value of 0.749-0.896. Cronbach's alpha of 0.867> 0.70 and a composite reliability rating of 0.881 for job satisfaction suggest that it is dependable. Convergent validity is strongly suggested by the AVE score of 0.716, which exceeds 0.50. Total variation in work satisfaction measurement items is 71.6%. X2.3 and X2.4 exhibited the highest outer loading (0.882) and (0.896) among the four measurement items, respectively, suggesting that they accurately represent the variation in work compensation variable data measurement. In this study, the third variable, job satisfaction, is assessed using four valid items with an outer loading value of 0.832-0.935. This suggests that the four items are significantly correlated with the pay of air traffic controllers. Cronbach's alpha of 0.909 greater than 0.70 and a composite reliability rating of 0.915 for the work compensation variable suggest satisfactory reliability. An AVE score of 0.787> 0.50 suggests that the data has strong convergent validity.

Measurement item variation for the job satisfaction variable is 78.7%. Job satisfaction data measurement variation is most accurately represented by the two measurement items with the maximum outer loading (0.908) and (0.935) of the four measurement items: Y2 and Y3. The outer loading value of all five valid items is between 0.800 and 0.923, which indicates that all measurement items are substantially associated in explaining ATC performance, the final variable in this study. The composite reliability rating of 0.931 and Cronbach's alpha of 0.925> 0.70 suggest that the performance variable is reliable. convergent validity is strongly suggested by the AVE score of 0.770, which is greater than 0.50.

This investigation's final variable is performance, which serves as the dependent variable. In terms of the performance variable, the measurement item variation is 77%. Out of the five measurement items, Z4 and Z5 exhibited the maximum outer loading (0.923) and (0.902), respectively, indicating that they offer the most precise representation of the performance variable's data measurement variation.

Table 4. Fornell and Lacker

	Job Satisfaction	Performance	Commitment	Compensation
Job Satisfaction	0.887			
Performance	0.817	0.877		
Commitment	0.715	0.699	0.769	

Compensation	0.742	0.634	0.581	0.846

The diagonal value is the root AVE and the other values are correlations

Source: Processed (2024)

The Fornell and Lacker criteria must be examined in order to assess discriminant validity. Discriminant validity is a method of assessment that ensures that variables are theoretically distinct and empirically supported through statistical testing. The Fornell and Lacker criteria dictate that the variable's AVE root exceeds the correlation between variables. Where the work discipline variable has an AVE root (0.842) that is greater than the correlation with satisfaction (0.840) and the correlation with motivation (0.783). These findings suggest that the work discipline variable's discriminant validity has been satisfactorily fulfilled. Similarly, the validity of job satisfaction, performance, and motivation is established when the root AVE exceeds the correlation between variables.

Table 5. HTMT

	Job Satisfaction	**Performance**	**Commitment**	**Compensation**
Job Satisfaction				
Performance	0.881			
Commitment	0.777	0.769		
Compensation	0.830	0.696	0.643	

Source: Processed (2024)

Hair et al. (2019)suggest that HTMT be deemed a more sensitive or accurate measure of discriminant validity. The HTMT value for the variable pair is less than 0.90, indicating that discriminant validity has been attained, as indicated by the test results. The variable divides the variance of the measurement item against the item that measures it more strongly than it divides the variance in other variable items.

Structural Model Evaluation

The influence between research variables is a factor in the evaluation of this structural model, which is related to hypothesis testing. The structural model is evaluated in three phases, the first of which is the determination of the absence of multicollinearity between variables using the inner VIF measure. The absence of multicollinearity between variables is indicated by an inner VIF value of less than 5 (Hair et al., 2021) Second, hypothesis testing between variables is conducted by examining the t-statistic or p-value. There is a significant influence between variables if the calculated t statistic is greater than 1.96 (t table) or the p-value of the test results is less than 0.05. Furthermore, it is imperative to mention that the estimated path coefficient parameters comprise the results and 95% confidence interval. Third, the f square value is the direct variable effect at the structural level, with criteria (f square 0.02 low, 0.15 medium, and 0.35 high). According to Hair et al. (2021), the Upsilon V statistic, which is calculated by squaring the mediation coefficient, is also referred to as the f square of the mediation effect. The mediation effect of Lachowicz et al., as

interpreted by (Ogbeibu et al., 2021) is low at 0.02, medium at 0.075, and high at 0.175.

Table 6. Inner VIF

	Job Satisfaction	Performance
Job Satisfaction		3.051
Commitment	1.511	2.071
Compensation	1.511	2.251

Source: Processed (2024)

It is imperative to determine whether there is multicollinearity between variables, specifically with respect to the inner VIF statistical measure, prior to testing the structural model's hypothesis. The inner VIF value is less than 5, indicating that the level of multicollinearity between variables is low, as indicated by the estimation results. These findings bolster the assertion that the parameter estimation in SEM PLS is unbiased and robust.

Table 7. Direct Effect Hypothesis Testing

Hypothesis	Path coefficient	p-value	95% Interval Kepercayaan Path Coefficient		f square
			Lower limit	Upper limit	
Commitment -> Performance	0.232	0.013	0.032	0.400	0.085
Compensation -> Performance	0.035	0.814	-0.225	0.351	0.002
Job Satisfaction -> Performance	0.625	0.000	0.342	0.813	0.420
Commitment -> Job Satisfaction	0.429	0.000	0.253	0.587	0.371
Compensation -> Job Satisfaction	0.493	0.000	0.279	0.668	0.490

Source: Processed (2024)

Based on the results of testing the direct effect hypothesis above, it is known that:

1. H1 (Commitment→Performance). The hypothesis is accepted, specifically the existence of a substantial influence of work commitment on performance with a path coefficient (0.232) and p-value (0.013 < 0.05). Performance of the air traffic controller will be influenced by any modification in the form of work commitment. 0.032 to 0.400 is the range of the influence of commitment on air traffic controller performance within the 95% confidence interval. However, the structural level classifies the existence of air traffic controller work commitment and its impact on air traffic controller performance as low (f square = 0.085).
2. H2 (Compensation→Performance). The model is accepted with a path coefficient of 0.035 and a p-value of 0.814, which is greater than 0.05, indicating that compensation has an insignificant impact on performance. Compensation modifications do not have an appreciable impact on performance. -0.225 to 0.351 is the range of the effect of contentment on performance within the 95% confidence interval. Thus, the structural level classifies the existence of satisfaction and its impact on performance as extremely low (f square = 0.002).

3. H3 (Job Satisfaction→Performance). The hypothesis is accepted. This is suggested by the substantial impact of job satisfaction on performance, as evidenced by a path coefficient of 0.625 and a p-value of 0.000, which is less than 0.05. Performance will be influenced by any modification in compensation. The influence of job satisfaction on performance is between 0.342 and 0.813 within the 95% confidence interval. So the structural level classifies the existence of job satisfaction and its impact on performance as high (f square = 0.420).
4. H4 (Commitment→Job Satisfaction). The model is accepted due to the substantial impact of commitment on job satisfaction, as evidenced by a path coefficient of 0.429 and a p-value of 0.000, which is less than 0.05. Every modification in the nature of commitment will have an impact on job satisfaction. The 95% confidence interval ranges from 0.253 to 0.587 in terms of the impact of commitment on job satisfaction. As a result, the structural level classifies the existence of commitment and its impact on job satisfaction as high (f square = 0.371).
5. H5 (Compensation→Job Satisfaction). This model is accepted as evidence of a substantial impact of compensation on job satisfaction, as indicated by a path coefficient of 0.493 and a p-value of 0.000 that exceeds 0.05. Customer satisfaction will be influenced by any modifications to compensation. The influence of compensation on satisfaction is between 0.279 and 0.668 within the 95% confidence interval. Consequently, the structural level classifies the existence of compensation and its impact on satisfaction as high (f square = 0.490).

Table 8. Direct Effect Hypothesis Testing

Hypothesis	Path coefficient	p-value	95% Interval Kepercayaan Path Coefficient		f square
			Lower limit	Upper limit	
Commitment→Job Satisfaction→Performance	0.268	0.002	0.104	0.436	0.071
Compensation→Job Satisfaction→Performance	0.308	0.000	0.152	0.427	0.094

Source: Processed (2024)

Based on the results of testing the direct effect hypothesis above, it is known that:

1. H6 (Commitment→Job Satisfaction→Performance). Job satisfaction functions as an intervening variable that significantly mediates the indirect effect of commitment on performance, with a mediation path coefficient (0.268) and p-value (0.002 <0.05). At the structural level, the mediation role of job satisfaction is classified as moderate (Upsilon V = 0.071). Ogbeibu et al (2020) elucidated that Upsilon V, which has a value of 0.01, has an impact.
2. H7 (Compensation→Job Satisfaction→Performance). The indirect effect of compensation on performance is mediated by job satisfaction, which

serves as an intervening variable with a mediation path coefficient of 0.308 and a p-value of 0.000, which is less than 0.05.

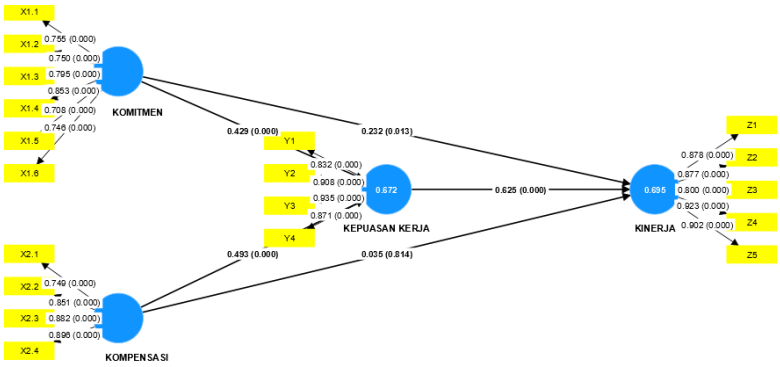

Figure. 2 PLS SEM Analysis

Description:
Commitment (Komitmen), Compensation (Kompensasi), Satisfaction (Kepuasan), Performance (Kinerja)

PLS is a variance-based SEM analysis that is designed to evaluate the theory of models that concentrate on prediction studies (Hair et al., 2021). The structural model is tested by examining the R square value, which denotes the percent of variation in endogenous variables that is accounted for by other exogenous or endogenous variables in the model. According to Hair et al. (2021), the qualitative interpretation value of R square is 0.75 for strong influence, 0.50 for moderate/moderate influence, and 0.25 for feeble influence. From the data processing results provided above, it is evident that it has a significant impact.

Table 9. R-Square

	R-square
Job Satisfaction	0.672
Performance	0.695

Source: Processed (2024)

According to the table above, the mutual influence of commitment and compensation on ATC job satisfaction is 67.2%, which is on the verge of being high or moderate. Subsequently, the joint influence of job satisfaction, compensation, and commitment on ATC performance is 69.5% (strong/high influence).

Table 10. SRMR

	Estimated Model
SRMR	0.090

Source: Processed (2024)

The term "SRMR" refers to the Standardized Root Mean Square Residual. In the context of model fit, this value is the difference between the data correlation matrix and the estimated model correlation matrix (Yamin, 2022). A model fit is considered adequate if the SRMR value is less than 0.08 (Hair et al., 2021). The SRMR value of 0.08-0.10 in Karin et al. (2003) is acceptably fitted. That is, the model estimation result is 0.090, indicating that the model is either an acceptable fit or a decent fit. In the model, the influence of variables can be elucidated through empirical data

DISCUSSION

Effect of Commitment (X1) on Air Traffic Controller Performance (Z)

Based on the data obtained for (Commitment to Performance), the following is a description of the analysis results:

- Positive relationship between commitment and performance.
- Path coefficient: 0.232
- P-value: 0.013 (statistically significant)
- Confidence interval: 0.032 to 0.400
- f square: 0.085. This value indicates work commitment and its impact on air traffic controller performance as low.

Therefore, air traffic controllers are inclined to remain with the organization in order to preserve its operational efficiency. The same results are also demonstrated by research (Nurandini & Lataruva, 2014), which demonstrates that the commitment variable has a positive and significant impact on employee performance.

Effect of Compensation (X2) on Air Traffic Controller Performance (Z)

Based on the data obtained for (Compensation to Performance), the following is a description of the analysis results:

- There is no significant relationship between compensation and performance.
- Path coefficient: 0.035
- P-value: 0.814 (not statistically significant)
- Confidence interval: -0.225 to 0.351
- f square: 0.002. The structural level classifies the existence of compensation and its impact on performance as very low.

The company's obligation to provide timely compensation demonstrates the continued necessity of financial resources for employees. As per Azmy's (2022) research, employee performance is substantially affected by organizational commitment and compensation.

Effect of Job Satisfaction (Y) on Air Traffic Controller Performance (Z)

Based on the data obtained for (Job Satisfaction to Performance), the following is a description of the analysis results:

- There is a positive and significant relationship between job satisfaction and performance.
- Path coefficient: 0.625
- P-value: 0.000 (statistically significant)
- Confidence interval: 0.342 to 0.813
- f square: 0.420. The structural level classifies the existence of job satisfaction and its impact on performance as high.

Therefore, the performance of air traffic controllers can be considerably enhanced by job satisfaction, which is characterized by positive working relationships among employees. This is due to the fact that air traffic controllers operate as a team, consisting of controllers, assistants, and supervisors. The

performance of employees at CV is significantly and positively influenced by job satisfaction, motivation, and organizational commitment, as demonstrated by research conducted by Citrawati (2021).

Effect of Commitment (X1) on Job Satisfaction (Y)

Based on the data obtained for (Commitment to Job Satisfaction), the following is a description of the analysis results:

- The commitment to work satisfaction is positively and significantly correlated
- Path coefficient: 0.429
- P-value: 0.000 (statistically significant)
- Confidence interval: 0.253 to 0.587
- f square: 0.371. The structural level classifies the existence of commitment and its impact on Job satisfaction as high.

Therefore, air traffic controllers are inclined to remain loyal and remain with the organization due to the opportunity for advancement and the cordial rapport among colleagues.

Effect of Compensation (X2) on Job Satisfaction (Y)

Based on the data obtained for (Compensation to Job Satisfaction), the following is a description of the analysis results:

- Compensation has a positive and significant effect on job satisfaction
- Path coefficient: 0.493
- P-value: 0.000 (statistically significant)
- Confidence interval: 0.279 to 0.668
- f square: 0.490. The structural level classifies the existence of compensation and its impact on Job satisfaction as high.

Therefore, the compensation that air traffic controllers receive must be adequate to ensure that they are content with their work. According to (Sela & Sayekti, 2021), partial compensation has a substantial and advantageous impact on job satisfaction.

The Effect of Commitment (X1) on the Performance of Air Traffic Controller (Z) Through Job Satisfaction(Y)

Based on the data obtained for (Effect of Commitment and Job Satisfaction on Performance), the following is a description of the analysis results:

- The path coefficient between commitment and job satisfaction is 0.268.
- The very low P-value (0.002) indicates that this relationship is statistically significant.
- The confidence interval between 0.104 and 0.436 does not include zero, indicating statistical significance.

Job satisfaction functions as a partial mediating variable in this scenario, as commitment continues to exert a direct impact on performance, in addition to an indirect influence through job satisfaction.

The Effect of Compensation (X2) on the Performance of Air Traffic Controller (Z) Through Job Satisfaction(Y)

Based on the data obtained for (Effect of Compensation and Job Satisfaction on Performance), the following is a description of the analysis results:

- The path coefficient between compensation and job satisfaction is 0.308.
- The very low P-value (0.000) indicates that this relationship is statistically significant.
- The confidence interval between 0.152 and 0.427 also indicates statistical significance.

The data processing results indicate that compensation continues to have a direct impact on performance. This implies that job satisfaction functions as a partial mediating variable.

CONCLUSIONS AND RECOMMENDATIONS

In this study, work satisfaction was used to examine how commitment and compensation affect ATC performance. Possible inference: 1. H1 (Commitment to Performance) is accepted, suggesting a significant impact of work commitment on performance (path coefficient = 0.232, p-value = 0.013, p-value < 0.05). Any job commitment change will affect air traffic controller performance. Commitment affects air traffic controller efficacy by 0.032 to 0.400 within the 95% confidence interval. However, the structural level shows that air traffic controller task commitment has little effect on performance (f square = 0.085).

Thus, labor commitment boosts performance. A path coefficient of 0.035 and a p-value of 0.814 indicate that compensation has no significant influence on performance (p-value > 0.05) in H2 (Compensation to Performance). Restructured remuneration does not affect performance. Contentment affects performance by -0.225 to 0.351 within the 95% confidence interval. Thus, satisfaction and performance are very low at the structural level (f square = 0.002). Performance is positively but insignificantly affected by remuneration.

Job satisfaction and performance hypothesis H3 is supported. Job satisfaction significantly affects performance, as shown by the path coefficient (0.625) and p-value (0.000 < 0.05). Any pay change will affect performance. Job happiness affects performance by 0.342–0.813 within the 95% confidence interval. Job satisfaction and performance are good at the structural level (f square = 0.420). We can conclude that job happiness positively affects performance.

Commitment to job satisfaction is accepted as commitment significantly impacts work satisfaction, as shown by a path coefficient of 0.429 and a p-value of 0.000 (p-value < 0.05). Any commitment change will affect job satisfaction. Commitment affects job satisfaction by 0.253–0.587 in the 95% confidence interval. Thus, commitment and work satisfaction are strong at the structural level (f square = 0.371).

The path coefficient (0.493) and p-value (0.000> 0.05) indicate a significant impact of salary on job satisfaction, supporting H5 (compensation to Job Satisfaction). Compensation changes will affect customer satisfaction.

Compensation affects satisfaction between 0.279 and 0.668 (95% confidence interval). Compensation's impact on satisfaction is high at the structural level (f square = 0.490). Data processing shows that remuneration significantly improves job satisfaction.

Data analysis shows that employment satisfaction mediates work commitment's effect on performance. This link is helpful but minor. The following statistical data shows how commitment affects job satisfaction and performance. Job satisfaction acts as a partial mediation variable because commitment affects performance directly and indirectly through work satisfaction.

Data processing shows that work satisfaction mediates the compensation-performance relationship. This link is beneficial but minor. The following statistical data shows how compensation affects job satisfaction and performance simultaneously. Data processing shows that compensation still affects performance. Thus, work satisfaction partially mediates. In conclusion, remuneration and commitment affect air traffic controller performance directly and indirectly through job satisfaction.

Suggestion for the AirNav Indonesia Palembang Branch to enhance employee performance, particularly that of air traffic controllers, includes the establishment of a work environment that is both secure and comfortable, as well as the promotion of employee motivation and creativity. It can also offer training, awards, and support facilities. Establishing positive relationships among administrators, employees, and colleagues to foster a collaborative and harmonious work environment. It is also recommended that the AirNav Indonesia Palembang Branch conduct regular evaluations and monitoring of the performance and welfare of air traffic controllers, as well as provide them with sufficient support and facilities. It is also recommended that the AirNav Indonesia Palembang Branch conduct regular evaluations and monitoring of the performance and welfare of air traffic controllers, as well as provide them with the necessary support and facilities.

FURTHER STUDY

This investigation does not establish that compensation, job satisfaction, and commitment are the primary factors contributing to employee performance; rather, it illustrates a correlation between these variables. The sample size for this study was restricted to 63 air traffic controllers employed at the AirNav Indonesia Palembang Branch. This can impact the generalizability of the study's findings, as it does not accurately represent the characteristics of the entire air traffic controller population. Consequently, the findings of this investigation are not applicable to air traffic controllers employed in other regions or countries. This study employs a subjective measurement instrument, specifically a questionnaire that respondents complete according to their own perceptions. This may result in bias or measurement errors, as respondents' perceptions may be influenced by external factors, such as their temperament, physical condition, or the circumstances surrounding the questionnaire

completion. Consequently, the validity and reliability of the data obtained are not guaranteed by this investigation.

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REFERENCES

Ardiansyah, I. (2015). ANALISIS EFEKTIFITAS KOMUNIKASI ANTARA CONTROLLER DAN PENERBANG DI UNIT APPROACH JAKARTA SEKTOR TERMINAL WEST JAKARTA AIR TRAFFIC SERVICES CENTRE. *Operations Excellence: Journal of Applied Industrial Engineering*, *7*(3). https://publikasi.mercubuana.ac.id/index.php/oe/article/view/539

Aryani, I. astri, Argentina, F., Diba, S., Darmawan, H., & Garfendo, G. (2020). Isolasi dan Identifikasi Spesies Dermatofita Penyebab Tinea Kruris di Pusat Pelayanan Kesehatan Primer. *Jurnal Kedokteran dan Kesehatan : Publikasi Ilmiah Fakultas Kedokteran Universitas Sriwijaya*, *7*(1), Article 1. https://doi.org/10.32539/JKK.V7I1.7761

Christian, F. (2018). *ORGANIZATION CULTURE AND LECTURER PERFORMANCE: CASE OF PAPUA PRIVATE UNIVERSITIES*. https://doi.org/10.31219/osf.io/m5uyj

Creswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. SAGE.

Fahyan, S. E. (2013). *Manajemen dan evaluasi kinerja / Payaman J. Simanjuntak*. https://www.semanticscholar.org/paper/Manajemen-dan-evaluasi-kinerja-Payaman-J.-Fahyan/aa7f7443cad0cb54d3f8bd7c8a10bb4918363dd9

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Evaluation of the Structural Model. In J. F. Hair Jr., G. T. M. Hult, C. M. Ringle, M. Sarstedt, N. P. Danks, & S. Ray (Eds.), *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook* (pp. 115–138). Springer International Publishing. https://doi.org/10.1007/978-3-030-80519-7_6

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Harahap, S. F., Tirtayasa, S., & Program Studi Magister Manajemen, Universitas Muhammadiyah Sumatera Utara Medan, Indonesia. (2020). Pengaruh Motivasi, Disiplin, Dan Kepuasan Kerja Terhadap Kinerja Karyawan Di PT. Angkasa Pura II (Persero) Kantor Cabang Kualanamu. *Maneggio: Jurnal Ilmiah Magister Manajemen*, *3*(1), 120–135. https://doi.org/10.30596/maneggio.v3i1.4866

Hidayat, A. (2021). PENGARUH KOMPENSASI DAN MOTIVASI TERHADAP KINERJA KARYAWAN DENGAN KEPUASAN KERJA SEBAGAI VARIABEL INTERVENING. *Jurnal Ilmu Manajemen (JIMMU)*, *6*(2), 165–177. https://doi.org/10.33474/jimmu.v6i2.12328

Hikmah, M. (2009). Hak-hak Komunitas Adat Terpencil dari Perspektif Hak Asasi Manusia. *Indonesian Journal of International Law*, *6*(4). https://doi.org/10.17304/ijil.vol6.4.211

Husin, N. H., Abu Mansor, N. N., Kelana, B. W. Y., & Sondoh Jr., S. L. (2021). Employee Participation and Innovative Work Behaviour: The Mediation Effect of Work Engagement. *International Journal of Academic Research in Business and Social Sciences*, *11*(7), Pages 1043-1055. https://doi.org/10.6007/IJARBSS/v11-i7/10571

Latifah, E., Agung, S., & Rinda, R. T. (2020). PENGARUH MOTIVASI DAN KEPUASAN KERJA TERHADAP KINERJA KARYAWAN. *Manager : Jurnal Ilmu Manajemen*, *2*(4), 566. https://doi.org/10.32832/manager.v2i4.3811

Mangkunegara, A. P., & M.Si. (2015, October 7). *Evaluasi Kinerja SDM*. https://www.semanticscholar.org/paper/Evaluasi-Kinerja-SDM-Mangkunegara-M.Si./999b3f8af0226a904b02b013f34e18383db676f1

Mathis, R. L., & Jackson, J. H. (2010). *Human Resource Management*. Cengage Learning.

Meho, H., & Christian, F. (2019). Analysis of Government Employee Performance in Keerom Regency, Papua, Indonesia. *Journal of Economics, Business, and Government Challenges*, *2*(02), 126–135. https://doi.org/10.33005/ebgc.v2i2.79

NURANDINI, A., & LATARUVA, E. (2014). *ANALISIS PENGARUH KOMITMEN ORGANISASI TERHADAP KINERJA KARYAWAN (Studi pada Pegawai Perum Perumnas Jakarta)* [Other, Fakultas Ekonomika dan Bisnis]. http://eprints.undip.ac.id/43935/

Ogbeibu, S., Jabbour, C. J. C., Gaskin, J., Senadjki, A., & Hughes, M. (2021). Leveraging STARA competencies and green creativity to boost green organisational innovative evidence: A praxis for sustainable development. *Business Strategy and the Environment*, *30*(5), 2421–2440. https://doi.org/10.1002/bse.2754

Pangestu, A. A. (2014). FAKULTAS EKONOMIKA DAN BISNIS UNIVERSITAS DIPONEGORO SEMARANG. *FAKULTAS EKONOMIKA DAN BISNIS UNIVERSITAS DIPONEGORO SEMARANG*.

Paramitadewi, K. F. (2017). *Pengaruh Beban Kerja dan Kompensasi terhadap Kinerja Pegawai Sekretariat Pemerintah Daerah Kabupaten Tabanan* (Issue 6) [Journal:eArticle, Udayana University]. https://www.neliti.com/publications/255108/

Peraturan Direktur Jenderal Perhubungan Udara Nomor: KP 650 Tahun 2015. (n.d.). Retrieved August 15, 2024, from https://jdih.dephub.go.id/peraturan/detail?data=2VqZejUPowG8nwXlBwiZFg4jlVWw4CPWX4vUp7Qdl19C4eWrOhCx38q48WbVAOyyAy4v

Qw9Dd4Xur4jo4Ny3gGeX4ed5faX7Hrp8Qg3x7Pof5d5CcrJIAg0FK9bcI2bpIOiqByE0v7vUsCDH0AkIpuarQ3

Rivai, V., & Mulyadi, D. (2006). *Kepemimpinan dan perilaku organisasi*. https://www.semanticscholar.org/paper/Kepemimpinan-dan-perilaku-organisasi-Rivai-Mulyadi/3a71509fe1782699119f260fe814aa60969fd230

Robbins, S. P., & Judge, T. A. (2021). *Organizational Behavior, Updated Global Edition*. Pearson Higher Ed.

Robbins, S. P., Judge, T., & Judge, T. (2019). *Organizational Behavior*. Pearson.

Rochka, M. M., Rahmadani, S., & Anwar, A. A. (2019, September 19). *ANALISIS DETERMINAN KEPATUHAN PEGAWAI TERHADAP KAWASAN TANPA ROKOK DI DINAS PENDIDIKAN PROVINSI SULAWESI SELATAN*. https://www.semanticscholar.org/paper/ANALISIS-DETERMINAN-KEPATUHAN-PEGAWAI-TERHADAP-DI-Rochka-Rahmadani/2b2ed18f17438aa65e1d25c4d25fd3dfaa98c032

Rummler, G. A., & Brache, A. P. (2012). *Improving Performance: How to Manage the White Space on the Organization Chart*. Wiley.

Sedarmayanti. (2017). *Perencanaan dan Pengembangan Sumber Daya Manusia: Untuk Meningkatkan Kompetensi, Kinerja dan Produktivitas Kerja*. https://www.semanticscholar.org/paper/Perencanaan-dan-Pengembangan-Sumber-Daya-Manusia%3A-Sedarmayanti/2cf0bff3ebc48485f7131a38d2f1a9435d487755

Sela, R., & Sayekti, R. N. S. (2021). *KOMPENSASI DAN MOTIVASI KERJA PENGARUHNYA TERHADAP KINERJA KARYAWAN MELALUI KEPUASAN KERJA SEBAGAI VARIABEL INTERVENING*. *4*(1).

Silaen, N. R. (2021). *Kinerja Karyawan*. Widina Bhakti Persada. https://singlelogin.re/book/27530048/5703b3/kinerja-karyawan.html

Sitompul, S. S., & Simamora, F. (2021). The Effect Of Workload, Work Experience, And Compensation On Employee Performance PT. Tannery Sejahtera Mandiri Pekanbaru. *Management Studies and Entrepreneurship Journal*.

Stafyla, A., Kaltsidou, G., & Spyridis, N. (2013). Gender differences in work stress, related to organizational conflicts and organizational constrains: An empirical research. *International Journal of Economic Sciences and Applied Research*, *6*(1).

STANDAR PELAYANAN PENGGUNA JASA – BANDAR UDARA-PERMENHUB No. 178 TAHUN 2015, BN 2015 / NO. 1771. (2015). https://jdih.dephub.go.id/api/media?data=7UMgGX5qWfRJrd5yWVtPos8bK8IZxfAFG4ZJ499ATBkz8gcqaC7CXgb8hgaxniMhfN4jlW9LfGTw28MPoJ0DMdKI8X10gpUaJnj4TxiRzIJPHtHK2UlZqPSpZIm1HRyXy19j0btuFow05VO68soPoGPlm3DIEjD2fO8T22MXrYTtbXWp0ktvklIrVsP7dEpTKgUJTuJCUE8JICxXS4yRPDOOIns95lE5SPv3SPsFn2oe6CE8Ln

Sudarmanto. (2015). *Kinerja dan Pengembangan Kompetensi SDM: Teori , Dimensi Pengukuran, dan Implementasi dalam Organisasi*. Pustak Pelajar. https://openlibrary.telkomuniversity.ac.id/pustaka/103507/kinerja-dan-pengembangan-kompetensi-sdm-teori-dimensi-pengukuran-dan-implementasi-dalam-organisasi.html

Suhendra, A. J., Abdurrahman, D., & Firdaus, F. S. (2021). *Konflik Interpersonal dan Beban Kerja terhadap Stres Kerja Karyawan Marchesini Group Indonesia*. https://www.semanticscholar.org/paper/Konflik-Interpersonal-dan-Beban-Kerja-terhadap-Suhendra-Abdurrahman/d41d3f6b28e9edc70a076bef0ab1f9fa1ae4bc6c

Tan, W. C. K. (2022). *Research Methods: A Practical Guide For Students And Researchers (Second Edition)*. World Scientific.

Umar, H. (2001). *Riset SDM Dalam Organisasi Husein Umar*. Gramedia Pustaka Utama.

Yusuf, P. D. A. M. (2016). *Metode Penelitian Kuantitatif, Kualitatif & Penelitian Gabungan*. Prenada Media.