Asian Journal of Social Science and Management Technology
ISSN: 2313-7410
Volume 6, Issue 6, November-December, 2024
Available at www.ajssmt.com

A Study of Perceived Organizational Support on Adaptive Performance: Artificial Intelligence as Moderating Variable

Djaelani Susanto[1], Subarjo Subarjo[2], Zainur Rahman[3], Yetti Lutiyan Suprapto[4]

[1, 2, 4.] *Department of Management, Faculty of Economics, Universitas Mercu Buana Yogyakarta, Indonesia*
[3.] *Program Study of Management, Faculty of Economics and Business, Universitas Negeri Surabaya, Indonesia*

Abstract: Adaptive performance is a study that is currently of concern, both from researchers and practitioners. This is because organizational change is experiencing an increasingly rapid transition so employees are required to be more adaptive to existing changes. Employees need to be directed so that they can more easily adapt to new working conditions and demands. Therefore, the role of the organization is very important to provide support to its employees, both in the form of increasing skills and in the form of providing more adequate welfare. In addition, the role of technology can also encourage employees to improve employee adaptive performance.

This study investigates the impact of perceived organizational support on adaptive performance, with artificial intelligence (AI) as a moderating variable. Using a quantitative approach, the research involved a sample size of 386 respondents, and the data were analyzed using Structural Equation Modeling (SEM). The findings reveal that perceived organizational support positively influences adaptive performance. However, AI does not moderate this relationship, as its role remains limited to systems and processes. Employees continue to depend on positive organizational support and emotional stability to effectively achieve organizational goals.

Keywords: Adaptive Performance; Artificial Intelligence; Perceived Organizational Support

---

1. Introduction

Employee performance continues to be an evolving research topic, where at present, the study of employee performance is beginning to shift to adaptive performance. Employee performance has a sequential impact on organizational performance. The decline in organizational performance is not only due to the effects of the pandemic but several other factors influence one of them is the lack of resource optimization, ranging from human resources, natural resources, and other resources.

To achieve superior and competitive human resources, support from the organization is needed. McKeown & Cochrane (2017) define perceived organizational support (POS) as a structure that maps and encourages the evaluation of employee performance in their workplace by considering how these employees reflect the organization's commitment to their long-term welfare.

In improving employee performance, employees need to get company support so that employees believe that the company will support them from behind the scenes (Putra & Surya, 2019). This is in line with (Musenze et al., 2022) and (Malaeb et al., 2022) which state that POS has a significant effect on employee performance. Therefore, it is necessary to have strong organizational support so that employee performance is getting better and also to achieve organizational goals.

Gumelar & Suhana (2022) stated that one of the efforts to maximize employee affective commitment is to pay attention to organizational support for the welfare of its employees. This support can be conveyed in the form of providing various facilities needed by employees both morally and materially. This effort is made as a means to help employees achieve their desires, strengthen their identity with the organization, and anticipate achieving greater success (Hamzah, 2020). Therefore, employees who are already committed to the organization will make them more adaptive to their work.

Research (Hamzah, 2020) stated that POS has a positive and significant effect on affective commitment where the higher the POS, the higher the performance. In addition, in the current organizational conditions, the role of technology cannot be separated because organizational activities cannot be separated from the role of technology. Jarrahi (2018) stated that technologies such as artificial intelligence (AI) provide many changes to humans in complex tasks, coupled with big data, algorithmic decision-making has opened up new opportunities to deal with complexity and present decision makers with comprehensive by using data effectively. Therefore, employees will be more willingness to put in extra effort to improve their performance and remain part of the organization so that they become more involved while they want to maintain their position in the company (Asif et al., 2019). Due to this gap, this study aims to examine the effect of perceived organizational support on adaptive performance moderated by artificial intelligence.

2. Literature Review

Perceived Organizational Support and Adaptive Performance

Perceived organizational support (POS) or commonly referred to as perceived organizational support is an aspect that refers to employee evaluations regarding employee experiences while working in terms of how far employees reflect organizational concern for employee welfare (McKeown & Cochrane, 2017). Perceived organizational support encourages employees to contribute more to help the organization achieve its goals and create a positive mood and psychology in employees (Kurtessis et al., 2015).

Another opinion was conveyed by Wayne et al. (1997) which stated that the perception of organizational support is a form of general belief developed by employees about how much the organization values contributions and cares about the lives of individual employees. When employees' expectations and desires about a sense of attention and support from the organization are fulfilled, these conditions make it more likely for employees to form emotional ties to the organization so that they are serious in carrying out their obligations to the organization.

Pulakos et al. (2000) stated that adaptive performance is self-regulation in dealing with changes in the workplace. Adaptive performance is more directed at self-regulation in adjusting to change. Without self-regulation, it will be difficult for employees to achieve adaptive performance.

H1: Perceived organizational support has a significant positive effect on adaptive performance.

Artificial Intelligence Moderate the Effect of Perceived Organizational Support on Adaptive Performance

AI is one of the tools in organizations to make work more effective and efficient. Legg & Hutter (2007) defined AI as something that has the ability to think, plan, have knowledge, adapt to the environment or retrieve information. On the other hand, Johansson & Herranen (2019) defined AI as the ability of things like machines to learn, interpret and understand themselves in a manner similar to humans. Thus, AI is a medium that organizational members can use in analyzing to make decisions because AI is designed to make a gar task easier to carry out.

This area of implementation is also further supported by Tecuci (2012) who has knowledge acquisition, natural language, and robotics as some of the key areas for AI. Based on these definitions, AI is knowledge acquisition and problem-solving based on the use of machines or extrinsic tools. Jarrahi (2018) stated that AI with superior quantitative, computational, and analytic capabilities provides many changes to humans in complex tasks, coupled with big data, algorithmic decision-making has opened up new opportunities to deal with complexity and present decision makers with comprehensive by using data effectively.

Jarrahi (2018) stated that AI with superior quantitative, computational, and analytical capabilities provides many changes to humans in complex tasks, coupled with big data, algorithmic decision-making has opened up new

opportunities to deal with complexity and present decision-makers with comprehensive by using data effectively. All processes have been recorded and analyzed comprehensively to make the organization run well. AI can help in managing complexity by identifying causal relationships and asserting appropriate causes of action among various causes (Marwala, 2015).

Venkatesh et al. (2003) stated that employees who believe the system is useful tend to use it to do their work. With the ease of the system, employees will perceive their work positively so that employees will devote their positive energy by working with dedication and enthusiasm.

H2: Artificial intelligence moderates the effect of perceived organizational support on adaptive performance.

3. METHOD

The type of this research is quantitative research. The quantitative research method is one type of research whose specifications are systematic, planned and structured from the beginning to the making of the research design. The unit of analysis is the individual level where participating respondents are given a questionnaire through a face-to-face survey method.

The sampling technique in this study was purposive sampling, employees whose companies in the service sector experienced organizational changes. The data collected were then analyzed using SEM (Structural Equation Modeling) with a sample size is 386 respondents. The data were analyzed in two stages. In the first stage, the measurement model is assessed based on rules of thumb to determine acceptable levels of reliability and validity.

The second involves model evaluation. The model evaluation consists of two parts, namely the outer model and the inner model. The outer model is evaluated by convergent and discriminant validity of the indicators and composite reliability for blocks of indicators. The inner model is measured using several criteria, namely: R-square for endogenous latent variables and positive path coefficient values indicate that exogenous variables are positively related to endogenous variables, while negative coefficient values mean that exogenous variables are negatively related to endogenous variables.

Perceived Organizational Support is an aspect that refers to the employee's evaluation of the employee's experience while working in terms of how far the employee reflects the organization's concern for employee welfare (McKeown & Cochrane, 2017). In this study, perceived organizational support is measured using indicators from Rhoades et al. (2001), consisting of 7 question items with a Likert scale (1-5), namely: (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree.

Pulakos et al. (2000) defined adaptive performance can be defined as a change in behavior in meeting new demands or requests from a job such as unclear problems, new people, cultural differences, physical condition challenges, and new technology due to changes and uncertain work situations. The dimensions used in this study use the dimensions of Pulakos et al. (2000) which state that adaptive performance is measured. Question items with a Likert scale (1-5), namely: (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree.

Johansson & Herranen (2019) defined AI as the ability of things like machines to learn, interpret, and understand themselves in a manner similar to humans. The AI instrument was adapted from Paschen et al. (2019). Question items with a Likert scale (1-5), namely: (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree.

4. Result

Measurement Evaluation Test

To evaluate the quality of a measuring instrument for a construct, this research uses a measurement model evaluation. Measurement models come in two types: reflective and formative. This study employs only reflective measurement, as it is based on a construct developed from established theory and relevant articles. Reflective measurements are assessed by examining the factor loading for each construct. The model evaluation serves to test both validity and reliability. Validity is assessed through discriminant and convergent validity tests, while reliability is measured using composite reliability and Cronbach's alpha.

Jr et al. (2008) stated that the convergent validity test is assessed based on factor loadings which higher than 0.50 on each construct. The results of convergent validity testing are presented in detail in Table 1.

Table 1. Factor Loading

Variable	Item	*Loading*	*Cronbach's Alpha*	*Composite Reliability*
Perceived Organizational Support	POS1	0.780	0.734	0.819
	POS2	0.753		
	POS3	**0.368**		
	POS4	0.701		
	POS5	0.597		
	POS6	0.700		
	POS7	0.780		
Adaptive Performance	AP1	0.734	0.798	0.853
	AP2	0.662		
	AP3	0.742		
	AP4	0.666		
	AP5	0.619		
	AP6	0.515		
	AP7	0.760		
Artificial Intelligence	AI1	0.787	0.838	0.878
	AI2	0.629		
	AI3	0.725		
	AI4	0.758		
	AI5	0.724		
	AI6	0.683		
	AI7	0.676		

Table 1 presents the measurement evaluation test results. Items with factor loadings below 0.50 are excluded from further testing, as they do not meet the criteria for convergent validity; one item falls below this threshold and is thus omitted from the structural evaluation test. All constructs in the study demonstrate internal consistency reliability, with Cronbach's alpha and composite reliability values exceeding 0.60.

The next validity test is the discriminant validity assessment, which compares the square root of the average variance extracted (AVE) with the correlations between constructs. The results of this test are detailed in Table 2.

Table 2. Correlation Among Variable

	POS	AP	AI
POS	**0.664**		
AP	0.263	**0.676**	
AI	0.325	0.282	**0.713**

Table 2 shows that the discriminant validity criteria in this study have been met: the square root of the AVE values, found in the diagonal, are greater than the correlations between constructs in the same column. Data processing results confirm that each construct demonstrates a higher distinction from other constructs in the corresponding column.

Structural Evaluation Test

This research uses effect size to evaluate the structural model, specifically to assess the individual contribution of each predictor latent variable to the R^2 value of the criterion variable. According to Hair et al. (2010), effect

size is categorized into three levels: 0.02 (weak), 0.15 (medium), and 0.35 (large). Table 3 provides detailed calculations of the effect sizes for each path coefficient.

Table 3. Effect Size

	POS	AP	AI
AP	0.576	-	-

Table 3 shows that the effect size of perceived organizational support on adaptive performance (AP) is 0.56, the results indicate a strong practical influence. The structural model on endogenous variables was evaluated using the coefficient of determination (R^2) and Q-Square (Q^2). The results of the coefficient of determination (R^2) test show that the percentage of variance in the endogenous construct can be explained by the exogenous construct. The results of data processing R^2 of the endogenous adaptive performance construct is 0.566. These results mean that the variance of the adaptive performance construct can be explained by 57% by the variance of the exogenous construct of perceived organizational support.

The results of the structural model evaluation carried out in this research also looked at predictive relevance by using Q-Square value. The rule of thumb by using the value of the endogenous variable must be greater than zero so that it can indicate that the exogenous construct has predictive relevance on the endogenous variable. The test results for the Q-Square value on the endogenous construct are greater than zero for adaptive performance 0,585. This test shows that the predictive relevance of this research model is very good.

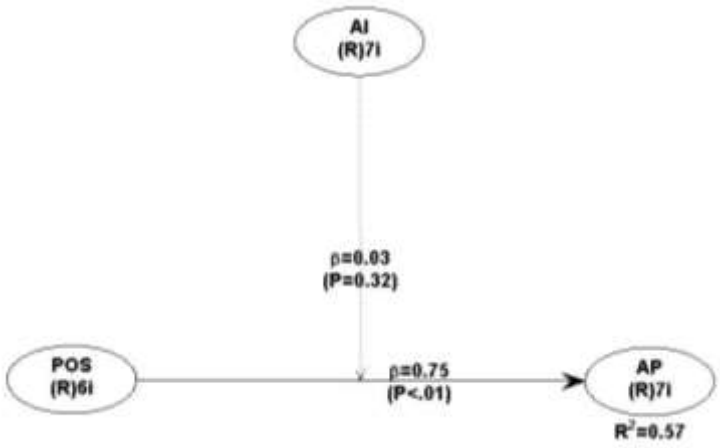

Figure 1. Research Model

Table 4 presents the results for each hypothesis proposed in this research. Hypothesis 1 posits that perceived organizational support has a positive effect on adaptive performance. As shown in Table 4, the POS→AP path coefficient is 0.75 with a p-value of <0.001, indicating a significant positive effect. Thus, the test results support Hypothesis 1, confirming that perceived organizational support has a significant positive impact on adaptive performance, so the hypothesis 1 is supported.

Table 4. Hypothesis Test

Variable Correlation	Path Coefficient	*P-Value*
POS→ AP	0.75	<0,001***
POS*AI → AP	0,03	0,028

*Significant at level 0.1 (*2-tailed*)

** Significant at level 0.05 (*2-tailed*)

*** Significant at level 0.01 (*2-tailed*)

Artificial intelligence moderates the effect of perceived organizational support on adaptive performance as indicated by the path coefficient value POS*AI → AP of 0,03, with a p-value of 0,028. Based on the test results,

artificial intelligence does not moderate the effect of perceived organizational support on adaptive performance, so hypothesis 2 was not supported.

5. Discussion

In discussing the impact of perceived organizational support (POS) on adaptive performance without artificial intelligence as a moderating factor. Perceived organizational support refers to employees' perception that their organization values their contributions and cares about their well-being. High POS can foster a sense of security, motivation, and loyalty, which are critical for enhancing adaptive performance, particularly in rapidly changing environments (Kurtessis et al., 2015).

Research indicates that when employees feel supported by their organization, they are more likely to embrace change, take initiative, and manage uncertainty more effectively (Al-Omar et al., 2019). The employees develop a general belief about the organization's support based on how much it values their contributions and cares for their well-being Wayne et al. (1997). Furthermore, POS has a psychological impact, enhancing employees' emotional resilience and reducing stress, which is essential for maintaining high adaptive performance (Andrade & Neves, 2022).

In this context, POS acts as a foundational support system that strengthens employees' willingness and ability to adapt, demonstrating the crucial role of organizational support in fostering an adaptable workforce. Johansson and Herranen (2019) describe AI as the ability of machines to learn, interpret, and understand in ways similar to humans. Therefore, AI serves as a medium for organizational members to analyze and make decisions, simplifying complex tasks. But, this research finding proved that AI not moderate the effect perceived organizational support on adaptive performance. AI systems often operate within predefined parameters and may struggle to interpret complex human dynamics or nuanced workplace contexts, which are crucial for fostering adaptability (Brynjolfsson & McAfee, 2014). Besides, the limitation of AI is difficult to support employees in adapting to unpredictable or rapidly changing work environments. Over-reliance on AI can hinder the development of problem-solving and decision-making skills essential for adaptability (Siau & Yang, 2017).

Makridakis (2017) stated that AI is typically designed to optimize efficiency and productivity, which may not align with fostering employee adaptability, a process that often involves trial, error, and learning through experience. AI lacks emotional intelligence and may fail to address employees' psychological and emotional needs, which are critical for adapting to new roles or challenges (Müller & Bostrom, 2016).

6. Conclusion and Future Research Agenda

This research demonstrates that perceived organizational support positively impacts adaptive performance. Organizational support plays a crucial role in boosting employees' motivation and encouraging their adaptability to new conditions and demands. However, the study found that AI does not moderate the relationship between perceived organizational support and adaptive performance. This suggests that, in new situations, AI's role remains limited as it primarily focuses on systems and processes. Employees still rely on a positive perception of organizational support and emotional stability to effectively achieve organizational goals.

This research has limitations, as it focuses solely on service sector organizations. Future studies could explore a broader range of organizational settings. Additionally, this study examines adaptive performance using only external factors, specifically perceived organizational support. Future research could incorporate both external and internal individual factors as antecedents of adaptive performance.

7. References

1. Al-Omar, H. A., Arafah, A. M., Barakat, J. M., Almutairi, R. D., Khurshid, F., & Alsultan, M. S. (2019). The impact of perceived organizational support and resilience on pharmacists' engagement in their stressful and competitive workplaces in Saudi Arabia. *Saudi Pharmaceutical Journal*, *27*(7), 1044–1052. https://doi.org/10.1016/j.jsps.2019.08.007.
2. Andrade, C., & Neves, P. C. (2022). Perceived Organizational Support, Coworkers' Conflict and Organizational

Citizenship Behavior: The Mediation Role of Work-Family Conflict. *Administrative Sciences*, *12*(1). https://doi.org/10.3390/admsci12010020.

3. Ansori, M. A., & Wulansari, N. A. (2021). The Effect of Perceived Organizational Support and Psychological Capital on OCB: Mediating Role of Engagement. *Diponegoro International Journal of Business*, *4*(2), 69–81. https://doi.org/10.14710/dijb.4.2.2021.69-81.
4. Asif, M., Qing, M., Hwang, J., & Shi, H. (2019). Ethical Leadership, Affective Commitment, Work Engagement, and Creativity: Testing a Multiple Mediation Approach. *Sustainability (Switzerland)*, *11*(16). https://doi.org/10.3390/su11164489.
5. Bessen, J. E. (2019). *AI and jobs: The role of demand*. NBER Working Paper Series.
6. Brynjolfsson, E., & McAfee, A. (2014). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*.
7. Gumelar, I. T., & Suhana. (2022). Pengaruh Perceived Organizational Support terhadap Komitmen Afektif pada Karyawan PT X. *Bandung Conference Series: Psychology Science*, *2*(1), 417–423. https://doi.org/10.29313/bcsps.v2i1.1205.
8. Hamzah, K. D. (2020). The Mediating Effect of Affective Commitment Between Organizational Justice, Perceived Organization Support and Employee Engagement. *Journal of Archaeology of Egypt/Egyptology*, *17*(6), 15909–15923.
9. Jarrahi, M. H. (2018). Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making. *Business Horizons*, *61*(4), 577–586. https://doi.org/10.1016/j.bushor.2018.03.007.
10. Johansson, J., & Herranen, S. (2019). The application of Artificial Intelligence (AI) in Human Resource Management: Current state of AI and its impact on the traditional recruitment process. *Master Thesis*. Jonkoping University.
11. Jr, J. F. H., Hopkins, L., Georgia, M., & College, S. (2008). *Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research*. https://doi.org/10.1108/EBR-10-2013-0128.
12. Kurtessis, J. N., Eisenberger, R., Ford, M. T., Buffardi, L. C., Stewart, K. A., & Adis, C. S. (2015). Perceived Organizational Support: A Meta-Analytic Evaluation of Organizational Support Theory. *Journal of Management*, *43*(6), 1854–1884. https://doi.org/10.1177/0149206315575554.
13. Legg, S. & Hutter, M. (2007). A Collection of Definitions of Intelligence. Advances in Artificial General Intelligence: Concepts, Architecture and Algorithms, *IOS press*, Issue 157, 17-24.
14. Makridakis, S. (2017). *The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms*. Futures.
15. Malaeb, M., Dagher, G. K., & Canaan Messarra, L. (2022). The Relationship Between Self-Leadership and Employee Engagement in Lebanon and the UAE: The Moderating Role of Perceived Organizational Support. *Personnel Review*. https://doi.org/10.1108/PR-12-2021-0862.
16. Marthing, E. K., & Sandroto, C. W. (2018). Analisis Pengaruh Perceived Organizational Support terhadap Organizational Citizenship Behavior Karyawan BPJS Ketenagakerjaan dengan Affective Commitment sebagai Variabel Mediasi. *Prosiding Working Papers Series In Management*, *10*(2), 43–60.
17. Marwala, T. (2015). *Causality, Correlation and Artificial Intelligence for Rational Decision Making*. Singapore: World Scientific.
18. McKeown, T., & Cochrane, R. (2017). Independent Professionals and the Potential for HRM Innovation. *Personnel Review*, *46*(7), 1414–1433. https://doi.org/10.1108/PR-09-2016-0256.
19. Mufarrikhah, J. L., Yuniardi, M. S., & Syakarofath, N. A. (2020). Peran Perceived Organizational Support terhadap Work Engagement Karyawan. *Gadjah Mada Journal of Psychology (GamaJoP)*, *6*(2), 151–164. https://doi.org/10.22146/gamajop.56396.
20. Müller, V. C., & Bostrom, N. (2016). *Future progress in artificial intelligence: A survey of expert opinion*.
21. Musenze, I. A., Mayende, T. S., Kalenzi, A., & Namono, R. (2022). Perceived Organizational Support, Self-Efficacy and Work Engagement: Testing for the Interaction Effects. *Journal of Economic and Administrative Sciences*, *38*(2), 201–228. https://doi.org/10.1108/jeas-08-2020-0141.
22. Putra, I. P. D. S. S., & Surya, I. B. K. (2019). The Effect of Perceived Organizational Support on Work Engagement and Turnover Intention. In *International Journal of Education and Social Science Research* (Vol. 2, Issue 04). http://ijessr.com.
23. Tecuci, G. (2012). Artificial Intelligence. *Wires computational statistics*, 4(2), 168-180.

24. Tong, H., & Wang, S. (2018). Influence of Perceived Organizational Support on Employees' Affective Commitment in Railway Enterprises: From the Mediating Role of Overconfidence. *Advances in Social, Education and Humanities Research*, *151*, 175–180.
25. Wayne, S. J., Shore, L. M., & Liden, R. C. (1997). Perceived Organizational Support and Leader-Member Exchange: A Social Exchange Perspective. *Academy of Management Journal*, *40*(1), 82–111. https://doi.org/10.2307/257021.
26. Yulivianto, T. S. (2019). Job Crafting Dan Persepsi Dukungan Organisasi Terhadap Kinerja Karyawan Melalui Keterikatan Kerja. *Jurnal Ilmu Manajemen (JIM)*, *7*(4), 1017–1028.
27. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27, 425-478.

INFO

Corresponding Author: Djaelani Susanto, Department of Management, Faculty of Economics, Universitas Mercu Buana Yogyakarta, Indonesia.

How to cite/reference this article: Djaelani Susanto, Subarjo Subarjo, Zainur Rahman, Yetti Lutiyan Suprapto, A Study of Perceived Organizational Support on Adaptive Performance: Artificial Intelligence as Moderating Variable, *Asian. Jour. Social. Scie. Mgmt. Tech*. 2024; 6(6): 234-241.