



The Influence of Authentic Leadership and Organizational Support on Innovative Behavior through Intrinsic Motivation as A Mediating Variable

Mahendriyo^{1,a)}, Widi Fajar Widyatmoko^{1,b)}

^{1,2}Department of Management, Universitas Teknologi Yogyakarta, Yogyakarta, Indonesia

^{a)} Corresponding author: mahendriyo05@gmail.com

^{b)} widifajar.psi@uty.ac.id

Abstract. This study aims to analyze the influence of authentic leadership and organizational support on innovative behavior through intrinsic motivation as a mediating variable among millennial employees and permanent staff in Yogyakarta. The sampling method used is purposive sampling. A total of 128 online questionnaires were distributed and deemed valid, and the data were processed using SPSS 26 software. The data analysis method of this study uses multiple linear regression analysis. Hypothesis testing in this research uses the t-test and path analysis. The results of the analysis indicate that authentic leadership and organizational support have a positive and significant effect on intrinsic motivation, authentic leadership and intrinsic motivation have a positive and significant effect on innovative behavior, organizational support has a positive but not significant effect on innovative behavior, and authentic leadership and organizational support have a positive but not significant effect on innovative behavior through intrinsic motivation.

Keywords: Authentic Leadership, Innovative Behavior, Intrinsic Motivation, Organizational Support.

INTRODUCTION

In the era of globalization and intense business competition, innovative behavior has become a crucial factor for companies to maintain a competitive edge [1]. This behavior, which involves the process of generating, introducing, and implementing new ideas, is heavily influenced by the quality of human resources (HR) within the company. High-quality HR is considered a key asset that must be well-managed through training, motivation, and skill development [2].

Human resource management (HRM) plays a central role in regulating the relationships and roles of employees to achieve organizational goals effectively, innovatively, and efficiently [3]. HRM integrates various disciplines, such as sociology and psychology, to manage aspects like employee planning, career management, performance evaluation, and maintaining positive work relationships. These elements collectively contribute to the cultivation of innovative behavior in the workplace [4].

In addition to HRM, leadership style significantly influences employees' innovative behavior. Authentic leadership, a leadership theory that emphasizes honesty and ethics, is believed to enhance leader effectiveness and provide long-term positive impacts on the organization [5]. Previous research has demonstrated a strong relationship between authentic leadership and employees' innovative behavior [6].

Organizational support is also a key factor that influences innovative behavior. Support from the organization can enhance employees' perception of their role within the organization, thereby encouraging their contribution to innovation [7] [8]. When employees feel supported, they tend to develop a stronger emotional attachment to the organization, which motivates them to contribute positively [9] [10].

Intrinsic motivation, which focuses on the internal drive of employees to achieve, has also been shown to have a significant influence on innovative behavior. Previous studies have indicated that high intrinsic motivation is associated with increased creativity and innovation in the workplace [11] [12].

This study aims to investigate the relationship between authentic leadership, organizational support, and intrinsic motivation on innovative behavior, with a focus on employees in Yogyakarta. The study seeks to build on previous research and provide deeper insights into the factors that drive innovative behavior in the workplace.

METHODS

a. Sample

This study utilizes purposive sampling with the following criteria for selecting participants:

1. Millennials
2. Employees or staff who are permanently employed in private companies or state-owned enterprises

Table 1. Amount of Participants

No	Description	Total
1	Questionnaires	147
2	Cannot be processed	19
3	Processable	128

Based on the distribution of the questionnaires, 147 responses were obtained. However, 19 respondents did not meet the criteria and thus their data could not be processed. Therefore, the analyzable data for this study totals 128 responses.

b. Operational Definition of a Variable

The variables used in this study consist of an independent variable, namely Authentic Leadership and Organizational Support. The dependent variable is Innovative Work Behavior, with one intervening variable being Intrinsic Motivation.

1. Dependent Variable

The dependent variable in this study is Innovative Work Behavior. Innovative Work Behavior is defined as an individual's actions aimed at identifying or proposing new ideas, processes, products, or procedures that are beneficial within the context of work, groups, or organizations, according to [13].

Table 2. Innovative Behaviour Statement Item

Number of Question Item	Reference
11	[14]

2. Independent Variable

The independent variables in this study are Authentic Leadership and Organizational Support, which are explained as follows:

a) Authentic Leadership

Authentic Leadership is a leadership style that emphasizes expectations, optimism, self-confidence, and efficiency. Leaders who adopt this approach have clear moral values and perspectives and encourage employees to become leaders in the interest of the greater good [15].

Table 3. Authentic Leadership Statement Item

Number of Qustion Item	Reference
10	[16]

b) Organizational Support

Perceived Organizational Support is the evaluation conducted by employees regarding the contributions and attention that the organization provides towards the employees' well-being [17].

Table 4. Organizational Support Statement Item

Number of Question Item	Reference
9	[18]

3. Intervening Variable

The dependent variable in this study is Intrinsic Motivation, according to [19], intrinsic motivation arises from within and is not influenced by external factors, as each individual inherently has a tendency to engage in certain actions.

Table 5. Intrinsic Motivation Statement Item

Number Question item	Reference
16	[20]

c. Method of Analysis

Validity testing is conducted by comparing the calculated r value with the table r with positive results indicating validity. Classical assumption tests include the Monte Carlo normality test, which should show sig>0.05, the multicollinearity test with tolerance>0.1 and VIF<10, and the heteroscedasticity test using the Glejser test with sig>

0.05 Data analysis is performed using multiple linear regression analysis via SPSS. Hypothesis testing involves the coefficient of determination and t-tests, where hypotheses are accepted if the sig>0.05 and the t-value is positive.

[21] explains that multiple linear regression analysis predicts changes in the dependent variable based on variations in independent variables. This method is used when there are two or more independent variables.

1. Regression Model 1

$$Z = a + b_1X_1 + b_2X_2$$

Description:	
Z	= Intrinsic Motivation
X1	= Authentic Leadership
X2	= Organizational Support
b1	= Regression Coefficient
b2	= Regression Coefficient

2. Regression Model 2

$$Y = a + b_1X_1 + b_2X_2 + b_3Z$$

Description:	
Y	= Innovative Behaviour
X1	= Authentic Leadership
X2	= Organizational Support
b1	= Regression Coefficient
B2	= Regression Coefficient

d. Path Analysis

According to [21], path analysis can be conducted using correlation and regression, which allows for the examination of relationships up to the final dependent variable, including direct paths or mediation variables

RESULTS AND DISCUSSION

a. Descriptive Analysis

Based on the questionnaires collected from 147 respondents from private companies and state-owned enterprises in Yogyakarta, data regarding the type of employees was obtained.

Table 6. Analysis Descriptive Result

Characteristic	Number of employees	Percent (%)
Based on type of employees		
Permanent employees	128	87,1%

It was found that there are 128 permanent employees and 19 non-permanent employees. Based on these results, the data used for analysis totals 128 responses.

b. Result of Validity and Reliability Testing

The SPSS calculations yielded an r value higher than the r table value of 0.1736, with a significance level below 0.05, indicating that the questionnaire items are valid. For reliability testing, Cronbach's Alpha was used to assess the consistency of the statements. The results showed a Cronbach's Alpha value greater than 0.60, confirming that the statements are reliable and suitable for use as research instruments.

c. Results of Classical Assumption Tests

The normality test conducted using the Monte Carlo method returned a significance value greater than 0.05, suggesting that the data follows a normal distribution. The multicollinearity analysis showed tolerance values above 0.1 and Variance Inflation Factor (VIF) values below 10, indicating that multicollinearity is not an issue. The Glejser test for heteroskedasticity produced a significance value greater than 0.05, confirming the absence of heteroskedasticity. Lastly, the linearity test yielded a significance value below 0.05, which validates that the model is linear.

d. Testing the Coefficient of Determination (Adjusted R Square)

Based on the R Square value of 0.692 shown in Table 7, it indicates that Authentic Leadership and Organizational Support account for 69% of the variance in Intrinsic Motivation, with the remaining percentage attributed to other factors not examined in this study.

Table 7. Coefficient of Determination for Model 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,835 ^a	0,696	0,692	3,123

Based on the R Square value of 0.672 shown in the table 8, this indicates that Authentic Leadership, Organizational Support, and Intrinsic Motivation account for 67% of the variance in Innovative Behavior, with the remaining percentage attributed to other factors not examined in this study

Table 8. Coefficient of Determination for Model 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
-------	---	----------	-------------------	----------------------------

2	0,825 ^a	0,680	0,672	2,142
---	--------------------	-------	-------	-------

e. Regression Result

Table 9 presents the results of the panel data regression on the impact of Authentic Leadership and Organizational Support on Intrinsic Motivation. Based on Table 9, it is possible to determine whether the hypotheses for all independent variables are accepted or not.

Table 9. Regression Result Model 1

Variables	Unstandardize Coefficients (B)	t	Sig	Description
(Constan)	18,064	5,962	0,000	
Authentic Leadership	0,702	7,198	0,000	Accepted
Organizational Support	0,385	3,344	0,001	Accepted

Dependent Variable Intrinsic Motivation

Table 10 presents the results of the panel data regression on the impact of Authentic Leadership, Organizational Support, and Intrinsic Motivation on Innovative Behavior. Based on Table 10, it is possible to determine whether the hypotheses for all independent variables are accepted or not.

Table 10. Regression Result Model 2

Variables	Unstandardize Coefficients (B)	t	Sig	Description
(Constan)	5,498	2,335	0,021	
Authentic Leadership	0,254	3,190	0,002	Accepted
Organizational Support	0,029	,352	0,725	Rejected
Intrinsic Motivation	0,341	5,556	0,000	Accepted

Dependent Variable Intrinsic Behaviour

f. Path Analysis

Based on the SPSS data analysis, the path analysis model shows that authentic leadership influences innovative behavior with an index of 0.324 and affects intrinsic motivation with an index of 0.596. Organizational support impacts innovative behavior with an index of 0.031 and intrinsic motivation with an index of 0.277. Intrinsic motivation affects innovative behavior with an index of 0.512. Additionally, authentic leadership influences innovative behavior through intrinsic motivation with an index of 0.554, while organizational support impacts innovative behavior through intrinsic motivation with an index of 0.572. These results can be seen in Figure 1.

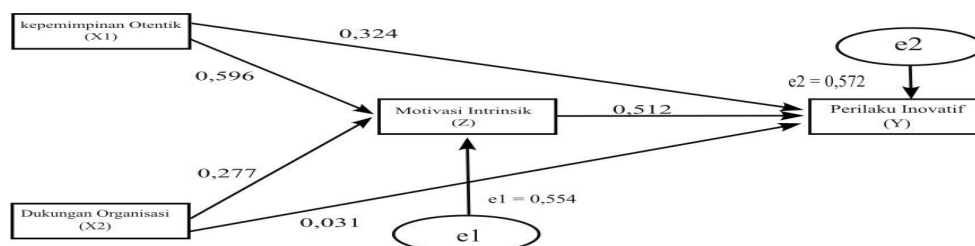


Figure 1. Path Analysis

Based on the path analysis results, a Sobel test was conducted to assess the impact of Authentic Leadership on Innovative behavior through the mediating variable of Intrinsic Motivation, using a Sobel calculator as shown in Figure 2.

Figure 2. Sobel Calculator Result

Input:		Test statistic:	Std. Error:	p-value:
a	0.702	Sobel test: 0.55732189	0.42952198	0.57730752
b	0.341	Aroian test: 0.55200126	0.43366206	0.58094749
s _a	0.098	Goodman test: 0.5627994	0.42534161	0.57357149
s _b	0.61	Reset all	Calculate	

The mediation test results show a p-value of $0.57 > 0.05$, indicating that Intrinsic Motivation does not significantly mediate the relationship between Authentic Leadership and Innovative Behavior. Thus, Intrinsic Motivation does not have a partial or full mediating effect between Authentic Leadership and Innovative Behavior.

Based on the path analysis results, a Sobel test was conducted to assess the impact of Organizational Support on Innovative Behavior through the mediating variable of Intrinsic Motivation, using a Sobel calculator as shown in Figure 3.

Input:		Test statistic:	Std. Error:	p-value:
a	0.385	Sobel test: 0.55138243	0.23810153	0.58137154
b	0.341	Aroian test: 0.52890498	0.24822039	0.59687137
s _a	0.115	Goodman test: 0.57699295	0.22753311	0.56394422
s _b	0.61	Reset all	Calculate	

Figure 3. Sobel Calculator Result

The mediation test results show a p-value of $0.58 (> 0.05)$, indicating that Organizational Support does not significantly affect Innovative Behavior through Intrinsic Motivation. Thus, Intrinsic Motivation does not mediate the relationship between Organizational Support and Innovative Behavior, either partially or fully.

g. Discussion

1. Impact of Authentic Leadership on Innovative Behavior

Based on the t-test with a 95% confidence level ($\alpha = 0.05$), the Authentic Leadership variable has a p-value of $0.02 (< 0.05)$ and a t-value of $3.190 (> 1.979)$, indicating that H1 is accepted. This means Authentic Leadership has a positive and significant impact on Innovative Behavior among millennial employees in Yogyakarta. It helps leaders understand effective ways to think and act in the company and how their judgments are perceived. These findings are consistent with [22] and [23], who also found a positive and significant effect of Authentic Leadership on Innovative Behavior.

2. Impact of Authentic Leadership on Intrinsic Motivation

Based on the t-test with a 95% confidence level ($\alpha = 0.05$), the Authentic Leadership variable has a p-value of $0.00 (< 0.05)$ and a t-value of $7.198 (> 1.979)$, indicating that H2 is accepted. This means Authentic Leadership has a positive and significant impact on Intrinsic Motivation among millennial employees in Yogyakarta. Authentic Leadership fosters trust through honesty and transparency, creating a supportive work environment that enhances intrinsic motivation. These findings are supported by [24] and [25], who also found a positive and significant effect of Authentic Leadership on Intrinsic Motivation.

3. Impact of Organizational Support on Innovative Behavior

The t-test results show that Organizational Support has a p-value of $0.725 (> 0.05)$ and a t-value of $0.352 (< 1.979)$, indicating that Organizational Support does not have a

significant impact on Innovative Behavior among millennial employees in Yogyakarta. This suggests that despite having supportive policies and programs, their implementation might be ineffective or not well-communicated, resulting in limited impact on employees. These findings align with [26]), who also found no significant effect of Organizational Support on Innovative Behavior.

4. Impact of Organizational Support on Intrinsic Motivation

The t-test results show that Organizational Support has a p-value of 0.01 (< 0.05) and a t-value of 3.334 (> 1.979), indicating a significant effect on Intrinsic Motivation. This suggests that Organizational Support in Yogyakarta positively influences the Intrinsic Motivation of millennial employees. Effective organizational support enhances employees' sense of autonomy and control, boosting their intrinsic motivation. Supportive practices such as career development programs and growth opportunities further increase motivation by providing clear paths for personal and professional goals. These findings are consistent with [27] and [28], who also found a significant impact of Organizational Support on Intrinsic Motivation.

5. Impact of Intrinsic Motivation on Innovative Behavior

The t-test results show that Intrinsic Motivation has a p-value of 0.00 (< 0.05) and a t-value of 5.556 (> 1.979), indicating a significant effect on Innovative Behavior. This means that Intrinsic Motivation significantly influences the Innovative Behavior of millennial employees in Yogyakarta. Intrinsic Motivation drives employees to explore and learn new things, leading them to seek innovative solutions and improve job performance. Employees who are intrinsically motivated are generally more engaged and satisfied with their work, which fosters creativity and efficiency. These findings are supported by [29] and [30], who also found a significant impact of Intrinsic Motivation on Innovative Behavior.

6. Impact of Authentic Leadership on Innovative Behavior Through Intrinsic Motivation

The Sobel test results show a p-value of 0.57 (> 0.05), indicating that Intrinsic Motivation does not significantly mediate the relationship between Authentic Leadership and Innovative Behavior. This suggests that Intrinsic Motivation does not have a partial or full mediating effect between Authentic Leadership and Innovative Behavior. Factors such as organizational context, work environment, and external pressures may limit the impact of Intrinsic Motivation, despite its positive potential. Additionally, insufficient skills or resources and varying perceptions of leadership and innovation might affect the clarity of Intrinsic Motivation's impact.

7. Impact of Organizational Support on Innovative Behavior Through Intrinsic Motivation

The mediation test results show a p-value of 0.58 (> 0.05), indicating that Intrinsic Motivation does not significantly mediate the relationship between Organizational Support and Innovative Behavior. This means that Intrinsic Motivation does not have a partial or full mediating effect between Organizational Support and Innovative Behavior.

CONCLUSIONS

This study aimed to examine the impact of Authentic Leadership and Organizational Support on Innovative Behavior through Intrinsic Motivation as a mediating variable. Based on the results and discussions, the conclusions are as follows:

1. Authentic Leadership has a positive and significant effect on Innovative Behavior.
2. Authentic Leadership positively and significantly influences Intrinsic Motivation.
3. Organizational Support has a positive but not significant effect on Innovative

Behavior.

4. Organizational Support positively and significantly affects Intrinsic Motivation.
5. Intrinsic Motivation has a positive and significant impact on Innovative Behavior.
6. Authentic Leadership does not significantly influence Innovative Behavior through Intrinsic Motivation.
7. Organizational Support does not significantly influence Innovative Behavior through Intrinsic Motivation.

ACKNOWLEDGMENTS

I would like to thank my supervisor, Mr. Widi Fajar Widyatmoko, for his guidance and support during this study. I also appreciate the contributions from the participants from companies in Yogyakarta. Special thanks to Universitas Teknologi Yogyakarta for the resources provided. Lastly, I would like to thank my family and friends for their encouragement.

REFERENCES

- [1] S. Tien, "Implementation of Authentic Leadership and Person-Organization Fit and Its Relationship with Psychological Contracts and Islamic Organizational Commitment," *Indonesian Sharia Economics Journal*, Vol. X, No. 2, Pp. 132-139, 2020.
- [2] S. D. Apriliana dan E. R. Nawangsari, "Competency-based human resource training and development," *Economic Forum*, vol. 23, no. 4, pp. 804-812, 2021.
- [3] E. Susan, "Human resource management," *Journal of Islamic Education Management*, vol. 9, no. 2, pp. 952-962, 2019.
- [4] A. Muhtarom, S. A. Rahmaji, T. S. Basirun, M. and J., "Basic Concepts of Organizational Behavior: Definition, History and Contribution of Disciplines to Organizations," *Tambusai Education Journal*, vol. 7, no. 1, pp. 1421-1427, 2023.
- [5] G. Alarifi dan N. A. Adam, "The Role of Participatory Leadership and Employee Innovative Behavior on SMEs' Endurance," *Sustainability*, vol. 15, no. 2740, pp. 1-13, 2023.
- [6] M. Groselj, M. Crene, S. Penger dan B. Grah, "Authentic and Transformational Leadership And Innovative Work Behaviour: The Moderating Role Of Psychological Empowerment," *European Journal Of Innovation Management*, vol. 24, no. 3, pp. 678-706, 2021.
- [7] J. Stoffers, P. Neessen dan P. V. Dorp, "Organizational Culture and Innovative Work Behavior: A Case Study of a Manufacturer of Packaging Machines," *American Journal of Industrial and Business Management*, vol. 5, pp. 198-207, 2015.
- [8] M. Zainuddin dan A. Nasikhah, "The Role of Organizational Culture in Improving Employee Performance (Case Study at Laznas Nurul Hayat Kediri)," *Sharia Economics*, vol. 4, no. 2, pp. 1-41, 2020.
- [9] A. Ordu dan T. Sari, "The Role of Innovative Work Behaviour in the Relationship between Organizational Support and Organizational Happiness," *Research in Educational Administration & Leadership*, vol. 7, no. 4, pp. 893-935, 2022.
- [10] S. Hadi, L. Setiawati, K. C. Kirana, S. B. Lada dan C. H. T. Rahmawati, "The Effect of Digital Leadership and Organizational Support on Innovative Work Behavior: The Mediating Role of Emotional Intelligence," *Quality - Access to Success*, vol. 25, no. 199, pp. 74-83, 2024.
- [11] H. Setyadhi, E. Masdupi dan S., "The Influence of Competence and Intrinsic Motivation on Innovative Behaviour Through Work Meaningfulness, as a Mediator, of the Employees of the Education Units of the Ministry of Industry in West Sumatera," *Atlantis Press*, vol. 192, pp. 562-569, 2021.
- [12] A. Venkatesamy dan C. Lew, "Intrinsic and extrinsic reward synergies for innovative work behavior among South African knowledge workers," *Reward synergies for work behaviour*, vol. 53, no. 1, pp. 1-17, 2022.
- [13] W. Widodo dan I. Gustari, "Teacher's Innovative Behavior in Indonesian School: The Role of Knowledge Management, Creativity and OCB," *Universal Journal of Educational Research*, vol. 8, no. 10, pp. 4784-4791, 2020.
- [14] J. D. Jong dan D. D. Hartog, "Measuring Innovative Work Behaviour," *Creativity and Innovation Management*, vol. 19, no. 1, pp. 23-36, 2010.
- [15] M. Saruksuk, N. Hidayat dan A. Lutfia, "The Influence of Authentic Leadership and Affective Well-Being on the Affective Commitment of Edutech Startup Employees," *Urnal of Business, Management, and*

Finance, Vol. 3, No. 2, Pp. 560-578, 2022.

- [16] Y. Bai, Z. Wang, M. Alam, F. Gul dan Y. Wang, "The Impact of Authentic Leadership on Innovative Work Behavior: Mediating Roles of Proactive Personality and Employee Engagement," *Authentic Leadership and Proactive Personality*, vol. 13, pp. 1-12, 2022.
- [17] T. O. Indrawian, A. I. Anggraeni dan A. Indrayanto, "The Influence Of Perceived Organizational Support (POS) And Psychological Capital On Organizational Citizenship Behavior (OCB)," *Journal Of Accounting, Management, And Economics*, vol. 20, no. 1, pp. 1-4, 2018.
- [18] A. Riyadi, "The Influence of Perceived Organizational Support Toward The Employees' Turnover Intentions in Budget Hotel: A Case Study in Jakarta," *Advances in Economics, Business and Management Research*, vol. 52, pp. 288-301, 2018.
- [19] R. Rismayanti, M. A. Rayhan, Q. K. El Adzim dan L. A. Fatihah, "The Effect of Intrinsic Motivation and Extrinsic Motivation on the Learning Process of Students of Universitas Pendidikan Indonesia," *Journal of Education, Science and Technology*, vol. 2, no. 2, pp. 251- 256, 2023.
- [20] W.-J. Shyr, . Y.-M. Hsieh dan C.-H. Chen, "The Effects of Peer-Based Instant Response System to Promote Learning Performance, Intrinsic Motivation and Self-Efficacy," *Sustainability*, vol. 13, no. 4320, pp. 1-13, 2021.
- [21] S. Quantitative, *Qualitative and R&D Research Methods*, Bandung: Cv. Alfabeta, 2020.
- [22] C. A. Kusmargono, W. K. Jaya, . A. H. Hadna dan S. , "The Effect of Authentic Leadership on Innovative Work Behavior Mediated by Work Meaningfulness," *Journal of Psychology and Behavior Studies*, pp. 1-7, 2023.
- [23] L. S. Mahmud dan B. Uysal, "The Effect Of Authentic Leadership On Innovative Work Behavior, Psychological Empowerment And Work Engagement: A Research In Banking Sector," *Global Research Congress*, vol. 17, no. 38, pp. 198-199, 2023.
- [24] B. Aydogdu dan D. P. Alkan, "The Effect of Authentic Leadership on Intrinsic Motivation of Millennial Engineers Working in Information Technology (IT) Sector," *Journal Of Business Research-Turk*, vol. 11, no. 3, pp. 1503-1517, 2019.
- [25] Y. R. Handayani dan H. Heri, "Authentic Leadership and Affective Commitment: The Mediating Role of Intrinsic Motivation," *Journal of Management Science Community*, Vol. 1, No. 2, Pp. 138-151, 2022.
- [26] R. N. R. P. dan W., "A Model For Enhancing Innovative Work Behavior," *3rd International Conference on Environmental Geography and Geography Education*, pp. 1-10, 2021.
- [27] O. M. Karatepe, "Do Personal Resources Mediate The Effect Of Perceived Organizational Support Onemotional Exhaustion And Job Outcomes?," *Inernational Journal of Contemporary Hospitality Management*, vol. 27, no. 1, pp. 1-39, 2015.
- [28] M. Li, A. Jameel, Z. Ma, H. Sun, A. Hussain dan S. Mubeen, "Prism of Employee Performance Through the Means of Internal Support: A Study of Perceived Organizational Support," *Psychology Research and Behavior Management*, vol. 5, pp. 965-976, 2022.
- [29] A. T. Adriyanto, "The Effect of Intrinsic Motivation and Knowledge Sharing on Work Productivity Through Innovative Behavior as an Intervening Variable," *Journal of Taxation, Management, and Accounting*, vol. 13, no. 1, pp. 35-45, 2021..
- [30] Z. Xu, H. Wang dan S. Suntrayuth, "Organizational Climate, Innovation Orientation, and Innovative Work Behavior: The Mediating Role of Psychological Safety and Intrinsic Motivation," *Discrete Dynamics in Nature and Society*, vol. 2022, pp. 1-10, 2022.