

ENHANCING ADAPTIVE PERFORMANCE THROUGH SELF-REGULATION: THE MODERATING ROLE OF PERCEIVED ORGANIZATIONAL SUPPORT

Sakri Sandikiawan^{1*}, Asep Gunawan², Dadang Priyono³, Surnita Sandi Wiranata⁴

¹⁻⁴ Department of Economy and Business, Universitas Muhammadiyah Cirebon, Indonesia

*Email corresponding author: sakribod@gmail.com

Abstract

In Indonesia's public food logistics sector, adaptive performance has become increasingly vital in response to the evolving challenges brought about by digital transformation, regulatory changes, and bureaucratic complexities. This study explores the influence of self-regulation on adaptive performance and investigates whether Perceived Organizational Support (POS) serves as a moderating factor in this relationship. Data were collected from 240 employees working in logistics organizations across West Java, including the National Public Logistics Agency (BULOG) and its affiliated partners. Employing a quantitative methodology and utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM), the study demonstrates that Self-Regulation exerts a significant and positive effect on Adaptive Performance. However, the moderating role of Perceived Organizational Support in this dynamic was found to be non-significant. These findings indicate that while intrinsic psychological resources such as self-regulation are essential for enhancing adaptability among individuals, organizational support alone may not effectively amplify this effect unless it is perceived as personally meaningful and growth-oriented. The study contributes theoretically by underscoring the centrality of self-regulation within hierarchical, collectivist organizational cultures, and offers practical recommendations for human resource development such as incorporating psychological training, structured goal-setting initiatives, and individualized support systems to cultivate adaptability and resilience in the workforce.

Keywords: Self-Regulation, Adaptive Performance, Perceived Organizational Support, Public Sector, Food Logistics.

INTRODUCTION

This section contains the research background, objectives, contributions (research benefits from theoretical and practical), novelty should be explicitly written, research results and implications (Practical advice based on research results). Contains the background, research objectives and scope of discussion. Amidst the dynamic transformation of Indonesia's public service sector, state-owned enterprises (BUMN) operating in the logistics industry are increasingly expected not only to fulfill their core operational mandates with efficiency but also to respond proactively to heightened societal expectations for transparency, innovation, and accountability. These demands are particularly acute in the domain of food logistics, which involves the distribution of essential commodities such as rice, sugar, and cooking oil. In West Java, entities like National Public Logistics Agency BULOG and its regional logistics branches in Cirebon, Bandung, and Bekasi play a pivotal role in stabilizing food prices, securing national food supplies, and facilitating the smooth distribution of staple goods (Sitinjak, 2022).

Employees in this sector navigate challenges that go beyond technical execution, operating in environments characterized by regulatory volatility, digital transformation, and mounting expectations for citizen-centric public service. These conditions call for more than procedural adherence; they necessitate adaptive performance, defined as the capacity to modify cognitive, behavioral, and strategic responses in the face of evolving workplace demands (Pulakos et al., 2006); Charbonnier-Voirin, A., 2021).

Conventional strategies emphasizing technical training and formal regulations are increasingly insufficient in equipping employees to meet such complex demands. As a result, scholars and practitioners alike have turned their attention to psychological competencies, especially self-regulation, which refers to an individual's ability to manage their thoughts, emotions, and actions in pursuit of specific objectives (Karoly, 1993; Panadero, 2017). Employees with strong self-regulation skills tend to demonstrate higher levels of initiative, emotional resilience, and behavioral flexibility qualities that are essential for effective adaptation in today's public sector contexts (Jansen et al., 2018)

Nonetheless, the effectiveness of self-regulation is shaped not only by internal factors but also by external organizational conditions, particularly Perceived Organizational Support (POS) the extent to which employees believe their organization values their contributions and is concerned about their well-being (Eisenberger et al., 2020). In Indonesia's collectivist and paternalistic organizational culture, POS plays a vital role in enhancing psychological safety and fostering intrinsic motivation (Putra & Cho, 2021; Marselinus, 2024). High levels of POS can reinforce the positive impact of self-regulation on adaptive performance by cultivating a sense of belonging and a reciprocal obligation to support organizational goals.

Although existing research in Western and private-sector contexts has established connections between self-regulation, POS, and adaptive performance (Shin, 2020), empirical investigations in Indonesia's public food logistics sector are notably limited. Given the highly bureaucratic nature of the public sector, which is characterized by hierarchical authority and rigid procedures, extrapolating findings from private enterprises may yield misleading conclusions (Widianingsih & Morrell, 2021)

Furthermore, theoretical discourse on the interaction between self-regulation and contextual moderators like POS remains divided. While Self-Regulation Theory (Karoly, 1993; Zimmerman, 2012) emphasizes internal cognitive and behavioral processes, Social Exchange Theory (Blau, 1964; Cropanzano & Mitchell, 2015) highlights the significance of mutual obligation and relational dynamics within organizations. Some scholars caution that high POS could reduce employees' self-regulatory efforts by creating overly comfortable work environments (Ferris et al., 2018), whereas others argue that POS enhances self-regulation by reducing psychological strain and enabling greater goal focus (Baran et al., 2012; Nguyen & Ngo, 2022)

Against this backdrop, and in light of the existing empirical gaps in Indonesia's public sector, this study aims to examine: (1) the direct relationship between self-regulation and adaptive performance; and (2) the moderating role of POS within this relationship, focusing on employees within the public food logistics sector in West Java.

The study is anchored in the combined application of Self-Regulation Theory, which explores how individuals manage their behavior to achieve desired outcomes, and Social Exchange Theory, which provides a relational framework for understanding organizational motivation. By integrating these perspectives, the research offers a comprehensive lens through which to analyze the interplay between individual psychological attributes and organizational support structures in driving adaptive work behavior.

From a practical standpoint, the findings of this study aim to inform human resource development strategies within BUMN logistics institutions. Specifically, the results could support the implementation of psychologically informed interventions such as self-regulation training, stress reduction programs, individualized coaching, and structured support mechanisms. These initiatives are expected to complement technical training efforts and contribute to a more comprehensive, context-sensitive approach to workforce development critical for cultivating a resilient and adaptive public service workforce in the face of ongoing policy reforms and societal change.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Self-Regulation

Self-regulation refers to an individual's ability to manage their thoughts, emotions, and behaviors to achieve specific goals (Scoular et al., 2025). This construct encompasses cognitive, behavioral, and emotional components that operate in a coordinated and interdependent manner. Emerging research highlights that self-regulation is not a fixed trait but can be cultivated through the use of metacognitive strategies, reflective practices, and targeted regulatory training (Sabaliauskas et al., 2025). In dynamic work environments such as staple food logistics, self-regulation enables employees to maintain focus, adapt to shifting demands, and remain resilient under pressure and frequent procedural changes.

Adaptive Performance

Adaptive performance refers to an individual's capacity to modify behaviors, strategies, and cognitive processes in response to dynamic or uncertain workplace conditions. Recent scholarship has identified strong links between adaptive performance and psychological constructs such as self-regulation, self-efficacy, and problem-solving abilities in high-pressure situations (Yang et al., 2025). Within the context of food logistics, ongoing shifts in distribution systems, technological advancements, and regulatory frameworks necessitate continuous adaptation on the part of employees.

Perceived Organizational Support

Perceived Organizational Support (POS) refers to the extent to which employees believe that their organization acknowledges their contributions and demonstrates genuine concern for their well-being. POS has been shown to significantly influence employee loyalty, engagement, and motivation to engage in innovative behaviors (Karim et al., 2025). In organizational settings characterized by paternalistic cultural values, such as those commonly found in Indonesia, POS fosters a sense of psychological security and enhances the likelihood that employees will realize their full potential. Perceived Organizational Support is also theorized to moderate the relationship between internal psychological capacities such as self-regulation and external behavioral outcomes, including adaptive performance. However, empirical findings on this moderating role remain mixed, with several studies indicating that the influence of POS may not always be statistically significant. Its effectiveness as a moderator appears to depend on the nature of support offered and how it is perceived by employees (Yan et al., 2025).

Self-Regulation and Adaptive Performance

Self-regulation enables individuals to establish goals, regulate emotional responses, and engage in ongoing self-assessment of their performance. In dynamic work settings such as food logistics, self-regulation facilitates behavioral flexibility and effectiveness in responding to change. Individuals with strong self-regulatory abilities are better equipped to anticipate disruptions, sustain attention, and independently refine their work strategies competencies that are central to adaptive performance. (Sabaliauskas et al., 2025) found that training grounded in metacognitive principles significantly enhanced self-regulatory capacity, resulting in more adaptive and reflective workplace behaviors.

H1: Self-Regulation has a positive and significant effect on Adaptive Performance.

Self-Regulation and Adaptive Performance moderated by Perceived Organizational Support

Perceived Organizational Support (POS) fosters psychological safety, trust, and motivation, encouraging employees to take initiative and cultivate adaptive work behaviors. In this context, the positive impact of self-regulation on adaptive performance is amplified when the organization consistently provides support through mechanisms such as recognition, empathy, and access to necessary resources. POS functions as a catalyst, enhancing the effect of internal psychological strengths such as self-regulation on externally observable behaviors, including adaptability at work. (Karim et al., 2025) demonstrated that POS moderates the relationship between talent management

and employee engagement, which subsequently influences organizational performance. These findings underscore the role of organizational support in reinforcing the relationship between individual attributes and behavioral outcomes.

H2: Perceived Organizational Support positively and significantly moderates the relationship between Self-Regulation and Adaptive Performance.

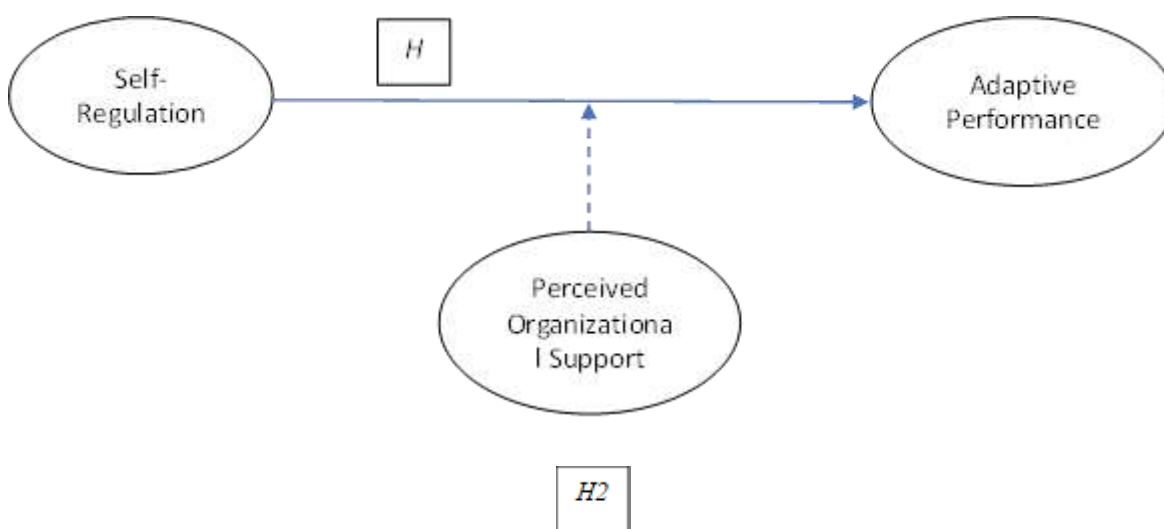


Figure 1. Self-Regulation and Adaptive Performance moderated by Perceived Organizational Support

RESEARCH METHODS

This study adopts a quantitative research approach to examine the relationships among variables as informed by an established theoretical framework. This method was selected to provide a comprehensive understanding of the effect of self-regulation on adaptive performance and to assess the moderating role of Perceived Organizational Support (POS) within this relationship. The research design enables the identification of causal linkages through the application of statistical hypothesis testing.

1. Population and Sample

The target population of this study consists of employees employed in logistics companies operating specifically within the food logistics sector, totaling 640 individuals across multiple branches in West Java, including Cirebon, Bandung, and Bekasi. The sample size was determined using the formula developed by (Krejcie et al., 1970), which provides a statistically appropriate sample size based on a known population. As a result, 240 employees were selected to participate in the study. A convenience sampling technique was employed, wherein participants were chosen based on their accessibility and willingness to engage in the research. This non-probability sampling method was deemed appropriate given the defined population and practical limitations related to time and resources. Although not random, convenience sampling enabled the researcher to gather a sufficiently large and diverse sample to conduct meaningful statistical analysis and derive relevant insights from the target population.

2. Data Collection Procedures

Data were collected through an online structured questionnaire designed to assess the study variables using a Likert scale. The data collection process was carried out over a one-month period in May 2025. Prior to the main survey, a pilot study involving 50 participants was conducted to evaluate the validity and reliability of the instrument. Participation in the study was voluntary, and respondents were assured of the confidentiality of their responses.

3. Measurement of Variables

This study investigated three core variables: Self-Regulation (SR) as the independent variable, Adaptive Performance (AP) as the dependent variable, and Perceived Organizational Support (POS) as the moderating variable. All variables were assessed using a structured questionnaire incorporating a 5-point Likert scale, with response options ranging from 1 (strongly disagree) to 5 (strongly agree). The measurement instruments were adapted from previously validated and reliable studies.

The Self-Regulation (SR) variable was assessed using indicators adapted from the studies of (Neal & Carey, 2005) and (Luszczynska et al., 2014). These indicators capture three fundamental dimensions of self-regulation: self-monitoring, goal setting, and self-evaluation. The questionnaire items were constructed to evaluate the extent to which individuals independently regulate, assess, and guide their behavior within a workplace setting.

The Adaptive Performance (AP) variable was measured using dimensions developed by (Pulakos et al., 2006) which encompass an individual's capacity to adjust to change, manage work-related pressure, acquire knowledge from novel situations, and modify behaviors and attitudes in response to evolving workplace demands. This measurement is intended to evaluate the degree to which individuals can successfully adapt within dynamic and continuously changing work environments.

The Perceived Organizational Support (POS) variable was evaluated using a scale developed by (Rhoades & Eisenberger, 2020), which assesses employees' perceptions regarding the extent to which their organization appreciates their efforts and is attentive to their overall well-being. The scale encompasses key dimensions such as emotional support, acknowledgment of professional accomplishments, and organizational concern for maintaining work-life balance.

Before proceeding with further analysis, all questionnaire items underwent validity and reliability testing to confirm that each indicator effectively and consistently measured the intended construct and was suitable for inclusion in the research model.

4. Data Analysis Technique

This study utilized a quantitative data analysis approach through the application of Partial Least Squares Structural Equation Modeling (PLS-SEM). PLS-SEM was chosen for its effectiveness in examining complex relationships among latent constructs, particularly in exploratory studies or those involving theoretical models that are still in the developmental stage. The analysis was performed using SmartPLS software version 4.0, which enables comprehensive evaluation of both the measurement model (outer model) and the structural model (inner model).

The analysis was conducted in two primary stages. The first stage focused on evaluating the measurement model to determine the validity and reliability of the constructs. This evaluation involved assessing outer loading values, Average Variance Extracted (AVE), and Composite Reliability (CR). Convergent validity was deemed satisfactory when outer loading values were ≥ 0.70 , AVE ≥ 0.50 , and CR ≥ 0.70 . In addition, discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT) criterion to ensure that each construct was conceptually distinct from the others.

The second stage involved assessing the structural model to examine the hypothesized relationships among latent variables. This process included the analysis of path coefficients, t-statistics, and p-values, utilizing the bootstrapping method. A hypothesis was considered supported when the t-statistic exceeded 1.96 and the p-value was below 0.05, in accordance with a 5% significance threshold. Furthermore, R-square (R^2) and Q-square (Q^2) values were employed to evaluate the model's explanatory power and predictive relevance. R-square reflects the proportion of variance in the dependent variable accounted for by the independent variables, while Q-square assesses the model's capacity to accurately predict outcomes for new or unseen data.

RESULTS AND DISCUSSION

RESULT

1. Respondent Demographic Profile

This study included a sample of 240 employees from a food logistics company operating in West Java, Indonesia. The sample size was determined using the formula proposed by (Krejcie et al., 1970), and the study achieved a response rate of 95%. Respondent demographics were analyzed across four key variables: gender, age group, educational attainment, and length of service.

The analysis revealed that the majority of respondents were male, totaling 144 individuals (60.0%), while female respondents accounted for 96 individuals (40.0%). This distribution suggests that the logistics sector remains predominantly male, although female participation is notably present. Regarding age demographics, the largest proportion of respondents fell within the 25–34 age group, comprising 86 individuals (35.8%), followed by those aged 35–44 years at 72 individuals (30.0%). Respondents aged 45 and above constituted 44 individuals (18.4%), while those under the age of 25 represented 38 individuals (15.8%).

In terms of educational attainment, the majority of respondents held an undergraduate degree (S1), accounting for 130 individuals (54.2%), indicating a workforce with a predominantly higher education background. Additionally, 54 respondents (22.5%) had completed high school or an equivalent qualification, 36 individuals (15.0%) held a Diploma (D3), and 20 respondents (8.3%) possessed a Master's degree (S2). Regarding length of service, the largest proportion of respondents 92 individuals (38.3%) had between 6 to 10 years of work experience. This was followed by 74 respondents (30.8%) with 2 to 5 years of experience, 46 respondents (19.2%) with over 10 years of service, and 28 individuals (11.7%) with less than 2 years of experience.

Table 1 Gender, Age, Last Education, and Length of Service of Respondents

Category	Subcategory	Frequency	Percentage (%)
Gender	Male	144	60.0%
	Female	96	40.0%
Age Range	< 25 years	38	15.8%
	25–34 years	86	35.8%
	35–44 years	72	30.0%
	≥ 45 years	44	18.4%
Education Level	High school or equivalent	54	22.5%
	Associate degree (D3)	36	15.0%
	Bachelor's degree (S1)	130	54.2%
	Master's degree (S2)	20	8.3%
Length Of Service	< 2 years	28	11.7%
	2–5 years	74	30.8%
	6–10 years	92	38.3%
	> 10 years	46	19.2%

The demographic profile results offer a comprehensive overview of respondent characteristics and serve as a critical foundation for interpreting the contextual dynamics underlying the relationships among self-regulation, perceived organizational support, and adaptive performance within the logistics work environment.

Data Analysis

This study employed the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach using SmartPLS software version 4.0. PLS-SEM was selected due to its suitability for predictive research objectives, its effectiveness with relatively small sample sizes, its ability to accommodate models incorporating formative constructs, and its robustness in handling data that do not necessarily follow a normal distribution (Hair Jr. et al., 2014)

1. Validity Test

Validity testing is carried out to evaluate the degree to which the research instrument effectively measures the construct it is intended to assess (Setiabudhi, 2024); (Hair Jr. et al., 2014). Within the PLS-SEM framework, construct validity is examined using two main approaches: convergent validity and discriminant validity.

a. Convergent Validity

To assess convergent validity, three main criteria are commonly employed: outer loadings, Average Variance Extracted (AVE), and composite reliability. An acceptable outer loading value is ≥ 0.70 , indicating that each indicator makes a strong contribution to its respective construct. The AVE should be ≥ 0.50 , signifying that the construct explains more than 50% of the variance in its indicators. Meanwhile, a composite reliability value of ≥ 0.70 is considered ideal to ensure adequate internal consistency among the indicators.

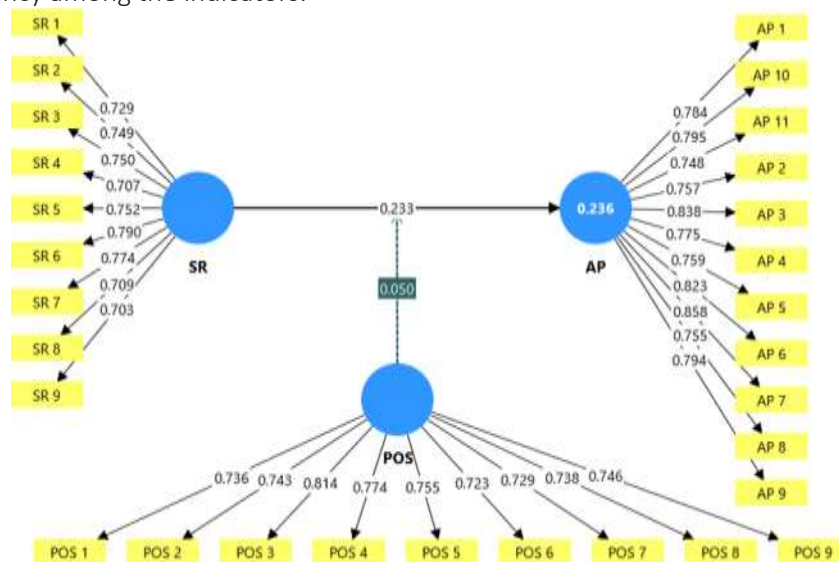


Figure 2 Validity Convergent

Table 2 Outer Loadings

Variable	Indicator	Factor Loading	Conclusion
Adaptive Performance	AP 1	0.786	Valid
	AP 10	0.792	Valid
	AP 11	0.745	Valid
	AP 2	0.759	Valid
	AP 3	0.839	Valid
	AP 4	0.776	Valid
	AP 5	0.760	Valid
	AP 6	0.824	Valid
	AP 7	0.858	Valid
	AP 8	0.754	Valid
	AP 9	0.792	Valid
Perceived Organizational Support	POS 1	0.743	Valid
	POS 2	0.750	Valid
	POS 3	0.813	Valid
	POS 4	0.775	Valid
	POS 5	0.760	Valid
	POS 6	0.724	Valid

	POS 7	0.713	Valid
	POS 8	0.718	Valid
	POS 9	0.703	Valid
Self-Regulation	SR 2	0.749	Valid
	SR 3	0.750	Valid
	SR 4	0.707	Valid
	SR 5	0.752	Valid
	SR 6	0.790	Valid
	SR 7	0.774	Valid
	SR 8	0.708	Valid
	SR 9	0.702	Valid
	SR 1	0.730	Valid
	POS x SR	1.000	Valid

All indicators for the three variables Adaptive Performance, Perceived Organizational Support, and Self-Regulation demonstrated factor loadings of ≥ 0.70 , indicating that each indicator is valid and suitable for use. This confirms that the indicators consistently represent their respective constructs.

The highest factor loading was observed for AP7 (0.858), while the lowest, SR9 (0.702), still falls within the acceptable threshold. Additionally, the interaction term POS x SR showed a loading value of 1.000, which is typical for moderating constructs generated in SmartPLS. Overall, these results confirm that all constructs have met the criteria for convergent validity, allowing the model to proceed to the next stage of analysis.

b. Average Variance Extracted (AVE)

The Average Variance Extracted (AVE) was calculated to evaluate the proportion of indicator variance that is attributable to the underlying latent construct, relative to the variance attributed to measurement error. According to (Fornell & Larcker., 2016), an AVE value exceeding 0.50 indicates satisfactory convergent validity, signifying that the construct accounts for more than half of the variance observed in its indicators. The authors also emphasize that AVE serves as a reliable metric for establishing convergent validity, particularly within reflective measurement models.

As presented in Table 4, all constructs in this study exhibit AVE values above the minimum threshold of 0.50. This demonstrates that each construct adequately accounts for the variance in its associated indicators, thereby confirming that the measurement model satisfies the requirements for convergent validity.

Table 3 Average Variance Extracted (AVE)

Construct	AVE	Conclusion
Adaptive Performance (AP)	0.625	Valid
Perceived Organizational Support (POS)	0.555	Valid
Self-Regulation (SR)	0.549	Valid

These findings further reinforce the validity of the indicators in accurately representing their corresponding latent constructs, thereby establishing a robust basis for advancing to the structural model evaluation phase.

2. Discriminant Validity

a. Fornell-Larcker criterion

Discriminant validity evaluates the degree to which a construct is distinct from other constructs within the model. This assessment involves comparing the square root of the Average

Variance Extracted (AVE) for each construct (represented by the diagonal values) with its correlations with other constructs (represented by the off-diagonal values). According to Fornell and Larcker (2016), discriminant validity is established when the square root of a construct's AVE exceeds its highest correlation with any other construct.

Table 4 Fornell-Larcker Criterion

	AP	POS	SR
AP	0.790		
POS	0.458	0.745	
SR	0.424	0.680	0.741

As presented in Table 5, the square roots of the AVE values (diagonal elements) for each construct exceed their respective correlations with other constructs (off-diagonal elements), thereby confirming discriminant validity. For instance, the Adaptive Performance (AP) construct shows a value of 0.790, which is greater than its correlations with POS (0.458) and SR (0.424). Likewise, the Perceived Organizational Support (POS) construct has a square root AVE of 0.745, exceeding its correlation with SR (0.680), while the Self-Regulation (SR) construct records a value of 0.741, which is higher than its correlations with both AP and POS.

Therefore, in accordance with the Fornell-Larcker criterion, all constructs within the model exhibit satisfactory discriminant validity. This confirms that each construct is empirically distinct and captures a conceptually unique aspect of the model.

b. Cross Loadings

Discriminant validity was further evaluated using cross-loading analysis, wherein each indicator is expected to demonstrate the highest loading on its corresponding construct relative to its loadings on other constructs.

Table 5 Cross Loadings (Selected Indicators)

	AP	POS	SR	POS x SR
AP 1	0.786	0.330	0.298	-0.097
AP 10	0.792	0.350	0.397	-0.122
AP 11	0.745	0.403	0.393	-0.243
AP 2	0.759	0.318	0.278	-0.080
AP 3	0.839	0.354	0.279	-0.062
AP 4	0.776	0.353	0.279	-0.055
AP 5	0.760	0.361	0.290	-0.054
AP 6	0.824	0.332	0.286	-0.098
AP 7	0.858	0.380	0.344	-0.101
AP 8	0.754	0.411	0.377	-0.212
AP 9	0.792	0.359	0.408	-0.113
POS 1	0.347	0.743	0.384	-0.281
POS 2	0.341	0.750	0.390	-0.286
POS 3	0.357	0.813	0.490	-0.355
POS 4	0.440	0.775	0.582	-0.355
POS 5	0.305	0.760	0.631	-0.327
POS 6	0.311	0.724	0.595	-0.327
POS 7	0.316	0.713	0.526	-0.316

POS 8	0.290	0.718	0.455	-0.343
POS 9	0.327	0.703	0.511	-0.377
SR 2	0.288	0.397	0.749	-0.313
SR 3	0.299	0.583	0.750	-0.356
SR 4	0.316	0.561	0.707	-0.307
SR 5	0.335	0.511	0.752	-0.229
SR 6	0.303	0.530	0.790	-0.257
SR 7	0.280	0.511	0.774	-0.222
SR 8	0.337	0.520	0.708	-0.255
SR 9	0.344	0.512	0.702	-0.255
SR 1	0.304	0.387	0.730	-0.332
POS x SR	-0.148	-0.442	-0.379	1.000

As presented in Table 6, each indicator exhibits its highest loading on the construct it is intended to measure. For instance, item AP3 shows the strongest loading on Adaptive Performance (0.839), POS5 on Perceived Organizational Support (0.760), and SR6 on Self-Regulation (0.790). No indicator demonstrates a higher loading on an alternative construct than on its designated one, thereby supporting the discriminant validity of the measurement model.

Therefore, the cross-loading analysis further confirms that all indicators in this study consistently and accurately reflect their respective constructs, thereby satisfying the criteria for discriminant validity based on the cross-loading approach.

3. Reliability Test

Reliability testing was performed to evaluate the internal consistency of the measurement model. Two primary indicators were utilized: Cronbach's Alpha and Composite Reliability (CR). While Cronbach's Alpha serves as a conventional measure of internal consistency, Composite Reliability (pc) is regarded as a more precise indicator of construct reliability, especially within the context of PLS-SEM (Hair et al., 2012). A CR value exceeding 0.70 is generally considered acceptable, with values above 0.80 indicating good to excellent reliability.

Table 6 Composite Reliability and Cronbach's Alpha

Variabel	Cronbach's alpha	rho_A	Composite reliability	Conclusion
Adaptive Performance (AP)	0.940	0.941	0.948	Very Good
Perceived Organizational Support (POS)	0.900	0.905	0.918	Very Good
Self-Regulation (SR)	0.897	0.897	0.916	Very Good

The results of the construct reliability assessment within the measurement model indicate that all three variables Adaptive Performance (AP), Perceived Organizational Support (POS), and Self-Regulation (SR) exhibited excellent internal consistency. This is supported by the values of Cronbach's Alpha, rho A, and Composite Reliability, all of which surpass the commonly accepted threshold of 0.70, confirming strong reliability in accordance with standards outlined by Hair et al. (2019).

The Adaptive Performance (AP) construct demonstrated a Cronbach's Alpha of 0.940, a rho A value of 0.941, and a Composite Reliability of 0.948, indicating a high level of internal consistency among its indicators. These results reflect excellent reliability in measuring the dimensions of adaptive performance.

The Perceived Organizational Support (POS) construct yielded a Cronbach's Alpha of 0.900, a rho A value of 0.905, and a Composite Reliability of 0.918. Despite a typographical error in the original conclusion ("Very God"), these figures clearly indicate that the POS construct possesses a very high degree of reliability, demonstrating strong inter-item consistency in measuring employees' perceptions of organizational support.

The Self-Regulation (SR) construct also demonstrated strong reliability metrics, with a Cronbach's Alpha of 0.897, a rho_A value of 0.897, and a Composite Reliability of 0.916. These values fall within the range of excellent reliability, indicating that the indicators used to assess self-regulation exhibit high internal consistency.

In conclusion, all variables assessed in this study have satisfied the criteria for excellent reliability and are therefore considered appropriate for inclusion in the subsequent structural model analysis.

4. Structural Model Ecalution (Inner Model)

a. Koefisien Determinasi (R²)

The coefficient of determination (R²) is employed to assess the proportion of variance in the dependent variable (Y) that is explained by the independent variable(s) (X). Evaluating the R² value is essential to determine the explanatory power of the model. A higher R² value indicates that a greater portion of the variance in the dependent variable is accounted for by the independent variables, whereas a lower R² suggests limited explanatory capacity. In this study, the R² values were generated using SmartPLS version 4 to evaluate the model's predictive strength.

Table 7 R Square and R Square Adjusted

Construct	R-Square	R-Square adjusted
Adaptive Performance (AP)	0.240	0.230

An R-square (R²) value of 0.240 signifies that 24.0% of the variance in the dependent variable, Adaptive Performance (AP), is explained by the independent variables included in the model. This indicates that the model accounts for approximately one-quarter of the variability in respondents' adaptive performance based on the specified predictors.

The Adjusted R-square value of 0.230 indicates that, after accounting for the number of predictors and the sample size, 23.0% of the variance in Adaptive Performance is explained by the model. Adjusted R² is especially valuable for evaluating the model's generalizability, as it provides a more accurate estimate of explanatory power by correcting for potential inflation due to model complexity and the inclusion of multiple independent variables.

Overall, these results suggest that the regression model possesses a moderate degree of predictive power, with the remaining 76% of the variance in Adaptive Performance attributable to other factors not accounted for within the current model.

b. Predictive Relevance (Q²)

Predictive relevance (Q²) is utilized to evaluate the model's capability to predict outcomes for unobserved data. In this study, Q² was computed to assess how well the model can reproduce the values of the dependent variable. According to (Hair Jr. et al., 2014), a Q² value greater than zero indicates that the model possesses acceptable predictive relevance, while a value below zero suggests inadequate predictive capability. As such, Q² serves as a critical metric for assessing the structural model's effectiveness and reliability in forecasting unmeasured outcomes.

Table 8 . Q² – Predictive Relevance

Construct	SSO	SSE	Q ² (=1-SSE/SSO)
Adaptive Performance (AP)	2640	2271,551	0,140
Perceived Organizational Support (POS)	2160	2160	0,000

Self-Regulation (SR)

2160 2160

0,000

Based on the calculated Q^2 values (Stone-Geisser's Q^2), the Adaptive Performance (AP) construct yielded a Q^2 value of 0.140, suggesting that the model demonstrates weak to moderate predictive relevance for this variable. Although this value falls slightly below the commonly accepted threshold of 0.15 often cited as the minimum indicator of moderate predictive power (Chin, 1998) it nonetheless indicates that the model provides a meaningful contribution to explaining variance in the AP construct from a predictive perspective.

In contrast, the constructs Perceived Organizational Support (POS) and Self-Regulation (SR) each recorded Q^2 values of 0.000, indicating that the model lacks predictive relevance for these variables. This outcome is expected, as both POS and SR function as exogenous (independent) variables within the model. Consequently, the interpretation of their Q^2 values is not applicable in the context of evaluating the model's predictive capability.

Overall, the findings suggest that the structural model exhibits predictive relevance for the endogenous variable, Adaptive Performance (AP), albeit at a relatively weak level. This highlights opportunities for enhancing the model's predictive power in future research.

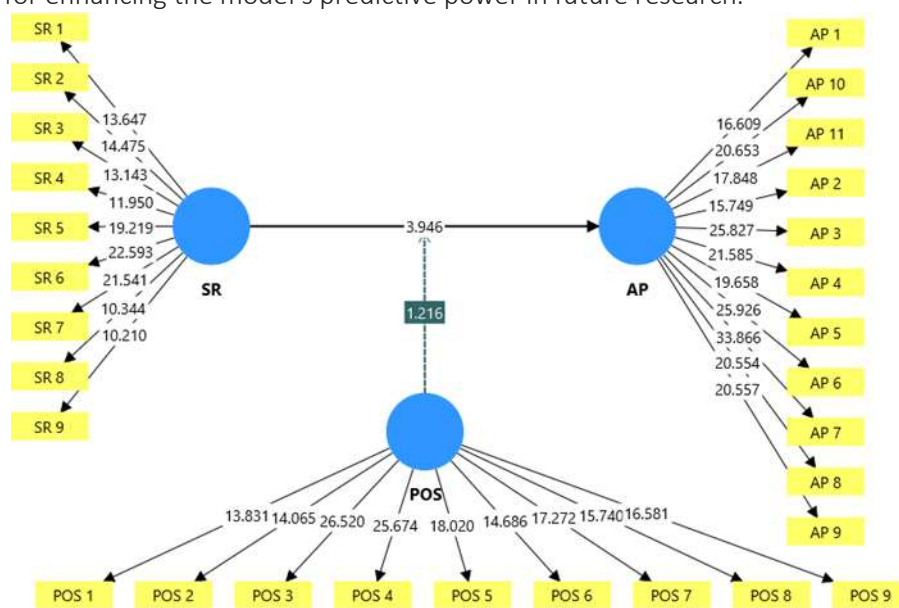


Figure 2 Bootstrapping

Hypothesis Testing

Hypothesis testing results represent the statistical evaluation conducted to determine the presence of significant relationships or effects among the variables examined, based on data collected from the research sample. Within the framework of quantitative research particularly when employing the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach these results are commonly reported using path coefficients, t-statistics, and p-values.

A hypothesis is deemed statistically significant and accepted when the t-statistic exceeds the critical threshold (e.g., > 1.96 at the 5% significance level) and the p-value falls below 0.05. Conversely, if these conditions are not satisfied, the hypothesis is considered unsupported or rejected (Hair Jr. et al., 2014).

The results of hypothesis testing offer essential insights into the magnitude and statistical significance of the relationships between variables. These findings form the foundation for deriving research conclusions and for developing both practical applications and theoretical contributions.

Table 9 Hypothesis Testing Results

No	Hypothesis	Beta	t-Value	p-Value	Decision
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H1	SR -> AP	0.233	3.946	0.000	Supported
H2	POS x SR -> AP	0.050	1.216	0.224	Not Supported

Note: The decision is based on a *t*-value greater than 1.96 and a *p*-value less than 0.05, indicating statistical significance at the 95% confidence level.

Interpretation:

1. H1 is supported, indicating that Self-Regulation exerts a significant influence on Adaptive Performance.
2. H2 is not supported, as the moderating effect of Perceived Organizational Support on the relationship between Self-Regulation and Adaptive Performance does not reach statistical significance at the 5% level ($p = 0.193$).

This suggests that although individual variables exert a significant influence on adaptive performance, the interaction effect of perceived organizational support may be limited in its moderating role within this context or warrants further exploration in future studies.

Finding and Discussion

This research set out to explore the impact of self-regulation on adaptive performance and to determine whether perceived organizational support (POS) moderates this relationship. Employing Partial Least Squares Structural Equation Modeling (PLS-SEM), the study produced two primary outcomes aligned with Hypotheses 1 (H1) and 2 (H2).

The first major finding demonstrates that self-regulation exerts a positive and statistically significant influence on adaptive performance. The model results yielded a path coefficient (β) of 0.222, a *t*-statistic of 3.694, and a *p*-value of 0.000, thereby supporting H1. This indicates that individuals with stronger abilities to regulate their cognition, emotions, and behaviors are more inclined to exhibit adaptive behaviors, especially in dynamic work environments. This capacity is particularly essential in state-owned enterprises like BULOG, where employees are frequently faced with policy shifts and operational changes.

In this study, self-regulation is operationalized through three key dimensions: self-monitoring, goal setting, and self-evaluation. These dimensions enable individuals to remain focused, respond effectively to changes, and recalibrate their actions when necessary. The findings align with (Bandura, 1991) Self-Regulation Theory and are reinforced by recent empirical evidence that positions self-regulation as a critical antecedent of adaptability in the workplace (Suri et al., 2022; Wang, 2021). Individuals with high self-regulatory capacities tend to sustain their performance levels during times of stress and adjust their strategies when faced with evolving job demands (Kim & Beehr, 2020).

From a practical standpoint, the results suggest that organizations should not only focus on technical skills but also prioritize the development of employees' psychological competencies. Interventions such as mindfulness practices, behavioral coaching, and stress management programs can help enhance employees' self-regulatory abilities, thereby fostering greater resilience and adaptability (Lee & Choi, 2023).

The second key finding pertains to the moderating role of Perceived Organizational Support in the relationship between self-regulation and adaptive performance. The results indicate that the interaction effect was not statistically significant ($\beta = 0.053$; $t = 1.302$; $p = 0.193$), leading to the rejection of H2. This suggests that POS does not significantly alter the influence of self-regulation on adaptive performance.

One plausible explanation is that self-regulation may function as an internally driven trait that operates relatively independently of external organizational factors. Employees with strong self-regulatory skills may rely primarily on internal resources rather than on perceived support from their organizations. Additionally, the nature of POS reported by respondents may have been too

generalized or not sufficiently tailored to developmental needs, thereby limiting its impact as a moderator (Zhang et al., 2021)

This outcome has meaningful implications for organizational practice. While POS remains essential for fostering employee well-being and engagement, its role as a moderator may depend on the extent to which support is personalized and aligned with employees' adaptive and developmental needs. Targeted support initiatives such as mentoring programs, individualized development plans, and coaching are more likely to complement self-regulatory mechanisms and enhance adaptive capacity (Becker et al., 2023)

Contextual factors should also be considered when interpreting these results. In formalized, bureaucratic institutions such as BULOG, support systems may be standardized and less responsive to individual differences, limiting their effectiveness in facilitating adaptive behavior. Future research conducted in more agile, decentralized, or private-sector environments may yield different results regarding the moderating role of POS.

From a theoretical standpoint, the findings invite further refinement of the research model by incorporating additional moderating or mediating variables—such as psychological empowerment, resilience, or learning agility—that may better explain the pathways between self-regulation and adaptive performance (Tang et al., 2023). Moreover, longitudinal research designs are recommended to capture the evolving nature of these relationships over time.

CONCLUSION

This study examined the impact of self-regulation on adaptive performance and explored the potential moderating role of perceived organizational support (POS) within that relationship. Set in the context of Indonesia's food warehousing logistics sector particularly among organizations such as the National Public Logistics Agency (BULOG) and its partners in West Java the research provides meaningful insights into the interplay between psychological resources and organizational conditions in shaping employee adaptability. The findings offer contributions to both theoretical development and practical approaches for organizations operating in structured, high-demand environments.

The first key finding of this study confirms that self-regulation exerts a positive and significant influence on adaptive performance. This result is consistent with the principles of Self-Regulation Theory (Bandura, 1991); (Karoly, 1993) which highlight the critical role of individuals' capacity to control their behavior, cognition, and emotions in the pursuit of goal-directed outcomes. Within the context of food logistics where employees frequently encounter challenges such as abrupt policy changes, the digital transformation of warehousing systems, and variable delivery demands self-regulation enables them to remain goal-oriented, adapt effectively to uncertainty, and sustain their performance. Individuals who are capable of setting goals, tracking progress, and evaluating their own actions tend to demonstrate greater resilience and operational effectiveness in complex work environments.

This relationship is especially significant within Indonesia's public sector logistics, which is marked by bureaucratic structures, rigid hierarchical systems, and limited organizational flexibility. In such settings, external support mechanisms are typically standardized and slow to respond to changing conditions, compelling employees to depend more on their internal capabilities to adapt. Under circumstances where formal procedures remain fixed, yet work demands fluctuate rapidly due to factors such as government directives or market volatility, the capacity for self-regulation becomes a critical asset for maintaining performance and responsiveness.

From a practical perspective, these findings highlight the importance of cultivating self-regulation as a core competency among employees. Human resource departments within logistics organizations should extend their focus beyond conventional technical training and prioritize psychological development initiatives. Programs that include training in goal setting, emotional regulation, reflective journaling, and metacognitive strategies can enhance employees' capacity for

self-management under pressure. Additionally, resilience-building interventions and individualized coaching can support sustained behavioral adaptability, particularly for frontline personnel engaged in high-intensity warehousing and distribution activities.

The second major finding of this study reveals that perceived organizational support (POS) does not significantly moderate the relationship between self-regulation and adaptive performance. This outcome diverges from the expectations grounded in Social Exchange Theory (Peter M. Blau, 1964), which posits that employees tend to reciprocate organizational support with enhanced behaviors and performance outcomes. However, within the context of this study, the moderating role of POS may be diminished due to the nature of the support provided and the way it is perceived by employees.

One possible explanation is that, within bureaucratic organizations, perceived organizational support (POS) often takes a generalized form such as formal welfare programs or standardized administrative policies rather than being tailored to individual development or adaptive needs. Consequently, employees may not perceive this type of support as directly relevant to the challenges they face in adapting to change. In such contexts, even a high level of POS may have limited influence on the extent to which self-regulation translates into adaptive behavior. Furthermore, if employees interpret organizational support as a mandated obligation rather than a voluntary and discretionary effort, its motivational impact is likely to be further reduced.

This insight carries significant practical implications, suggesting that organizational support should be reconceptualized to be more personalized and context-specific. Rather than depending solely on broad, generalized initiatives, organizations should offer targeted support mechanisms that directly align with adaptive performance objectives. Such initiatives may include individualized mentoring, access to psychological coaching, structured feedback systems, and learning platforms designed to foster adaptability and behavioral flexibility. When employees perceive organizational support as personally relevant and conducive to their professional growth, it is more likely to reinforce and enhance the effectiveness of their internal self-regulatory processes.

In addition, the absence of a significant moderating effect may be partially attributed to cultural influences. Within Indonesia's paternalistic and collectivist work environment, organizational support is often viewed as an expected and routine aspect of employment, rather than a discretionary incentive. As a result, such support may not function as a strong motivator for enhanced effort. Employees may perform their roles primarily out of a sense of duty or loyalty, rather than in response to perceived recognition or developmental investment. This dynamic reduces the potential of POS to act as a catalyst in psychological-behavioral mechanisms, thereby highlighting the greater influence of internal factors such as self-regulation.

From a strategic human resource management perspective, this suggests that logistics organizations particularly within the public sector should avoid treating support mechanisms as isolated motivational tools. Instead, such mechanisms should be integrated with broader psychological empowerment strategies. For example, adaptive performance can be explicitly recognized within performance appraisal systems. In addition, leadership can promote adaptability by modeling flexible behavior and involving employees in collaborative problem-solving processes. These practices help embed adaptability into the organizational culture, shifting reliance away from formal support structures and toward a foundation built on shared values and collective expectations.

With regard to future research, these findings present opportunities to investigate alternative moderating or mediating variables such as resilience, learning agility, or psychological empowerment that may more effectively explain the relationship between self-regulation and adaptive behavior. Employing longitudinal research designs could also provide valuable insights into how shifts in organizational culture or human resource interventions influence these dynamics over time. Additionally, examining these relationships within private sector logistics firms or startup environments where bureaucratic constraints are minimal may offer contrasting perspectives on the role and effectiveness of Perceived Organizational Support (POS).

In summary, this study underscores the importance of self-regulation as a vital psychological resource for employees working within dynamic and high-pressure logistics environments. In contexts where organizational structures lack flexibility and managerial support is inconsistent, individuals must depend on their internal capabilities to manage responsibilities, adjust their behavior, and maintain resilience. Although Perceived Organizational Support (POS) contributes to overall employee well-being, its moderating effect on adaptive behavior appears limited unless the support provided is personalized, developmentally meaningful, and aligned with the cultural context.

For organizations such as the National Public Logistics Agency (BULOG), the implications are evident: it is essential to foster psychological resilience among employees, implement structured and individualized support mechanisms, and cultivate a workplace culture that emphasizes self-directed development. By adopting these strategies, public logistics institutions will be better positioned to sustain service quality and enhance workforce adaptability in the face of ongoing change and operational complexity.

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