## DETERMINATION OF LOCUS OF CONTROL, WORK DISCIPLINE, WORKING ENVIRONMENT WITH WORK SATISFACTION AS A MEDIATOR VARIABLES TO WORK MOTIVATION USING SEM-PLS IN (EMPLOYEE RESEARCH STUDY IN THE BINTAN DISTRICT HEALTH OFFICE)

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### ABSTRACT

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 75. The discussion in this chapter is the result of field studies to obtain questionnaire answer data that measures the five main variables in this study, namely locus of control, work discipline, work environment, job satisfaction, and work motivation. 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 patterns of relationships 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. To have a direct and indirect effect between variables, the calculation results of the path coefficient and to see the significance.

The influence variable of X3 on X4 has a P-Values value of 0.001 <0.05, so it can be stated that the effect of X3 on X4 is significant. The influence of the X3 variable on Y with a P-Values value of 0.010 <0.05, so it can be stated that the effect of X3 on Y is significant. The effect of the variable X4 on Y with a P-Values value of 0.006 <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 0.036 <0.05, so it can be stated that the effect of X1 on X4 is significant. The influence variable X1 on Y with a P-Values value of 0.002 <0.05, so it can be stated that the effect of X1 on Y is significant. The influence variable X2 on X4 has a P-Values value of 0.002 <0.05, so it can be stated that the influence between X2 and X4 is significant. The effect of the variable X2 on Y with a P-Values value of 0.000 <0.05, so it can be stated that the effect of X2 on Y is significant.

**Keywords: Locus Of Control, Work Discipline, Work Environment, Job Satisfaction, Work Motivation**

## I. INTRODUCTION

In Law Number 36 of 2009 concerning Health, it is stated that health development aims to increase awareness, willingness and ability to live healthy for everyone so that the

highest degree of public health can be realized, as an investment for the development of socially productive human resources. and economical. Health affairs as contained in Law Number 23 of 2014 concerning Regional Government, are mandatory government affairs related to basic services. nature realizes the achievement of the vision of the Bintan Regency Government "The realization of a civil and prosperous Bintan Regency through the Achievement of Bintan Gemilang 2025 (Moving Forward in the Marine, Tourism and Cultural Sector)", the Bintan Regency Health Office as a Regional Apparatus Organization (OPD) is responsible for carrying out the mission. fourth, namely improving the quality of education, health and the quality of human resources so that they can compete in global competition. Meanwhile, the mission of the Health Office is to improve the quality of education, health and quality of human resources so that they can compete in global competences. As Vision and Mission in order to be realized in the work environment, it is necessary to pay attention to the character of the employee's locus of control, locus of control is how the individual feels or sees the line or relationship between his behavior and its consequences, whether he can accept responsibility or not for his actions. The definition of work discipline is an employee's compliance with all existing rules in the company where he works. Good discipline reflects a person's sense of responsibility for the tasks assigned to him. The work environment in a company needs to be considered, this is because the work environment has a direct influence on employees. Job satisfaction is a measure of the level of satisfaction of workers with their type of work which is related to the nature of their job duties, the results of the work achieved, the form of supervision obtained and the feeling of relief and liking for the work they are engaged in. Work Motivation is the attitude of individuals or groups to work together to do more active and voluntary work so that work can be completed faster and better.

**Formulation of the problem**
1. Does Locus Of Control directly determine the Job Satisfaction?
2. Does Work Discipline directly determine the Job Satisfaction?
3. Does the Work Environment directly determine the Job Satisfaction?
4. Does Job Satisfaction directly determine the Work Motivation?
5. Does Locus Of Control directly determine the work motivation?
6. Does Work Discipline directly determine the Work Motivation?
7. Does the Work Environment directly determine the Work Motivation?

## 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 75. 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 locus of control, work discipline, work environment, job satisfaction, and work motivation. 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 Bintan District Health Office, amounting to 75 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

| Variabel | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|----------|------------------|-------|----------------------|----------------------------------|
| X1 | 0.731 | 0.790 | 0.814 | 0.387 |
| X2 | 0.694 | 0.756 | 0.752 | 0.284 |
| X3 | 0.758 | 0.833 | 0.812 | 0.351 |
| X4 | 0.700 | 0.810 | 0.772 | 0.331 |
| Y | 0.806 | 0.881 | 0.848 | 0.414 |

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 | 0.737 | | | | |
| X1.2 | 0.665 | | | | |
| X1.3 | 0.692 | | | | |
| X1.4 | 0.742 | | | | |
| X1.5 | 0.692 | | | | |
| X1.6 | 0.673 | | | | |
| X1.7 | 0.582 | | | | |
| X1.8 | 0.486 | | | | |

| | | | | |
|---|---|---|---|---|
| X2.1 | | 0.582 | | |
| X2.10 | | 0.476 | | |
| X2.2 | | 0.626 | | |
| X2.3 | | 0.724 | | |
| X2.4 | | 0.566 | | |
| X2.5 | | 0.700 | | |
| X2.6 | | 0.556 | | |
| X2.7 | | 0.616 | | |
| X2.8 | | 0.453 | | |
| X2.9 | | 0.554 | | |
| X3.1 | | | 0.798 | |
| X3.10 | | | 0.473 | |
| X3.2 | | | 0.735 | |
| X3.3 | | | 0.677 | |
| X3.4 | | | 0.740 | |
| X3.5 | | | 0.721 | |
| X3.6 | | | 0.668 | |
| X3.7 | | | 0.521 | |
| X3.8 | | | 0.430 | |
| X3.9 | | | 0.533 | |
| X4.1 | | | | 0.704 |
| X4.10 | | | | 0.613 |
| X4.2 | | | | 0.660 |
| X4.3 | | | | 0.691 |
| X4.4 | | | | 0.726 |
| X4.5 | | | | 0.698 |
| X4.6 | | | | 0.739 |
| X4.7 | | | | 0.549 |
| X4.8 | | | | 0.472 |
| X4.9 | | | | 0.498 |
| Y1 | | | | 0.832 |
| Y10 | | | | 0.500 |
| Y2 | | | | 0.686 |
| Y3 | | | | 0.838 |
| Y4 | | | | 0.786 |
| Y5 | | | | 0.740 |
| Y6 | | | | 0.740 |
| Y7 | | | | 0.701 |
| Y8 | | | | 0.420 |
| Y9 | | | | 0.484 |

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 | 0.472 | | | | |
| X3 | 0.516 | 0.510 | | | |
| X4 | 0.610 | 0.738 | 0.752 | | |
| Y | 0.722 | 0.681 | 0.614 | 0.764 | |

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 | | | | 1.186 | 1.264 |
| X2 | | | | 1.081 | 1.297 |
| X3 | | | | 1.132 | 1.378 |
| X4 | | | | | 1.773 |
| 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) <Alpha (0.05) then Ho is rejected (the effect of a variable with other variables is significant). If the probability value (P-Value)> Alpha (0.05) then Ho 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 | 0.209 | 0.208 | 0.098 | 2.131 | **0.036** |
| X1 -> Y | 0.309 | 0.338 | 0.116 | 2.664 | **0.009** |
| X2 -> X4 | 0.349 | 0.379 | 0.111 | 3.158 | **0.002** |
| X2 -> Y | 0.316 | 0.304 | 0.104 | 3.036 | **0.003** |
| X3 -> X4 | 0.372 | 0.365 | 0.103 | 3.597 | **0.001** |
| X3 -> Y | 0.212 | 0.200 | 0.107 | 1.987 | **0.005** |
| X4 -> Y | 0.221 | 0.183 | 0.115 | 1.921 | **0.006** |

Source: Data Processing (2020)

1. The direct effect of variable X3 on variable X4 has a path coefficient of 3.597 (positive), so an increase in the value of variable X3 will be followed by an increase in variable X4. The influence of the X3 variable on X4 has a P-Values value of 0.001 <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 1.987 (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 0.005 <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 1.921 (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 0.006 <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 2.131 (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 0.036 <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 2.664 (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 0.009 <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 3.158 (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 0.002 <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 3.036 (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 0.003 <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

| Variabel | R Square | Adjusted R Square |
|----------|----------|-------------------|
| X4 | 0.436 | 0.412 |
| Y | 0.574 | 0.550 |

Source: Data Processing (2020)

**IV. CONCLUSION**

Providing appropriate responses to employee behavior as a locus of control stimulus can affect employee self-confidence in their work, application of work discipline by making mutually agreed upon rules, creating a healthy work environment to increase employee productivity, creating reward programs as motivation for increasing employee job satisfaction, establishing good communication and providing appreciation for employee ideas will motivate to work and provide maximum contribution to the agency.

**REFERENCES**

A A. Anwar Prabu Mangkunegara (2010). HR Performance Evaluation, PT. Refika Aditama, Bandung.Bangun, Wilson, 2012, Human Resource Management, Erlangga, Bandung

Alex S. Nitisemito, 2010. Management of personnel Human Resource Management. Third Edition. Jakarta: Ghalia Indonesia.

Alex S. Nitisemito, 2014, Personnel Management, Ghalia Indonesia, Jakarta.

April, K.A., Dharani, B & Peters, K. 2012. Impact of locus of control expectancy on level of well-being. Review of European Studies; 04 (2).

Arianto, D. A. (2013). The Influence of Discipline, Work Environment and Work Culture on Teaching Performance. Journal of Economia, 9 (2), 191-200.

Chaplin. 2011. Complete Psychology Dictionary (translated by Kartini & Kartono). Jakarta: PT. Raja Grafindo Persada

Dayakisni, and Yuniardi, S, 2010, Cross-Cultural Psychology. Revised Edition. Malang: UPT Publishing University of Muhammadiyah Malang.

Dole, Carol and Schroeder, Richard G., 2010, The Impact of Varios Factors on the Personality, Job Satisfaction and Turn Over Intentions of Professional Accountants, Managerial Auditing Journal, Vol. 16 No. 4 pp 234-245.

Edy Sutrisno, 2010. Human Resource Management, Third Edition, Kencana Prenada Media Group, Jakarta

Ghufron & Risnawita. 2011. Psychological Theories. Jogjakarta: Ar-Ruzz Media.

Hamedoglu M, Kantor J and Gulay E, 2012, The effect of Locus of Control and culture on leader preferences, International online journal of educational Sciences vol.4, 319-324.

Hasibuan, Malayu S.P., 2011. Human Resource Management. Bumi Aksara, Jakarta.

Kutanis, O., Mesci, M., & Ovdur, Z. (2011). The effects of locus of control on learning performance: A case of academic organization. Journal of Economic and Social Studies, 1 (2), 11-36.

Munandar. (2010), Budgeting Work Planning for Work Coordination and Work Supervision, BPFE, Yogyakarta.

Munandar, A. S. (2011). Industrial and Organizational Psychology. Jakarta: University of Indonesia (UI-Press).

Rivai, Veithzal. 2011, Human Resource Management for Companies: From Theory to Practice, Jakarta: RajaGrafindo Persada,

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.

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. *IJARIIE-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

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 Charateristics, 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