

The Influence of Opportunity-Enhancing HR Practices and Authentic Leadership on Work Engagement: The Moderating Roles of Proactive Personality and Psychological Capital

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ABSTRACT: *The dynamic changes in the business environment require organizations to manage human resources strategically, with work engagement serving as a crucial factor in enhancing employee effectiveness and productivity. This study aims to analyze the influence of Opportunity-Enhancing HR Practices and Authentic Leadership on Work Engagement, as well as to examine the moderating roles of Proactive Personality and Psychological Capital. Using a quantitative approach, data were collected from 310 employees across various industrial sectors in Indonesia and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS. The results reveal that Authentic Leadership and Proactive Personality have a positive and significant effect on Work Engagement, whereas Opportunity-Enhancing HR Practices and Psychological Capital do not show a significant direct effect. Additionally, Proactive Personality and Psychological Capital are not found to moderate the relationships between organizational variables and Work Engagement. These findings indicate that employee work engagement in the Indonesian context is more strongly influenced by leadership quality and proactive individual characteristics than by opportunity-based HR practices or psychological capital. This study provides practical implications for organizations to prioritize the development of authentic leadership and proactive behaviors to enhance sustainable work engagement, while also contributing theoretically to the literature on the integration of organizational and personal factors in shaping work engagement.*

KEYWORDS - *Opportunity-Enhancing HR Practices, Authentic Leadership, Proactive Personality, Psychological Capital, Work Engagement.*

I. INTRODUCTION

Rapid changes in the business environment resulting from globalization, digital transformation, and increasing competitive intensity require organizations to manage human resources more strategically. Although technological advancements have replaced some operational functions, employee quality and engagement remain key factors in determining long-term organizational competitive advantage (Prieto & Pérez-Santana, 2012). In this context, organizations are not only required to have competent employees but also to maintain a high level of work engagement. Work engagement is a positive psychological condition characterized by vigor, dedication, and absorption, which encourages employees to work optimally and actively contribute to the achievement of organizational goals (Schaufeli et al., 2002). In line with this, Gürbüz et al. (2024) emphasize that work engagement serves as a key mechanism linking human resource practices to various positive work outcomes, including employee performance and creativity.

In the Indonesian context, various studies also indicate that organizational and personal factors play an important role in shaping employee attitudes and performance. Research by Yupiter Gulo (2014) proves that transformational leadership, organizational culture, and work engagement have a significant effect on employee performance. In addition, Caraciolla and Nurwanti (2025) found that competence, motivation, and organizational commitment influence job satisfaction and employee performance through a Structural Equation Modeling approach. These findings emphasize that leadership quality, work environment, and individual characteristics are important factors in enhancing employee performance and engagement.

Previous studies have also identified Opportunity-Enhancing HR Practices (OEHR) and Authentic Leadership (AL) as organizational factors that play an important role in increasing work engagement. OEHR provides employees with opportunities to participate in decision-making, develop competencies, and obtain career development opportunities, thereby increasing their sense of appreciation and empowerment (Prieto & Pérez-Santana, 2012). This finding is reinforced by Gürbüz et al. (2024), who state that opportunity-based HR practices function as job resources that encourage employee motivation and engagement. Meanwhile, authentic leadership emphasizes honesty, transparency, and authentic relationships between leaders and subordinates, which can create psychological safety and strengthen employees' intrinsic motivation (Walumbwa et al., 2008;

Karam et al., 2017). However, empirical research results show inconsistent findings. Some studies find significant positive effects, while others indicate weak or insignificant effects, depending on individual characteristics and organizational context (Cheng et al., 2023; Gürbüz et al., 2024).

These inconsistencies indicate the existence of a research gap that highlights the importance of personal factors as additional explanatory variables. In this study, Proactive Personality (PP) and Psychological Capital (PC) are positioned as moderating variables. Proactive personality reflects an individual's tendency to act proactively, take initiative, and create positive changes in the work environment (Bateman & Crant, 1993). Proactive individuals tend to be more capable of utilizing organizational opportunities, thereby potentially enhancing work engagement. This is consistent with the findings of Gürbüz et al. (2024), which show that proactive personality serves as a personal resource in strengthening the relationship between HR practices and work engagement. Meanwhile, psychological capital, which consists of self-efficacy, hope, optimism, and resilience, represents psychological resources that enable employees to respond to leadership more positively and adaptively (Luthans et al., 2007).

Based on the above discussion, this study aims to analyze the effects of Opportunity-Enhancing HR Practices and Authentic Leadership on Work Engagement and to examine the moderating roles of Proactive Personality and Psychological Capital in these relationships. This study is expected to provide a more comprehensive understanding of how organizational and personal factors interact in shaping employee work engagement, as emphasized in Gürbüz et al. (2024) regarding the importance of integrating organizational and personal resources.

This study contributes in three main aspects. First, it enriches the work engagement literature by integrating organizational and personal perspectives within a single research framework and extending the findings of Gürbüz et al. (2024) in the Indonesian context. Second, it provides empirical evidence in Indonesia, where research on work engagement remains relatively limited. Third, the findings are expected to serve as a basis for organizations in designing human resource policies and leadership development programs that emphasize authentic leadership and encourage proactive behavior to create sustainable work engagement.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Opportunity-Enhancing HR Practices

Opportunity-Enhancing HR Practices are part of High Performance Work System practices that focus on providing real opportunities for employees to actively participate in organizations through involvement in decision-making, access to information, and opportunities for competency and career development. Prieto and Pérez-Santana (2012) define these practices as a set of human resource policies that emphasize participation, empowerment, and development opportunities, so that employees do not only function as task executors but also as active contributors in organizational processes. These practices include various programs such as job rotation, training and development, coaching and mentoring, information transparency, and two-way communication forums between management and employees. From the perspective of High-Performance Work Systems and high-involvement HR practices, opportunity-enhancing HR practices are viewed as important job resources because they provide space for employees to learn, take initiative, and continuously develop their roles (Boxall & Macky, 2009; Jiang et al., 2012; Seeck & Diehl, 2017). In line with Job Demands-Resources Theory, these practices function as job resources that are able to enhance intrinsic motivation, a sense of belonging, and positive energy at work (Karasek & Theorell, 1990; Bakker & Demerouti, 2007). Gürbüz et al. (2024) emphasize that opportunity-based HR practices, such as granting autonomy, involvement in decision-making, and access to competency development, play an important role in increasing work engagement by strengthening employees' job and personal resources. Various empirical studies also show that providing opportunities for participation and development through these HR practices is positively associated with innovation, job satisfaction, organizational commitment, and work engagement, because employees feel valued, empowered, and have greater control over their work (Prieto & Pérez-Santana, 2012; Cheng et al., 2023; Seeck & Diehl, 2017; European Journal of Sustainable Development, 2024; Gürbüz et al., 2024).

2.2 Authentic Leadership

Authentic leadership is a leadership style that emphasizes the leader's authenticity through openness, transparency, honesty, and consistency between internal moral values and behaviors displayed in daily work interactions. Walumbwa et al. (2008) explain that authentic leadership is built on four main elements, namely self-awareness, which reflects the leader's understanding of personal values, emotions, and motivations; relational transparency, which is reflected in the leader's openness and honesty in communicating with subordinates; balanced processing, which is demonstrated through the leader's willingness to consider various perspectives and inputs before making decisions; and internalized moral perspective, which describes the leader's behavior based on ethical principles and internal moral values rather than external pressure or personal interests. Through these characteristics, authentic leaders are able to create a work environment based on trust, psychological safety, and meaningful relationships between leaders and employees (Avolio & Gardner, 2005;

Gardner et al., 2011; Walumbwa et al., 2008). Such a work environment encourages employees to express themselves fully, actively engage in their work, and feel valued as individuals. A number of empirical studies show that authentic leadership is positively related to various work attitudes and behaviors, including job satisfaction, organizational commitment, creative behavior, and work engagement, because this leadership style strengthens intrinsic motivation and the quality of social relationships in the workplace (Karam et al., 2017; Wirawan et al., 2020; Gardner et al., 2011; Joo et al., 2016; Ribeiro et al., 2020).

2.3 Proactive Personality

Proactive personality is defined as an individual's tendency to actively take initiative, anticipate changes, and strive to influence the work environment in a more positive direction (Bateman & Crant, 1993). Individuals with proactive personalities do not merely respond to situational demands, but consciously create opportunities, improve work processes, and overcome obstacles without having to wait for formal instructions from the organization (Bateman & Crant, 1993; Fuller & Marler, 2009). The main characteristics of proactive personality are reflected in future orientation, courage to take action, initiative in problem solving, and persistence in achieving work goals, which make proactive individuals more adaptive in facing organizational dynamics and uncertainty (Fuller & Marler, 2009). In the main study conducted by Gürbüz et al. (2024), proactive personality was proven to play an important role in strengthening the utilization of opportunity-based HR practices and job autonomy in enhancing work engagement and employee creativity, because proactive individuals tend to actively shape a work environment that supports self-development and the achievement of optimal performance. These findings indicate that employees with high levels of proactive personality are better able to convert organizational resources into sustainable work energy, motivation, and engagement. In line with this, various empirical studies also show that proactive personality is positively related to job performance, well-being, and work engagement, because proactive individuals are faster in recognizing and utilizing opportunities available in their work (Frontiers in Psychology, 2021; Frontiers in Psychology, 2024).

2.4 Psychological Capital

Psychological capital is a positive psychological state of individuals that is developable and plays an important role in improving employee performance, well-being, and work attitudes. Luthans, Youssef, and Avolio (2007) define psychological capital as a psychological resource consisting of four main dimensions, namely hope, efficacy, resilience, and optimism, which collectively reflect an individual's capacity to set goals, maintain self-confidence, endure pressure, and view the future positively. Hope describes an individual's ability to set work goals and find various alternative pathways to achieve them, efficacy indicates self-confidence in completing challenging tasks, resilience reflects the ability to bounce back from difficulties or failures, while optimism relates to positive expectations regarding future success (Luthans et al., 2007; Newman et al., 2014). In the organizational context, psychological capital is positioned as a personal resource that encourages motivation, psychological resilience, and employee involvement in their work, so that individuals with high psychological capital tend to display more positive and adaptive work attitudes (Avey et al., 2011). Various empirical findings indicate that psychological capital is closely related to work engagement, because employees who possess high levels of hope, efficacy, resilience, and optimism are better able to cope with job demands, maintain positive energy, and remain committed to their work roles (Avey et al., 2011; Luthans & Youssef-Morgan, 2017). In addition to being a direct predictor, psychological capital also serves as a psychological mechanism that explains how employees respond constructively to the work environment, making it an important factor in the development of sustainable work attitudes and behaviors (Newman et al., 2014; Luthans & Youssef-Morgan, 2017).

2.5 Work Engagement

Work engagement is a positive, fulfilling, and work-related psychological state, characterized by high levels of energy (vigor), emotional involvement and a sense of meaning toward work (dedication), and full immersion in work activities (absorption) (Schaufeli, Salanova, González-Romá, & Bakker, 2002; Schaufeli & Bakker, 2004; Bakker & Albrecht, 2018). Employees with high levels of work engagement demonstrate strong enthusiasm, commitment to their work roles, and better ability to cope with organizational demands and challenges, thereby contributing to improved performance, job satisfaction, and employee retention (Bakker & Demerouti, 2017; Bakker, Albrecht, & Leiter, 2011). Within the Job Demands–Resources Model framework, work engagement is viewed as the result of the availability of adequate job resources and personal resources, in which organizational resources such as opportunity-based human resource practices and supportive leadership, as well as individual resources such as proactive personality and psychological capital, play an important role in promoting sustainable work engagement (Schaufeli & Bakker, 2004; Bakker & Demerouti, 2017; Bakker & Albrecht, 2018). In line with this framework, the main study by Gürbüz et al. (2024) shows that work engagement serves as a central mechanism linking opportunity-based HR practices, personality, and job autonomy to increased employee creativity and performance, because work engagement enables individuals to convert organizational and personal resources into sustained work energy, focus, and motivation. These findings emphasize that work engagement functions not only as a psychological outcome, but also as an important

mediator in explaining how organizational and individual factors generate various positive outcomes, including job performance, well-being, and adaptive work attitudes in dynamic work environments (Bakker & Demerouti, 2017; Bakker & Albrecht, 2018).

2.6 The Influence of Opportunity-Enhancing HR Practices and Authentic Leadership on Work Engagement

2.6.1 The Influence of Opportunity-Enhancing HR Practices on Work Engagement

Opportunity-Enhancing HR Practices emphasize providing employees with real opportunities to actively participate in the organization through involvement in decision-making, access to information, and opportunities for competency and career development. From the perspective of High-Performance Work Systems and Job Demands-Resources Theory, these practices are positioned as job resources that enable employees to learn, take initiative, and continuously develop their work roles, thereby enhancing intrinsic motivation and positive work energy (Prieto & Pérez-Santana, 2012; Karasek & Theorell, 1990; Bakker & Demerouti, 2007). When employees feel valued, empowered, and have control over their work, they tend to demonstrate higher levels of work engagement. Several empirical studies also indicate that opportunity-based HR practices are positively associated with job satisfaction, organizational commitment, innovation, and work engagement (Prieto & Pérez-Santana, 2012; Cheng et al., 2023; Seeck & Diehl, 2017). In addition, Gürbüz et al. (2024) emphasize that HR practices that provide opportunities for participation, development, and job autonomy play an important role in enhancing work engagement, as they strengthen employees' intrinsic motivation and sense of ownership toward their work. Therefore, the following hypothesis is formulated:

H1: Opportunity-Enhancing HR Practices have a positive effect on Work Engagement.

2.6.2 The Influence of Authentic Leadership on Work Engagement

Authentic leadership is a leadership style that emphasizes leaders' authenticity through self-awareness, relational transparency, balanced processing, and internalized moral perspective. These characteristics enable leaders to build work relationships based on trust, openness, and psychological safety, so that employees feel valued and supported in expressing themselves fully in the workplace (Walumbwa et al., 2008; Avolio & Gardner, 2005; Gardner et al., 2011). This safe and meaningful work environment strengthens employees' intrinsic motivation and emotional attachment to their work. Various empirical findings indicate that authentic leadership is positively related to job satisfaction, organizational commitment, creative behavior, and work engagement (Joo et al., 2016; Karam et al., 2017; Wirawan et al., 2020; Ribeiro et al., 2020). Based on this explanation, the following hypothesis is formulated:

H2: Authentic Leadership has a positive effect on Work Engagement.

2.7 The Influence of Proactive Personality on Work Engagement and Its Moderating Role

2.7.1 The Influence of Proactive Personality on Work Engagement

Proactive personality reflects an individual's tendency to actively take initiative, anticipate change, and create and utilize opportunities in their work. Individuals with a proactive personality not only respond to job demands but also strive to improve work processes and overcome obstacles independently, thereby becoming more adaptive to dynamic organizational environments (Bateman & Crant, 1993; Fuller & Marler, 2009). This characteristic promotes higher levels of work engagement because proactive individuals possess an internal drive to contribute optimally and meaningfully. Empirical studies indicate that proactive personality is positively associated with job performance, well-being, and work engagement, as proactive individuals are quicker to recognize and utilize opportunities available in their work (Frontiers in Psychology, 2021; Frontiers in Psychology, 2024). In addition, Gürbüz et al. (2024) found that individuals with high levels of proactive personality tend to be more capable of optimally utilizing HR practices and job autonomy, thereby demonstrating stronger levels of work engagement compared to less proactive employees. Therefore, the following hypothesis is formulated:

H3: Proactive Personality has a positive effect on Work Engagement.

2.7.2 The Moderating Role of Proactive Personality on the Influence of Opportunity-Enhancing HR Practices on Work Engagement

Although Opportunity-Enhancing HR Practices provide various opportunities for employee development, the effectiveness of these practices is strongly influenced by individual characteristics. Employees with high proactive personality tend to be more capable and more active in utilizing organizational opportunities, such as participating in decision-making, engaging in development programs, and taking initiative in career development. In contrast, employees with low proactive personality tend to be more passive, resulting in the benefits of opportunity-based practices not being fully maximized. Therefore, proactive personality functions as a factor that strengthens the effect of Opportunity-Enhancing HR Practices on work engagement. This argument is consistent with the findings of Gürbüz et al. (2024), which indicate that proactive employees are better able to convert opportunity-based HR practices into higher levels of work engagement through optimal utilization of job resources. In addition, previous empirical findings also show that proactive individuals

gain greater benefits from organizational practices that provide opportunities for participation and development (Fuller & Marler, 2009; Frontiers in Psychology, 2021). Therefore, the following hypothesis is formulated:

H5: Proactive Personality strengthens the influence of Opportunity-Enhancing HR Practices on Work Engagement.

2.8 The Influence of Psychological Capital on Work Engagement and Its Moderating Role

2.8.1 The Influence of Psychological Capital on Work Engagement

Psychological capital is a positive psychological condition of individuals consisting of hope, efficacy, resilience, and optimism, which functions as a personal resource in dealing with job demands and challenges. Individuals with high psychological capital have strong self-confidence, clear goal orientation, resistance to pressure, and a positive outlook on the future, enabling them to maintain energy, motivation, and involvement in their work (Luthans et al., 2007; Newman et al., 2014). Within the Job Demands–Resources Model framework, psychological capital plays an important role in enhancing work engagement because it helps employees manage work demands more adaptively. Various empirical studies indicate that psychological capital is positively associated with job satisfaction, performance, and work engagement (Avey et al., 2011; Luthans & Youssef-Morgan, 2017; Wang et al., 2020). Therefore, the following hypothesis is formulated:

H4: Psychological Capital has a positive effect on Work Engagement.

2.8.2 The Moderating Role of Psychological Capital on the Influence of Authentic Leadership on Work Engagement

The influence of authentic leadership on work engagement is not always experienced in the same way by every employee, as it is influenced by the psychological resources possessed by individuals. Employees with high psychological capital tend to be more capable of responding positively to authentic leadership, because they have optimism, self-confidence, and psychological resilience to capture and utilize the support, role modeling, and transparency of leaders. Under these conditions, authentic leadership becomes more effective in enhancing work engagement. In contrast, employees with low psychological capital tend to obtain more limited benefits. These findings are consistent with research showing that psychological capital strengthens the influence of positive leadership on work engagement (Avey et al., 2011; Wang et al., 2020). Therefore, the following hypothesis is formulated:

H6: Psychological Capital strengthens the influence of Authentic Leadership on Work Engagement.

Based on the theoretical explanations and empirical findings presented in the literature review and hypothesis development section above, it can be concluded that there are structural relationships among Opportunity-Enhancing HR Practices, Authentic Leadership, Proactive Personality, Psychological Capital, and Work Engagement. These relationships reflect both direct effects and moderating roles among variables in explaining employee work engagement. Therefore, to clarify the conceptual relationships among the research variables, a research model framework is developed and presented in Figure 1 below.

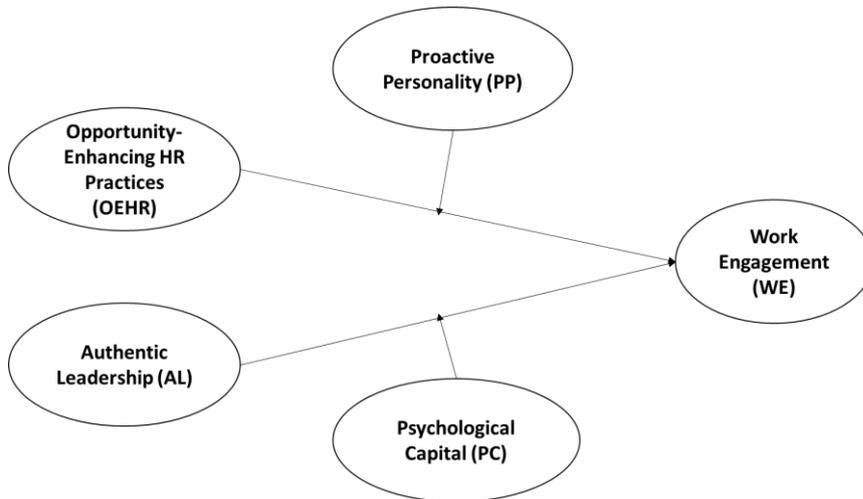


Figure 1. Research Model Framework

III. METHODS

3.1 Population and Sample

The population in this study consists of all employees working in various industrial sectors in Indonesia. Considering the heterogeneous characteristics of the population, this study employs probability

sampling using the simple random sampling method, in which every member of the population has an equal opportunity to be selected as a respondent.

Data were collected through an online questionnaire distributed using Google Forms. A total of 310 respondents participated voluntarily and completed the questionnaire in full. All collected data were deemed suitable for further analysis.

The sample size in this study meets the minimum requirements for Partial Least Squares–Structural Equation Modeling (PLS-SEM) analysis. According to Hair et al. (2019), PLS-SEM is appropriate for complex research models and requires an adequate sample size based on the number of indicators and structural paths tested.

The research instrument uses a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) (Sekaran & Bougie, 2016). This scale is used to measure respondents’ perceptions of Opportunity-Enhancing HR Practices, Authentic Leadership, Proactive Personality, Psychological Capital, and Work Engagement.

3.2 Variable Measurement

The variables in this study are measured using indicators adapted from previously validated research instruments. The operational definitions and indicators of each variable are presented in Table 1.

Table 1. Variable Definitions and Indicators

Variable	Definition	Indicators (Dimensions)
Work Engagement (WE)	A positive psychological state characterized by vigor, dedication, and absorption in work (Schaufeli et al., 2002).	1. Vigor 2. Dedication 3. Absorption
Opportunity-Enhancing HR Practices (OEHR)	HR practices that provide employees with opportunities to participate in decision-making, training, and career development, thereby enhancing motivation and work engagement (Prieto & Pérez-Santana, 2012).	1. Work Design 2. Participation
Authentic Leadership (AL)	Leadership characterized by honesty, integrity, transparency, and positive relationships with subordinates (Walumbwa et al., 2008).	1. Self-awareness 2. Relational transparency 3. Internalized moral perspective 4. Balanced processing
Proactive Personality (PP)	An individual’s tendency to take initiative, act anticipatively, and create change in the work environment (Bateman & Crant, 1993).	1. Taking initiative 2. Anticipating change 3. Action-oriented 4. Creating opportunities
Psychological Capital (PC)	A positive psychological state comprising self-efficacy, hope, resilience, and optimism (Luthans et al., 2007).	1. Self-efficacy 2. Hope 3. Resilience 4. Optimism

3.3 Data Analysis Technique

Data analysis was conducted using Structural Equation Modeling with the Partial Least Squares (SEM-PLS) approach through SmartPLS 4.0. This method was selected because it does not require normally distributed data, is capable of testing complex models, and is suitable for a large number of indicators (Hair et al., 2019; Ghazali & Latan, 2015).

The analysis was carried out in two stages, namely the evaluation of the outer model and the inner model. The outer model evaluation includes convergent validity testing using outer loading and AVE, discriminant validity testing using Fornell-Larcker and HTMT, and reliability testing using Cronbach’s Alpha and Composite Reliability. The inner model evaluation is conducted through the analysis of path coefficients, R², f², and Q².

3.4 Hypothesis Testing

Hypothesis testing was performed using the bootstrapping method in SmartPLS 4.0 with a significance level of 5%. According to Hair et al. (2019), a hypothesis is accepted if the t-statistic value is greater than 1.96 and the p-value is less than 0.05, and rejected if the t-statistic value is less than or equal to 1.96 and the p-value is greater than or equal to 0.05. This procedure is used to ensure that the research conclusions are based on strong statistical evidence.

IV. RESULT AND DISCUSSION

4.1 Description of Respondent Characteristics

This study employed the simple random sampling method by involving 310 employees from various industrial sectors in Indonesia. Data collection was conducted during the period from August to September 2025 through an online self-report questionnaire.

Based on Table 2, the majority of respondents were male (65.5%) and aged 18–28 years (89%). The highest level of education was dominated by high school/equivalent graduates (41.6%) and bachelor’s degree holders (34.8%). Most respondents were contract employees (39.7%) and operational staff (59%). The length of employment was dominated by respondents with less than one year of tenure (51.9%). The most common work pattern was work from office (44.5%), while the work system was dominated by teamwork (53.9%). The majority of respondents came from the service sector (71%) and medium-sized companies (47.1%).

Table 2. Respondents’ Demographic Profile

Description		Frequency	Percentage (%)
Gender	Male	203	65.5
	Female	107	34.5
Age	18–28	276	89
	29–39	32	10
	40–50	2	1
Last Education	High School/Equivalent	129	41.6
	Diploma	65	21
	Bachelor’s Degree	108	34.8
	Master’s Degree	8	2.6
Employment Status	Permanent Employee	90	29
	Contract Employee	123	39.7
	Freelance	18	5.8
	Internship	66	21.3
	Part-time	13	4.2
Current Position	Staff/Employee	183	59
	Managerial	127	41
Length of Employment	< 1 year	161	51.9
	1–3 years	102	32.9
	3–5 years	37	11.9
	5–10 years	9	2.9
	> 10 years	1	0.3
Work Pattern	Work from Office	138	44.5
	Work from Home	14	4.5
	Hybrid	84	27.1
	Shift	74	23.9
Work System	Individual	58	18.7
	Team-based	167	53.9
	Combination	85	27.4
Industry Type	Service Sector	220	71
	Manufacturing Sector	60	19
	Government Sector	30	10
Company Size	Small (< 50 employees)	94	30.3
	Medium (50–200 employees)	146	47.1
	Large (> 200 employees)	70	22.6

Source: Primary Data Analysis, October 2025

4.2 Description of Research Variables

Descriptive analysis of the research variables is presented in Table 3, which includes the mean, median, mode, standard deviation, minimum value, and maximum value.

Table 3. Description of Research Variables

	OEHR	AL	PP	PC	WE
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Mean	43.3516	34.5161	65.4935	52.3613	39.1194
Median	45	36	68	54	41
Mode	45.00a	36	68	55	41
Std. Deviation	5.61744	4.76279	8.01889	6.46963	5.03341
Minimum	18	13	25	18	14
Maximum	50	40	75	60	45

Source: Primary Data Analysis, October 2025

The results of the analysis indicate that OEHR has an average value of 43.35, which reflects a positive perception of opportunity-based HR practices. Authentic Leadership obtained an average of 34.52, indicating a fairly good perception of leadership quality. Proactive Personality has the highest average value of 65.49, which reflects the respondents' proactive tendencies. Psychological Capital shows an average of 52.36, indicating a high level of psychological capital. Meanwhile, Work Engagement has an average value of 39.12, which indicates a relatively high level of work engagement. Overall, these results show that respondents have positive perceptions of organizational and personal factors that support work engagement.

4.3 Convergent Validity

Convergent validity testing was conducted through analysis of outer loading values and Average Variance Extracted (AVE).

Table 4. Measurement Items of the Study

Variable	Measurement Items in This Study	Outer Loading	AVE
Work Engagement (Schaufeli et al., 2002)	I feel energetic when carrying out tasks at work.	0.817	0,570
	I feel enthusiastic and strong when working.	0.775	
	I am able to complete my work even when there are difficulties.	0.732	
	I feel that my work is important and meaningful.	0.730	
	I am proud of my work.	0.754	
	I feel that my work is challenging and motivates me.	0.717	
	Time passes quickly when I am focused on working.	0.728	
	I feel satisfied and happy when working earnestly.	0.753	
	I am very involved in my work.	0.781	
Opportunity-Enhancing HR Practices (Prieto & Pérez-Santana, 2012)	I am given opportunities for job rotation or assigned to various work areas.	0.774	0,579
	I am given various tasks and responsibilities in my job.	0.726	
	I am encouraged to work in teams and engage in cross-divisional collaboration.	0.771	
	My job requires various kinds of skills.	0.740	
	I am given freedom to make decisions related to my work.	0.754	
	I have opportunities to convey suggestions or ideas for work improvement.	0.741	
	I am involved in discussions about work standards, quality, or benefits.	0.798	
	I am involved in problem-solving and decision-making at work.	0.774	
	I am always informed about company goals, performance, and policies.	0.736	
My supervisor maintains open communication with me and colleagues.	0.790		

Authentic Leadership (Walumbwa et al., 2008)	My supervisor actively seeks feedback to improve interactions with the team.	0.819	0,605
	My supervisor understands how others perceive their abilities.	0.746	
	My supervisor speaks clearly and says what they mean.	0.808	
	My supervisor admits mistakes when they occur.	0.786	
	My supervisor's actions are consistent with their values.	0.798	
	My supervisor makes decisions based on personal principles.	0.709	
	My supervisor is open to different views.	0.798	
	My supervisor listens carefully before making decisions.	0.756	
Proactive Personality (Bateman & Crant, 1993)	I am motivated to make a positive impact on my workplace.	0.720	0,561
	I strive to be a positive force that brings change.	0.789	
	I enjoy overcoming obstacles to my ideas.	0.738	
	I feel satisfied when my ideas are realized.	0.751	
	I try to fix things that are not working well.	0.746	
	I will make things happen despite obstacles.	0.728	
	I fight for my ideas even when opposed.	0.725	
	I recognize opportunities well.	0.768	
	I look for better ways to do things.	0.749	
	Nothing stops me from realizing my ideas.	0.773	
	I challenge the status quo.	0.740	
	I solve problems immediately.	0.730	
	I turn problems into opportunities.	0.768	
	I recognize major opportunities early.	0.741	
I help others when they struggle.	0.765		
Psychological Capital (Luthans et al., 2007)	I feel confident representing my division in management meetings.	0.734	0,566
	I feel confident expressing opinions on organizational strategies.	0.769	
	I feel confident presenting information to colleagues.	0.813	
	I can find many ways to overcome work difficulties.	0.751	
	I see myself as successful in my job.	0.769	
	I can find many ways to achieve my work goals.	0.751	
	I achieve the targets I set for myself.	0.756	
	I can work independently when needed.	0.744	

I handle work pressure calmly.	0.765
I get through difficult times at work.	0.728
I see the positive side of my job.	0.710
I am optimistic about my career future.	0.728

Source: Primary Data Analysis, October 2025

Based on Table 4, all indicators have outer loading values greater than 0.70. In addition, the AVE values for each construct are above 0.50, namely Work Engagement (0.570), OEHR (0.579), Authentic Leadership (0.605), Proactive Personality (0.561), and Psychological Capital (0.566). These results indicate that all research constructs have met the criteria for convergent validity. Therefore, the research instrument is declared capable of accurately measuring the variables under study.

4.4 Discriminant Validity

Discriminant validity was tested using the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio. Based on the Fornell-Larcker criterion, discriminant validity is fulfilled when the square root value of Average Variance Extracted (AVE) for each construct is greater than the correlations among constructs in the model. Meanwhile, according to the HTMT criterion, discriminant validity is considered fulfilled when the ratio value is below 0.90.

Table 5. Fornell-Larcker Criterion

	X2 (AL)	X1 (OEHR)	Z2 (PC)	Z1 (PP)	Y (WE)
X2 (AL)	0.778				
X1 (OEHR)	0.919	0.761			
Z2 (PC)	0.915	0.935	0.752		
Z1 (PP)	0.899	0.950	0.950	0.749	
Y (WE)	0.920	0.906	0.924	0.919	0.755

Source: Primary Data Analysis, October 2025

Table 6. Assessment of the Heterotrait-Monotrait (HTMT) Ratio

	X2 (AL)	X1 (OEHR)	Z2 (PC)	Z1 (PP)	Y (WE)	Z1 (PP) x X1 (OEHR)	Z2 (PC) x X2 (AL)
X2 (AL)							
X1 (OEHR)	1.006						
Z2 (PC)	0.996	1.010					
Z1 (PP)	0.971	1.019	1.014				
Y (WE)	1.015	0.992	1.006	0.994			
Z1 (PP) x X1 (OEHR)	0.767	0.781	0.781	0.793	0.785		
Z2 (PC) x X2 (AL)	0.777	0.770	0.802	0.766	0.802	0.953	

Source: Primary Data Analysis, October 2025

Based on Table 5, the square root values of AVE for each construct are AL (0.778), OEHR (0.761), PC (0.752), PP (0.749), and WE (0.755). However, several inter-construct correlation values are higher than the square root values of AVE. For example, the correlation between OEHR and AL is 0.919, between OEHR and PP is 0.950, between OEHR and PC is 0.935, between AL and WE is 0.920, and between PP and PC is 0.950.

These correlation values exceed the respective square root AVE values on the diagonal, indicating that the Fornell-Larcker criterion has not been fully satisfied.

Furthermore, based on the HTMT test results in Table 6, several ratio values among the main constructs exceed the recommended threshold of 0.90. For instance, the HTMT values for OEHR–AL (1.006), AL–WE (1.015), OEHR–PP (1.019), OEHR–PC (1.010), and PP–PC (1.014) are above 0.90. This indicates a high level of association among these constructs. However, the HTMT values for the interaction constructs, such as PP × OEHR and PC × AL, are below 0.90 in most pairwise comparisons, except for the value between PC × AL and PP × OEHR (0.953), which is slightly above the threshold.

Thus, the Fornell-Larcker results show that discriminant validity has not been fully achieved, and the HTMT results indicate that several constructs exhibit high intercorrelations exceeding the recommended threshold. This suggests that although the constructs remain theoretically distinct, there is substantial empirical overlap among some of the main variables in the model.

4.5 Reliability Test

The reliability test was conducted to assess the internal consistency of the research constructs using Cronbach’s Alpha and Composite Reliability (CR). A construct is considered reliable if the values of Cronbach’s Alpha and CR are greater than 0.70 (Hair et al., 2019).

Table 7. Cronbach’s Alpha and Composite Reliability

Variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
X1 (OEHR)	0,919	0,920	0,932	0,579
X2 (AL)	0,906	0,908	0,925	0,605
Y (WE)	0,905	0,906	0,922	0,570
Z1 (PP)	0,944	0,944	0,950	0,561
Z2 (PC)	0,930	0,931	0,940	0,566

Source: Primary Data Analysis, October 2025

Based on Table 7, all research variables meet the reliability criteria. Opportunity-Enhancing HR Practices (OEHR) has a Cronbach’s Alpha value of 0.919 and a CR value of 0.932. Authentic Leadership (AL) shows a Cronbach’s Alpha value of 0.906 and a CR value of 0.925. Work Engagement (WE) obtains a Cronbach’s Alpha value of 0.905 and a CR value of 0.922. Proactive Personality (PP) has the highest Cronbach’s Alpha value, which is 0.944, and a CR value of 0.950. Psychological Capital (PC) shows a Cronbach’s Alpha value of 0.930 and a CR value of 0.940.

In addition, all variables have Average Variance Extracted (AVE) values above 0.50, indicating that convergent validity has been fulfilled. Thus, all constructs in this study are considered to have very good reliability and are appropriate for further analysis.

4.6 Inner Model

The evaluation of the structural model was conducted after the measurement model was declared valid and reliable. The assessment of the inner model was carried out by analyzing the coefficient of determination (R²) and predictive relevance (Q²).

Table 8. Adjusted R-Square and Q-Square

	R-square adjusted	Q-square
Y (WE)	0,899	0,886

Source: Primary Data Analysis, October 2025

Based on Table 8, the Work Engagement (WE) variable has an adjusted R-square value of 0.899, indicating that 89.9% of the variation in work engagement can be explained by OEHR, AL, PP, and PC. The Q-square value of 0.886 indicates that the model has very good predictive relevance because its value is greater than zero. These results indicate that the constructed structural model has strong explanatory power and predictive capability.

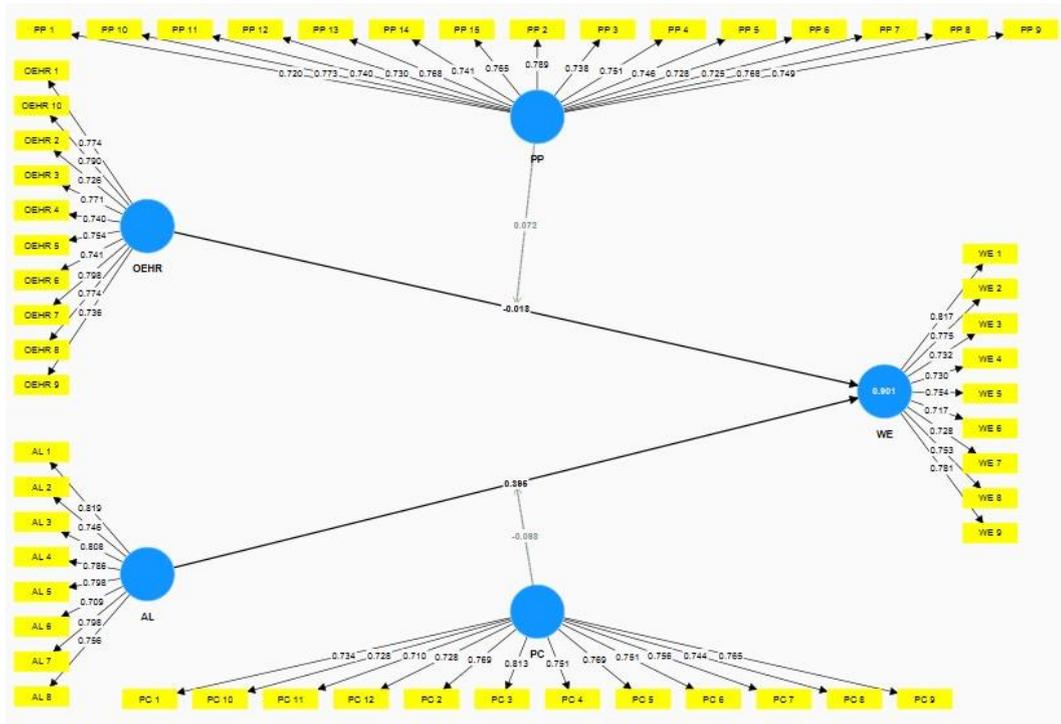


Figure 2. Results of Standardized SEM Estimation

4.7 Hypothesis Testing

Table 9 presents the results of hypothesis testing based on the bootstrapping procedure using SmartPLS 4.0.

Table 9. T-Statistics of Direct and Moderating Effects

	Hypothesis	Path Coefficient	T-Value	P-Value	Supported
H1	X1 (OEHR) -> Y (WE)	-0,018	0,121	0,903	No
H2	X2 (AL) -> Y (WE)	0,395	4,655	0,000	Yes
H3	Z1 (PP) -> Y (WE)	0,396	2,656	0,008	Yes
H4	Z2 (PC) -> Y (WE)	0,150	1,135	0,256	No
H5	Z1 (PP) x X1 (OEHR) -> Y (WE)	0,072	1,313	0,189	No
H6	Z2 (PC) x X2 (AL) -> Y (WE)	-0,098	1,774	0,076	No

Source: Data processed using SmartPLS 4.0

4.8 Analysis of Direct Effects and Moderating Roles

4.8.1 Direct Effects on Work Engagement

The direct effect analysis was conducted to examine the relationships between the independent variables and the dependent variable in the research model.

First, Opportunity-Enhancing HR Practices did not have a significant effect on Work Engagement ($\beta = -0.018$; $p = 0.903 > 0.05$). This result indicates that providing opportunities through participation, training, and career development has not directly increased employee work engagement. This finding suggests that the opportunities provided by the organization have not been fully perceived optimally by employees or are still influenced by individual and environmental factors. This result differs from the findings of Prieto and Pérez-Santana (2012) and Gürbüz et al. (2024), who found that opportunity-based HR practices play an important role in enhancing engagement. This difference may be caused by variations in organizational context, the level of HR practice implementation, and the characteristics of respondents in this study.

Second, Authentic Leadership had a positive and significant effect on Work Engagement ($\beta = 0.395$; $p < 0.05$). This finding indicates that leadership based on honesty, transparency, and positive relationships is able to increase employees' enthusiasm, dedication, and emotional involvement. This result is consistent with the

findings of Walumbwa et al. (2008) and Karam et al. (2017), which emphasize the important role of authentic leadership in building sustainable engagement.

Third, Proactive Personality had a positive and significant effect on Work Engagement ($\beta = 0.396$; $p = 0.008 < 0.05$). This indicates that employees with proactive tendencies are more capable of adapting, seeking opportunities, and solving problems independently, resulting in higher levels of work engagement. This finding supports the theories of Bateman and Crant (1993) and Fuller and Marler (2009) regarding the role of proactive personality as a personal resource. This result is also consistent with studies published in *Frontiers in Psychology* (2021, 2024) and Gürbüz et al. (2024), which show that proactive individuals are better able to utilize job resources to enhance engagement.

Fourth, Psychological Capital did not show a significant effect on Work Engagement ($\beta = 0.150$; $p = 0.256 > 0.05$). Although it includes efficacy, optimism, hope, and resilience, this psychological capital has not been able to directly increase work engagement without adequate support from the work environment and leadership. This finding differs from the results of Avey et al. (2011) and Luthans and Youssef-Morgan (2017), who found a positive effect of psychological capital on engagement. This difference indicates that in the context of this study, organizational factors, particularly leadership, play a more dominant role than individual psychological resources.

4.8.2 Moderating Roles in the Research Model

Moderation analysis was conducted to examine the roles of Proactive Personality and Psychological Capital in strengthening the relationships among variables.

First, the interaction between Proactive Personality and Opportunity-Enhancing HR Practices did not have a significant effect on Work Engagement ($\beta = 0.072$; $p = 0.189 > 0.05$). This result indicates that proactive personality has not been able to strengthen the effect of opportunity-based HR practices on work engagement. This finding suggests that the development opportunities provided by the organization are not yet fully aligned with individual needs, readiness, and characteristics. This result differs from the findings of Gürbüz et al. (2024), which indicate that proactive individuals are able to maximize the benefits of HR practices. This difference may be influenced by limitations in HR practice implementation and relatively low levels of job autonomy in the context of this study.

Second, the interaction between Psychological Capital and Authentic Leadership also did not have a significant effect on Work Engagement ($\beta = -0.098$; $p = 0.076 > 0.05$). This result indicates that the influence of authentic leadership on work engagement is already sufficiently strong without being reinforced by individual psychological capital. This finding suggests that the quality of relationships, support, and leadership role modeling plays a more dominant role in shaping engagement than personal factors. This result differs from the studies of Avey et al. (2011) and Wang et al. (2020), but is consistent with the findings of Gürbüz et al. (2024), which indicate that leadership often serves as the main factor in shaping positive work behaviors.

Overall, the analysis results indicate that authentic leadership and proactive individual characteristics have stronger direct effects on work engagement than opportunity-based HR practices and the moderating roles of personal resources. These findings emphasize that in the Indonesian organizational context, leadership quality and individual initiative are key factors in building sustainable employee work engagement, as also demonstrated in the study by Gürbüz et al. (2024).

V. CONCLUSION

This study produces several important findings related to the influence of organizational and personal factors on employee Work Engagement. The results show that Authentic Leadership and Proactive Personality have a positive and significant effect on Work Engagement. Leadership that upholds honesty, transparency, and integrity, as well as proactive and initiative-driven individual characteristics, is proven to enhance employees' vigor, dedication, and involvement in their work. In contrast, Opportunity-Enhancing HR Practices and Psychological Capital do not show a significant effect, indicating that structural factors and individual psychological capital do not necessarily increase work engagement directly without the support of effective leadership.

Furthermore, the moderation test results indicate that Proactive Personality does not moderate the relationship between Opportunity-Enhancing HR Practices and Work Engagement, and Psychological Capital does not moderate the relationship between Authentic Leadership and Work Engagement. This shows that the influence of authentic leadership on work engagement is dominant and operates directly without depending on employees' personal psychological conditions.

This study has several limitations, including the dominance of young respondents with relatively short tenure, the use of a cross-sectional design, and limitations in capturing long-term work behavior dynamics. Therefore, future research is recommended to involve more diverse respondents, apply longitudinal or qualitative approaches, and include additional variables such as job autonomy, perceived organizational support,

and psychological empowerment in order to enrich the understanding of the mechanisms underlying work engagement formation in the context of organizations in Indonesia.

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