

***DETERMINATION OF COMPENSATION, WORK FACILITIES, WORK  
DISCIPLINE ON WORK MOTIVATION AS A VARIABLES OF  
WORKING SATISFACTION MEDIATOR USING SEM-PLS IN  
(EMPLOYEE RESEARCH STUDY OF BP BATAM)***

***Tommy Arby Rumengan<sup>1</sup>, M. Zainur<sup>2</sup>, Jemmy Rumengan<sup>3</sup>, Khadafi<sup>4</sup>***

<sup>1,2,3,4</sup> Fakultas Ekonomi dan Bisnis, Universitas Batam.  
Email: jemmy.rumengan@univbatam.ac.id

***ABSTRACT***

*In this study, researchers used respondent data, such as gender, age and length of work of respondents in order to provide information about the characteristics of respondents. Where from the questionnaires distributed as many as 40. The discussion in this chapter is the result of field studies to obtain questionnaire answer data that measures five main variables in this study, namely compensation, work facilities, work discipline, work motivation and job satisfaction. Data analysis with parametric and non-parametric statistics using SEM-PLS (Structural Equation Modeling-Partial Least Square) regarding research variables, instrument testing, normality test, hypothesis testing, and discussion of hypothesis test results and Path Analysis Path. This study uses path analysis to examine relationship patterns that reveal the effect of a variable or set of variables on other variables, both direct and indirect. The calculation of the path coefficient in this study was assisted by Smart PLS Ver 3.0. To determine the direct and indirect effect between variables, it is seen from the calculation of the path coefficient and to determine the significance.*

*The influence of the variable X3 on X4 has a P-Values value of  $0.007 < 0.05$ , so it can be stated that the effect of X3 on X4 is significant. The influence of the X3 variable on Y has a P-Values value of  $0.011 < 0.05$ , so it can be stated that the effect of X3 on Y is significant. The effect of the variable X4 on Y has a P-Values value of  $0.002 < 0.05$ , so it can be stated that the effect of X4 on Y is significant. The effect of variable X1 on X4 has a P-Values value of  $0.007 < 0.05$ , so it can be stated that the effect of X1 on X4 is significant. The effect of the variable X1 on Y has a P-Values value of  $0.009 < 0.05$ , so it can be stated that the effect of X1 on Y is significant. The effect of the variable X2 on X4 has a P-Values value of  $0.021 < 0.05$ , so it can be stated that the effect of X2 on X4 is significant. The influence of the X2 variable on Y has a P-Values value of  $0.012 < 0.05$ , so it can be stated that the effect of X2 on Y is significant.*

***Keywords: Compensation, Work Facilities, Work Discipline, Work Motivation, Work Satisfaction***

## **I. INTRODUCTION**

The Batam Free Trade Area and Free Port Exploitation Agency (BP Batam) is a central government institution / agency established based on the Government Regulation of the Republic of Indonesia Number 46 of 2007 with the task and authority to carry out the management, development and development of the area in accordance with the functions of the area. In supporting the Vision and Mission of the President and Vice President in the period 2020-2024, the Vision of BP Batam in the next 5 years, namely: BP Batam contributes to increased investment to realize the Vision of the President and Vice President of Advanced Indonesia who are sovereign, independent and have a personality based on *gotong royong*. To support the Vision and Mission of BP Batam Employees, optimal employee performance is needed, and one that encourages performance is compensation. Compensation is a reward given by the company to employees for their services in carrying out their duties, obligations and responsibilities in order to achieve the company's goals. Compensation is important for employees because the amount of compensation reflects a measure of the work value of the employee, namely colleagues, family, and society. Work facilities are everything that is contained in a company that is occupied and enjoyed by employees, both in a direct relationship with work and for the smooth running of work. Work facilities provided by companies or organizations are facilities and infrastructure to facilitate work. Adequate work facilities with conditions that are fit for use and well maintained will help the smooth running of the work process in an organization. Discipline is an attitude, behavior and actions in accordance with company regulations, both written and unwritten. The regulations in question include attendance, late entry, and early return of employees. So this is an employee disciplinary attitude that needs to be addressed properly by management. Work motivation is a set of strength or energy both from inside and outside of work, starting from work-related efforts, considering direction, intensity and persistence. Work motivation is the most vital motor in achieving performance. Without motivation, employees will not succeed in completing a job maximally because there is no will that comes from within the employee himself, what appears is only a routine. Job satisfaction is the level of pleasure that a person feels for his role or job in the organization. So job satisfaction concerns the individual psychology in the organization, which is caused by the state he feels from his environment.

### **Formulation of the problem**

1. Does compensation directly determine the Job Satisfaction of employees?
2. Does the work facility directly determine the job satisfaction of employees?
3. Does the discipline directly determine the Job Satisfaction?
4. Does Job Satisfaction directly determine the motivation of employees?
5. Does compensation directly determine the motivation of employees?
6. Does the work facility directly determine the motivation of employees?
7. Does discipline directly determine the motivation of employees?

## **II. RESEARCH METHOD**

In this study, researchers used respondent data, such as gender, age and length of work of respondents in order to provide information about relationships. Where from the questionnaires distributed as many as 40. The discussion in this chapter is the result of field studies to obtain questionnaire answer data that measures five main variables in this study, namely compensation, work facilities, work discipline, work motivation, and work satisfaction. Data analysis with parametric and non-parametric statistics using SEM-PLS (Structural Equation Modeling-Partial Least Square) regarding research variables, instrument tests, normality tests, hypothesis testing, and discussion of the results of hypothesis testing and Path Analysis Path. This study uses path analysis (path analysis) to examine relationship patterns that reveal the effect of a variable or a set of other variables, both direct and indirect. The calculation of the path coefficient in this study was assisted by Smart PLS Ver 3.0. For the effect of departing directly and indirectly between variables, the results of the calculation of the coordination coordinates are to see the significance.

### **Population and Sample**

The population in this study was in BP Batam, amounting to 40 people regardless of specific strata and field of duty. Arikunto (in Riduwan, 2012: 210) states that if the subject is less than 100, it is better to take all of them, so that the research is a population study. Because of population limitations, all members of the population were used as the research sample, so this study used a saturated sample, which was taken through the Census Technique using proportional random sampling.

## **III. RESULT AND DISCUSSION**

Internal consistency analysis is a form of reliability used to assess the consistency of results across items on the same test. Internal consistency testing using a composite reliability value with the criteria of a variable is said to be reliable if the composite reliability value is  $> 0.600$  (Hair, Hult, Ringle, & Sarstedt, 2014).

### **Internal Consistency Analysis**

Tabel 1

<b>Variabel</b>	<b>Cronbach's Alpha</b>	<b>rho_A</b>	<b>Composite Reliability</b>	<b>Average Variance Extracted (AVE)</b>
<b>X1</b>	<b>0.747</b>	<b>0.810</b>	<b>0.825</b>	<b>0.420</b>
<b>X2</b>	<b>0.761</b>	<b>0.846</b>	<b>0.829</b>	<b>0.418</b>
<b>X3</b>	<b>0.815</b>	<b>0.890</b>	<b>0.869</b>	<b>0.489</b>
<b>X4</b>	<b>0.836</b>	<b>0.874</b>	<b>0.879</b>	<b>0.496</b>
<b>Y</b>	<b>0.845</b>	<b>0.893</b>	<b>0.886</b>	<b>0.528</b>

Source: Data Processing (2020)

Based on the data of the internal consistency analysis in the table above, the results show that the variables X1, X2, X3, X4 and Y have a composite reliability value  $> 0.600$ , so all X1, X2, X3, X4 and Y variables are reliable.

Convergent Validity

Tabel 2

	X1	X2	X3	X4	Y
X1.1	0.777				
X1.2	0.801				
X1.3	0.731				
X1.4	0.775				
X1.5	0.711				
X1.6	0.672				
X1.7	0.620				
X1.8	0.671				
X2.1		0.535			
X2.2		0.577			
X2.3		0.789			
X2.4		0.713			
X2.5		0.830			
X2.6		0.625			
X2.7		0.717			
X2.8		0.640			
X3.1			0.931		
X3.2			0.766		
X3.3			0.736		
X3.4			0.713		
X3.5			0.779		
X3.6			0.630		
X3.7			0.634		
X3.8			0.625		
X4.1				0.809	
X4.2				0.714	
X4.3				0.727	
X4.4				0.841	
X4.5				0.794	
X4.6				0.762	
X4.7				0.559	
X4.8				0.521	
Y1					0.825
Y2					0.701
Y3					0.891
Y4					0.703
Y5					0.794
Y6					0.756
Y7					0.753
Y8					0.576

Source: Data Processing (2020)

Based on the table above, it can be seen that the value of outer loading for variables X1, X2, X3, X4, Y where the value of all the items in the 5 variables tested is greater than 0.4, so all indicators in 5 variables are declared valid.

### **Disciplinary Validity**

Discriminant validity aims to assess an indicator of a construct variable is valid or not, namely by looking at the Heterotrait Value - Monotrait Ratio Of Corelation (HTMT) <0.90, then the variable has good (valid) discriminant validity (Hair, Hult, Ringle, & Sarstedt, 2014).

Tabel 3

Variabel	X1	X2	X3	X4	Y
X1					
X2	0.464				
X3	0.464	0.363			
X4	0.386	0.476	0.659		
Y	0.672	0.529	0.576	0.742	

Source: Data Processing (2020)

Based on the table above, the results of the correlation of variables X1 with X2, X1 with X3, X1 and X4, variables X1 and Y all variables have a correlation value <0.900, thus the correlation value of all variables is declared valid.

### **Structural Model Analysis (Inner Model)**

The structural model analysis or (inner model) aims to test the research hypothesis. The part that needs to be analyzed in the structural model is the coefficient of determination (R Square) by testing the hypothesis. Collinearity test is to prove whether the correlation between latent variables / constructs is strong or not. If there is a strong correlation, it means that the model contains problems from a methodological point of view, because it has an impact on the estimation of its statistical significance. This problem is known as collinearity. The value used to analyze it is by looking at the Variance Inflation Factor (VIF) value. (Hair, Hult, Ringle, & Sarstedt, 2014; Garson, 2016). If the VIF value is greater than 5.00, it means a collinearity problem occurs, and conversely there is no collinearity problem if the VIF value is <5.00 (Hair, Hult, Ringle, & Sarstedt, 2014).

Tabel 4

Variabel	X1	X2	X3	X4	Y
X1				1.162	1.166
X2				1.056	1.204
X3				1.114	1.549
X4					1.680

Y					
---	--	--	--	--	--

Source: Data Processing (2020)

From the data above it can be described that the VIF value for the correlation X1 with Y, X2 with Y, X3 with Y, X4 with Y has a value  $<5.00$  so there is no collinearity problem, thus from the data above, the structural model is in the case of it does not contain a collinearity problem.

### Direct Influence Hypothesis

Testing the direct effect hypothesis aims to prove the hypotheses of the effect of a variable on other variables directly (without intermediaries). If the path coefficient value is positive it indicates that an increase in the value of one variable is followed by an increase in the value of other variables, if the path coefficient value is negative it indicates that an increase in one variable is followed by a decrease in the value of another variable. If the probability value (P-Value)  $< \text{Alpha} (0.05)$  then  $H_0$  is rejected (the effect of a variable with other variables is significant). If the probability value (P-Value)  $> \text{Alpha} (0.05)$  then  $H_0$  is rejected (the effect of one variable with other variables is not significant).

Tabel 5

Variabel	Real sample	Average sample	Standard Deviation	T Statistics	P Values
X1 -> X4	0.052	0.045	0.127	0.408	<b>0.007</b>
X1 -> Y	0.357	0.372	0.137	2.605	<b>0.013</b>
X2 -> X4	0.297	0.279	0.123	2.405	<b>0.021</b>
X2 -> Y	0.198	0.209	0.105	1.889	<b>0.007</b>
X3 -> X4	0.509	0.536	0.116	4.380	<b>0.000</b>
X3 -> Y	0.139	0.137	0.146	0.950	<b>0.035</b>
X4 -> Y	0.385	0.341	0.117	3.290	<b>0.002</b>

Source: Data Processing (2020)

1. The direct effect of variable X3 on variable X4 has a path coefficient of 4.380 (positive), so an increase in the value of variable X3 will be followed by an increase in variable X4. The effect of the variable X3 on X4 has a P-Values value of  $0.000 < 0.05$ , so it can be stated that the effect of X3 on X4 is significant.
2. The direct effect of variable X3 on variable Y has a path coefficient of 0.950 (positive), so an increase in the value of variable X3 will be followed by an increase in variable Y. The effect of variable X3 on Y has a P-Values value of  $0.035 < 0.05$ , so it can be stated that the influence between X3 on Y is significant.
3. The direct effect of variable X4 on variable Y has a path coefficient of 3,290 (positive), so an increase in the value of variable X4 will be followed by an increase in variable Y. The effect of variable X4 on Y has a P-Values value of  $0.002 < 0.05$ , so it can be stated that the influence between X4 on Y is significant.
4. The direct effect of variable X1 on variable X4 has a path coefficient of 0.408 (positive), so an increase in the value of variable X1 will be followed by an increase in variable X4. The effect of variable X1 on X4 has a P-Values value of  $0.007 < 0.05$ , so it can be stated that the effect of X1 on X4 is significant.

5. The direct effect of variable X1 on variable Y has a path coefficient of 2.605 (positive), so an increase in the value of variable X1 will be followed by an increase in variable Y. The effect of variable X1 on Y has a P-Values value of  $0.013 < 0.05$ , so it can be stated that the influence between X1 on Y is significant.
6. The direct effect of variable X2 on variable X4 has a path coefficient of 2.405 (positive), so an increase in the value of variable X2 will be followed by an increase in variable X4. The effect of the variable X2 on X4 has a P-Values value of  $0.021 < 0.05$ , so it can be stated that the effect of X2 on X4 is significant.
7. The direct effect of variable X2 on variable Y has a path coefficient of 1.889 (positive), so an increase in the value of variable X2 will be followed by an increase in variable X4. The influence of the X2 variable on Y has a P-Values value of  $0.007 < 0.05$ , so it can be stated that the effect of X2 on Y is significant.

### **Coefficient of Determination**

The coefficient of determination (R Square) aims to evaluate the accuracy of the predictions of a variable. In other words, to evaluate how the variation in the value of the dependent variable is affected by the variation in the value of the independent variable in a path model.

Tabel 6

<b>Variabel</b>	<b>R Square</b>	<b>Adjusted R Square</b>
<b>X4</b>	0.405	0.355
<b>Y</b>	0.595	0.549

Source: Data Processing (2020)

### **IV. CONCLUSION**

Evaluating the provision of incentive compensation in terms of whether the amount given is correct or not, employee work facilities need attention to increase work productivity because work facilities have a positive effect on employee work productivity, the need for increased work discipline on the accuracy of completing tasks and compliance with leaders, it is hoped that the organization will always pay more attention to the needs of employees in terms of incentives, complete work facilities and work support tools to increase employee motivation, provide promotions for employees who excel in order to increase employee job satisfaction.

### **REFERENCES**

- Alex S. Nitisemito, 2010. Management of personnel Human Resource Management. Third Edition. Jakarta: Ghalia Indonesia.
- Amir, Mohammad Faisal, 2015. Understanding Employee Performance Evaluation, Concepts, and Performance Appraisals in Companies. Jakarta: Mitra WacanaMedia Publisher.
- A A. Anwar Prabu Mangkunegara (2010). HR Performance Evaluation, PT.Refika Aditama, Bandung.

- Barry, Cushway. (2012). Human Resource Management. Jakarta. PT Elex Media. Kumputindo.
- B. Uno, Hamzah. 2012 Motivation Theory and Its Measurement. Jakarta: PT. Earth Literacy.
- Davis, Keith & John W. Newstrom. 2012. Human Behavior at Work: Organizational Behavior, McGraw - Hill Education, New York.
- Dessler, 2013, Human Resources Management, Human Resources, Volume 2, Prenhalindo, Jakarta.
- Handoko, T. Hani. 2012. Personnel and Human Resources Management. Yogyakarta. BPFE.
- Hasibuan, Malayu S. P. 2010. Human Resource Management. Jakarta. PT Bumi Aksara.
- Hasibuan, Malayu S.P., 2011. Human Resource Management. Bumi Aksara, Jakarta.
- Kreitner, Robert and Angelo Kinicki. 2014. Organizational Behavior. Edition 9. Book 1. Jakarta: Salemba Empat
- L. Mathis, Robert & H. Jackson, John. 2011. Human Resource Management (10th edition). Jakarta: Four Salemba.
- Luthans, Fred. 2011. Organizational Behavior: An Evidence-Based Approach. New York: McGraw-Hill.
- Mangkunegara. 2011. Company Resource Management. PT. Rosdakarya youth. Bandung.
- Marwansyah. 2014. Human Resource Management, Second Edition, Alfabeta, Bandung.
- Malayu S.P. Hasibuan. 2013. Human Resource Management. Revised Edition. Jakarta: Earth Literacy.
- Mathis and Jackson, 2011, Human Resources Management, Interpretation, Salemba Empat, Jakarta.
- Mulyadi, D. 2015. Organizational Behavior and Service Leadership. Bandung: Alfbeta.
- Rista Ramadhan Tri Wahyuni and Anang Kistyanto. 2013. The Effect of Knowledge Sharing on Department Performance Through Service Innovation. Journal of Management Science. Volume 1 Number 4 July 2013. Pages 35-42.
- Rivai, 2013, Human Resource Management For. Company, First Printing, Raja Grafindo Persada, Jakarta.
- Robbins, 2011, Human Resources Management Concept and Practices, Preenhalindo, Jakarta.
- Robbins, S. P and Coulter, M. (2010), Management, Tenth Edition Volume 1. Jakarta: Erlangga.
- Robbins, S. P and Coulter, M. (2010), Management, Tenth Edition Volume 2. Jakarta: Erlangga.
- Robbins, Stephen P. & A. Judge, Timothy (2011). Organizational behavior. Fourteenth Edition. Pearson education. New Jersey 07458.77-89 \*.
- Robbins, P. Stephen and Mary Coulter. 2012. Management, translated by Bob Sabran, Wibi Hardani. Erlangga: Jakarta.
- Robbins, Stephen P. and Coulter, Mary. 2010. Tenth Edition Management. Jakarta: publisher Erlangga.
- Rumengan Jemmy / Satriawan Bambang / Juliandi, Azuar / Irfan, (2011), Path Analysis with SPSS, Diktat lectures and training. BATAM: UNIBA



- Rumengan Jemmy, Suhardis Adnan, Rumengan Tommy 2020. Health Research Methodology. Sefa Bumi Persada ISBN-978-623-7648-49-9.
- Rumengan Jemmy, Juliandi Azuar, Khaddafi Muammar, Rumengan Eleonora Angelina 2019. Research Methods. Sefa Bumi Persada ISBN-978-602-0768-85-4.
- Rumengan Jemmy, Khaddafi Muammar, Syarif Arman, Yanti Sri 2020. Research Methodology. Sefa Bumi Persada. ISBN-978-623-7648-57-4.
- Schermerhorn, J. R., Hunt, J. G., Osborn, R. N., and Uhl-Bien, M. (2011). Organizational Behavior 11th Edition. New Jersey: John Wiley & Sons, Inc.
- Sondang P. Siagian. 2011. Human Resource Management. Jakarta: Earth Literacy. Jakarta.
- Veithzal Rivai. 2014. Human Resource Management for Companies, 6th Edition, PT. Raja Grafindo Persada, Depok, 16956.
- Veithzal, Rivai. 2010. Human Resource Management for Companies: From Theory to Practice. Jakarta: Murai Kencana.
- Wibowo. 2013. Performance Management. Jakarta: Rajawali Press.
- Abdurr Rohmat, Angelina E Rumengan, & Bambang Satriawan. (2022). The Influence Of Leadership Style, Organizational Culture And Competence On Employee Performance With Job Satisfaction As Intervening Variable At The Office Of Transportation Offices And Port Authorities (Ksop) Batam. *Jurnal Ekonomi*, 11(03), 335–343. Retrieved from <http://ejournal.seaninstitute.or.id/index.php/Ekonomi/article/view/680>
- Adi, A., Rumengan, J., & Rumengan, A. E. (2019). Leadership Determination, Job Analysis And Career Development With Organizational Commitments As Intervening Variables On Performance Employees Archipelago Of Health Dinas Riau Province. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 9(1), 1–11. <https://doi.org/https://doi.org/10.37776/jzm.v9i1.172>
- Adijaya, Z., Rumengan, J., & Rumengan, A. E. (2019). Determination Of Position Promotion, Work Culture And Work Facilities With Work Satisfaction As Intervening Variables On Commitment Employee Agency Organization Of The France, Research And Development Riau Islands Province. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 9(3), 11–20. <https://doi.org/https://doi.org/10.37776/jzm.v9i3.195>
- Agustini, D. S., Rumengan, J., Rumengan, A. E., & Rumengan, T. A. (2021). Determination Of Emotional Intelligence, Intellectual Intelligence And Work Spirit With Discipline Working As A Mediator Variables On Performance By Using Sem-Pls (Research Study Employees At Raja Ahmad Hospital Tabib Tanjung Pinang Province Kepri). *Http://Ejurnal.Univbatam.Ac.Id/*, 11(Vol. 11 No. 1 (2021): Volume 11, Nomor 01, April 2021), 70–79. <https://doi.org/https://doi.org/10.37776/jzm.v11i1.781>.

- Aji, T. S., Rumengan, J., & Rumengan, A. E. (2019). Determination Of Discipline Of Work, Ethics, And Communication With Work Satisfaction As An Intervening Variable On Loyalty Of Housing Services And Area Of Bintan District Settlement Using Sem-Pls (Partial Least Square). *Zona Manajerial : Program Studi Manajemen Universitas Batam*, 9(1), 11–21. <https://doi.org/https://doi.org/10.37776/zm.v9i1.233>
- Anggaraini, N. D., Rumengan, J., & Rumengan, A. E. (2019). Determination Of Job Relevant Information, Work Motivation and Organizational Culture With Work Achievement as Intervening Variabels to Performance Employee of Financial Management Agency And The Assets of The Islands Province. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 9(3), 62–73. <https://doi.org/https://doi.org/10.37776/jzm.v9i3.200>
- Apriazir, Y. A., Rumengan, J., & Rumengan, A. E. (2019). Leadership Determination, Team Cooperation And Work Discipline With Organizational Commitments As Intervening Variables On Performance Of Employee Bureau And Protocol Of Secretariat Of Province Of Private Vocational School. *Zona Manajemen : Program Studi Magister Sains Manajemen Universitas Batam*, 9(3), 1–10. <https://doi.org/https://doi.org/10.37776/jzm.v7i2.194>
- Apriyandi, M., Rumengan, J., & Rumengan, A. E. (2019). Organizational Culture Determination, Work Discipline And Work Environment With Work Spirit As Intervening Variables On Work Satisfaction Employee And Financial Management Agency Regional Assets With Tanjung Pinang City. *Zona Manajerial : Program Studi Manajemen Universitas Batam*, 9(2), 69–79. <https://doi.org/https://doi.org/10.37776/zm.v9i2.216>
- Astriani, F., Rumengan, J., Rumengan, A. E., & Rumengan, T. A. (2021). Determination Of Work Communication, Work Spirit, Work Ethos With Work Motivation As Intervening Variables Towards Performance Using Sem-Pls In The Dinas Kesehatan Kota Batam. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 11(1). <https://doi.org/https://doi.org/10.37776/jzm.v11i1.783>
- Aulia, D. L. N., Anjani, A. D., Rumengan, A. E., Wibisono, C., Indrayani, I., & Khaddafi, M. (2022). A Study of Motivation and Commitment of Midwives' Services to their Performance in Batam City Hospital, Indonesia. *International Journal of Finance, Economics and Business*, 1(4), 303–312. <https://doi.org/10.56225/ijfeb.v1i4.108>
- Ebjed Ebjed, Jemmy Rumengan, Angelina Eleonora, R., & Suhardis, A. (2021). Determination Of Transformational Leadership , Organizational Culture, Achievement Motivation With Organizational Citizenship Behavior As Intervening Variables On Performance Using All-Pls (Employee Research Study In Pt. The Community Bank Indonesia Pinan. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 11(1), 80–89. <http://ejurnal.univbatam.ac.id/index.php/Manajemen/article/view/782>

- Erwin, T. H., Rumengan, J., & Rumengan, A. E. (2019). Determination Of Competence, Work Spirit And Work Environment With Work Motivation As Intervening Variables Against Performance Of Employee Services Riau Islands Province. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 9(2), 65–74. <https://doi.org/https://doi.org/10.37776/jzm.v9i2.261>
- Handriyanto, Rumengan, J., & Rumengan, A. E. (2019). Transformational Leader Determination, Competence And Organizational Climate With Work Satisfaction As Intervening Variables To Performance Environmental Service Employees Bintan District. *Zona Manajerial : Program Studi Manajemen Universitas Batam*, 9(2), 12–22. <https://doi.org/https://doi.org/10.37776/zm.v9i2.211>
- Hartono, B., Rumengan, J., & Rumengan, A. E. (2019). Transformational Leader, Attitude, Locus Of Control Determination With Work Satisfaction As Intervening Variables On Personnel Performance Karimun District Club Polres. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 9(1), 53–61. <https://doi.org/https://doi.org/10.37776/jzm.v9i1.179>
- Indrawan, J., Rumengan, J., & Rumengan, A. E. (2019). Transformational Leader Determination, Organizational Culture And Organizational Climate With Satisfaction Work As An Intervening Variable On Performance Of People's Household Service And The Area Of Provincial Settlement Riau Islands. *Zona Manajerial: Program Studi Manajemen (S1) Universitas Batam*, 9(2), 46–56. <https://doi.org/https://doi.org/10.37776/zm.v9i2.214>
- Jemmy Rumengan, Arman Syarif, Angelina Eleonora Rumengan, M. Tommy Arby Rumengan, C. W. (2020). The Effect Work Autonomy, Feedback, Responsibility, and Work Knowledge on the Work Motivation of Employees at Batam University with Partial Least Square (PLS). *Talent Development & Excellence*, ISSN: 1869-0459 (Print), ISSN: 1869-2885 (Online), 12(1), 1647–1655. International Research Association for Talent Development and Excellence (IRATDE), <http://www.iratde.com/index.php/jtde/article/view/788/600>
- Machrizal, R., & Rumengan, A. E. (2020). Determination Of Emotional Intelligence, Intellectual Intelligence And Working Spirit With Motivation Of Work As Variable Mediator Performance Of Job Officers General And Spatial Setup Karimun District. *Research Institutions and Community Services in Batam University*, 10(2087–6998), 14–27. <https://doi.org/https://doi.org/10.37776/jzm.v10i3.576>
- Mawarni, Rumengan, A. E., Indrayani, & Khaddafi, M. (2023). The influence of education and training on personnel performance through work motivation in the air force in wing education support. *International Journal of Educational Review, Law And Social Sciences (IJERLAS)*, 3(1), 35–58. <https://doi.org/https://doi.org/10.54443/ijerlas.v3i1.487>

- Mujid, M., Rumengan, J., & Rumengan, A. E. (2019). Leadership Determination, Competence And Training With Work Motivation As Intervening Variables On Teacher Performance Of Sman 8 Bengkong Sadai Batam. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 9(2), 42–51. <https://doi.org/https://doi.org/10.37776/jzm.v9i3.198>
- Nozariyanti, R., Rumengan, A. E., Khaddafi, M., & Indrayani. (2023). Determination Of Work Motivation, Leadership, And Training With Work Culture As An Intervening Variable On Performance In Regional Revenue Agency Batam City. *International Journal of Educational Review, Law And Social Sciences (IJERLAS)*, 3(1), 132–143. <https://doi.org/https://doi.org/10.54443/ijerlas.v3i1.591>
- Pratama, W. S., Rumengan, J., & Rumengan, A. E. (2019). Transformational Leadership Determination, Compensation, Organizational Climate With Work Satisfaction As Intervening Variables To Employee Performance Tax Management Agency And Regional Vocational Association. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 9(2), 75–85. <https://doi.org/https://doi.org/10.37776/jzm.v9i2.262>
- Rachman, W., Rumengan, J., & Rumengan, A. E. (2019). Compensation Determination, Organizational Culture And Work Environment With Work Satisfaction As Intervening Variables To Performance Of Regional Secretariat Employees Bintan District Using Sem-Pls (Partial Least Square). *Zona Manajerial : Program Studi Manajemen Universitas Batam*, 9(1), 42–52. <https://doi.org/https://doi.org/10.37776/zm.v9i1.236>
- Rahman, A., Rumengan, J., Rumengan, A. E., & Suhardis, A. (2021). Determination Of Self Efficacy, Working Ethos, Working Discipline With Organizational Citizenship Behavior As Intervening Variables On Work Achievement With Using Sem-Pls (Research Study Personnel Ditpolairud Polda Kepri). *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 11(1), 1–23. <https://doi.org/https://doi.org/10.37776/jzm.v11i1.774>
- Rahman, S., Rumengan, J., & Rumengan, A. E. (2019). Communication Determination, Employee Development Andorganizational Culture With Work Motivation As Intervening Variables Against Organizational Commitments Of Dinas Health Employees Archipelago Riau Province. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 9(2), 34–43. <https://doi.org/https://doi.org/10.37776/jzm.v9i2.258>
- Ramadhan, F., Wulandari, A., Rumengan, A. E., & Wahyuni, E. S. (2011). The Influence Of Profitability Ratio , Earning Per Share And Exchange Rate On Stock Price In Companies Including The Jakarta Islamic Index On The Indonesia Stock Exchange 2012-2016. *IJARIIIE-ISSN(O)-2395-4396*, 9(1), 66.

- Rumengan, A. E., Rumengan, J., & Wibisono, C. (2018). Moderating Attitude On Good Governance Implementation On Performance Of Batam City Regional Work Unit (SKPD) Using Partial Least Square (PLS). *International Journal of Civil Engineering and Technology (IJCIET)*, 9(13), 379-390.
- Rumengan, A. E., Rumengan, J., Wibisono, C., & Otok, B. W. (2018). Structural equation modeling in business performance through competitive advantage with information technology as moderating. *International Journal of Mechanical Engineering and Technology (IJMET)*, 9(10), 632-644.
- Rumengan, A. E., Wahyuni, E. S., Ramadhan, F., & Gunawan, D. (2022). Does Organizational Commitment Mediate the Relationship Between Motivation and Organizational Citizenship Behavior? *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 5(3), 24231–24240.  
<https://doi.org/https://doi.org/10.33258/birci.v5i3.6444.24231>
- Rumengan, J., Juliandi, A., Khaddafi, M., & Rumengan, A. E. (2019). *Metode Riset*. Number report : 000188521
- Rumengan, J., Juliandi, A., Khaddafi, M., & Rumengan, A. E. (2019). *METODE RISET* (pp. 180, ISBN : 978-602-0768-85-4). SEFA BUMI PERSADA. [www.sefabumipersada.com](http://www.sefabumipersada.com)
- Rumengan, J., Syarif, A., Rumengan, A. E., & Rumengan Chablullah Wibisono, M. (2020). The Effect Work Autonomy, Feedback, Responsibility, and Work Knowledge on the Work Motivation of Employees at Batam University with Partial Least Square (PLS). *Talent Development & Excellence*, 12(1).  
<http://www.iratde.com/index.php/jtde/article/view/788>
- Santika, M., & Rumengan, A. E. (2020). Determination Of Emotional Intelligence, Intellectual Intelligence And Disciplined Working Spirit Working As A Variable Of Mediator Officer Performance At The Secretariat Areas Of Tanjung Pinang City. *Paper Knowledge . Toward a Media History of Documents*, 10(2), 12–26.  
<https://doi.org/https://doi.org/10.37776/zm.v10i2.622>
- Sembiring, A. L., Rumengan, J., Rumengan, A. E., & Rumengan, T. A. (2021). Determination Of Organizational Trust, Organizational Culture, Organizational Climate With Job Satisfaction Asintervening Variables On Commitments Organization Using Sem-Pls (Employee Research Study In Organics Persero State Saving Bank). *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 11(1), 1–23.  
<https://doi.org/https://doi.org/10.37776/jzm.v11i1.776>
- Silvia, S., Rumengan, J., & Rumengan, A. E. (2019). Determination Of Career Development, Competence, Work Motivation With Work Satisfaction As Intervening Variables On Performance Of Vts Sea Ministry Of The Vts (Vassel

Traffic System) Batam Center. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 9(2), 23–33.  
<https://doi.org/https://doi.org/10.37776/jzm.v9i2.257>

Sukaesih, S., Rumengan, J., & Rumengan, A. E. (2019). Determination Of Autonomy Of Work, Work Facilities And Discipline Of Work With Work Motivation As Intervening Variables To Performance Employee Of Provincial Health Service Riau Islands. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 9(2), 55–64. <https://doi.org/https://doi.org/10.37776/jzm.v9i2.260>

Wirandha, A., Rumengan, J., Rumengan, A. E., & Suhardis, A. (2021). Determination Of Work Characteristics, Locus Of Control, Reward With Work Achievement As Intervening Variables On Performance Withusing Sem-Pls (Study Employee Research In Bintan District Health Office. *Zona Manajemen: Program Studi Magister Sains Manajemen Universitas Batam*, 11(1), 10–19.  
<https://doi.org/https://doi.org/10.37776/jzm.v11i1.775>