

# The Role of Psychological Capital on the Effect of High-Performance Work System and Proactive Personality on Job Performance

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## Abstract

**Objective:** This study aims to investigate the effect of a high-performance work system (HPWS) and proactive personality on job performance and examine the role of psychological capital as mediation in the proposed research model.

**Design/Methods/Approach:** This study adopts quantitative approaches by distributing cross-sectional surveys of multi-sector employees; 231 respondents were collected. The data collected underwent model evaluation and structural equation modeling using Smart PLS 3.2.9, employing the embedded two-stage approach.

**Findings:** The statistical analysis indicates that High-Performance Work Systems (HPWS) and proactive personality directly impact job performance. Moreover, they also have an indirect positive impact through mediation by psychological capital.

**Originality:** This study contributes to the existing literature by investigating the mediating role of psychological capital on the influence of HPWS and proactive personality on job performance in the context of workers in various industrial sectors in Indonesia. This study confirms that HPWS, proactive personality, and psychological capital positively impact employee job performance. It also supports the broaden-and-build theory of positive emotions and the JD-R model in Indonesian workplaces.

**Practical/Policy implication:** The findings of this study can provide valuable insights, evidence, and knowledge to academics and Human resource managers. By implementing High-Performance Work Systems (HPWS), recruiting workers with a proactive personality, and improving employee job performance, organizations can build a solid human resource base that can contribute to achieving optimal organizational goals. Human resource managers are advised to develop policies that focus on recruitment, training, motivation, and enhancing opportunities while fostering a proactive personality among employees. It will encourage optimism, hope, resilience, and efficacy in performing tasks, improving organizational performance and outcomes.

**Keywords:** HPWS, Proactive personality, Psychological capital, Job performance, Effective institutions

**JEL Classification:** L2



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## I. Introduction

A strong organization requires a robust Human Resource Management system to enhance employee and organizational productivity. Organizations that implement high-performance work systems (HPWS) use specific combinations of human resource management practices that lead to improved performance (Li et al., 2019). These practices enhance employee knowledge, skills, and abilities and demonstrate a commitment to achieving organizational goals (Jyoti & Dev, 2016). Research has shown that High-Performance Work Systems (HPWS) can enhance employee productivity by enabling them to develop their competencies and abilities. HPWS can also provide empowerment, motivation, and incentives appropriate to the employees' needs (Edgar et al., 2020). Studies indicate that HPWS positively impacts individual outcomes such as job performance (Ijigu et al., 2022; Imran et al., 2020), which are crucial for organizations. Therefore, organizations with HPWS enjoy significant advantages, including increased ability to face various business challenges (Imran et al., 2020).

Several studies have suggested that employees' personality plays a crucial role in their behavior and performance at work (Pandey, 2019; Yang et al., 2020). According to Fuller and Marler (2009), proactive personality is a valuable trait that contributes significantly to the study of personality traits. Proactive individuals tend to be more active and possess broader cognitive and attentional resources, which help them influence the work environment positively (Roopak et al., 2019). Such individuals are better at identifying opportunities, taking initiative, and implementing corrective actions. They are also determined to bring about significant changes (Ullah et al., 2023), making it easier for them to achieve organizational goals (Buil et al., 2019). This trait encourages proactive individuals to give their best efforts to complete tasks and minimize job problems.

This study aims to expand the study of the influence of HPWS and proactive personality on job performance, consisting of task performance and contextual performance (Andrade et al., 2020). Imran and Atiya (2020) found that High-Performance Work Systems (HPWS) positively influence job performance by developing organizational human resources. The research of Karadas & Karatepe (2019) presents different findings, suggesting that HPWS does not directly impact employee performance in a specific context. These variations in the results can be attributed to cultural differences, labor standards, economic directions, and political and legal environments that vary across countries (Zhai & Tian, 2023). Several studies have shown that having a proactive personality can have a positive impact on various important aspects of organizational success, such as job performance (Bakker et al., 2012; Hsiao et al., 2020; Spitzmuller et al., 2015; Yang et al., 2020). However, some studies have found that under certain conditions, a proactive personality may negatively affect job performance (Chan, 2006; Erdogan & Bauer, 2005; Gerhardt et al., 2009). The reasons for this discrepancy in findings are not clear. Hence, this study aimed to conduct similar tests to gain a better understanding of how proactive personality influences job performance in the context of organizations in Indonesia.

Moreover, research on the mechanisms by which HR practices, such as HPWS, affect employee performance and behavior is lacking. Previous studies have not fully specified the mediating mechanism that explains the relationship between HPWS and job performance (Abubakar et al., 2019). This study aims to investigate the role of psychological capital as a mediator in the effect of HPWS on job performance. This study also examines the mediating effect of psychological capital on the relationship between proactive personality and job performance, which has not been explored in previous studies (Kumar et al., 2021). It is possible to test the role of psychological capital mediation as it can intervene and improve positive employee behavior, including job performance (Avey, 2014; Castillo & Lopez-Zafra, 2022). The mediating role of psychological capital, as established by several previous studies (Arefin et al., 2019; Hao et al., 2019; Luthans et al., 2008), can be constructed in this study. By incorporating the broaden-and-build theory of positive emotions (Fredrickson, 2004) and the job demands-resource (JD-R) model (Bakker & Demerouti, 2007), this proposed model is expected to provide valuable insights in the field of organizational behavior research.

This study contributes several ways to the human resource management literature on job performance, psychological capital, proactive personality, and HPWS. We make theoretical contributions by providing evidence that psychological capital mediates the relationship between HPWS and proactive personality on job performance. This study confirmed the claim that HPWS has a significant impact on job performance (Imran & Atiya, 2020; Miao et al., 2021). In addition, this study also confirmed the claim that a proactive personality has a positive effect on job performance (Bakker et al., 2012; Hsiao et al., 2020; Spitzmuller et al., 2015; Yang et al., 2020). Further, this study also offers methodological contributions. First, this study uses two-stage techniques. This provides more robust influence testing power by considering the authenticity of constructs from both unidimensional and multidimensional sides on the variables used. Second, this study incorporated an attention test to gather data from serious respondents and avoid careless responses. Third, the data testing technique in this study maximizes the function of SmartPLS by adjusting bootstrapping with 5000 subsamples, where usually researchers only use 500 subsamples. This aims to ensure the stability of the results produced.

The proposed model in this study explains the context of multi-sector organizations in three Indonesian metropolises, namely Jakarta, Surabaya, and Banjarmasin. Jakarta is the capital of Indonesia and a national economic center known for its large trade and financial operations, as well as national and international companies. Surabaya is the capital of the East Java Province and the second-largest metropolis in Indonesia, known for its strong economy, trade, and industry. Banjarmasin is the main economic center in South Kalimantan province and has the most diverse range of industrial sectors on the island of Kalimantan. These three cities are their regions' main trading centers,

representing multi-sector industries. With their status as trade and business centers, all three cities have thriving transportation and logistics sectors. They each have ports that facilitate international trade and the transportation of goods. Jakarta has Tanjung Priok Port, one of the busiest ports in Asia. Surabaya has Tanjung Perak Port, which is also essential for international trade. Banjarmasin has Trisakti Port, which connects the city with the surrounding area via river. Therefore, these three cities are representative and contain multi-sector industries in Indonesia.

The following section summarizes the literature review, development of hypotheses, research methods and data collection, results and discussion, and conclusion.

## 2. Literature Review and Hypotheses Development

### 2.1 HPWS and Job Performance

A high-performance work system (HPWS) refers to an organization's level of investment in key HR practices designed to enhance employee performance. These practices include selective recruitment, systematic training and development, results-oriented performance appraisals, rewards for high performance, open communication, and employee participation and autonomy (Miao et al., 2021). In addition, HPWS is a collection of high-performance and coordinated economy-oriented policies, guiding the choice of formal HR practices and creating a synergistic effect among them to improve organizational performance (Peláez-León & Sánchez-Marín, 2023). HPWS implementation emphasizes two key aspects that can have a significant impact on a company's workforce. Firstly, HR programs aimed at increasing employee commitment are achieved through training opportunities, awards, and incentives. Secondly, synergistic practices such as high-involvement HR programs and simultaneous decision-making can enhance teamwork. These aspects have been proven to positively impact the company's overall performance (Baik et al., 2019).

Job performance refers to employees' productivity when working with their colleagues toward a common goal (Huang et al., 2021). It encompasses all the actions taken by employees that contribute to the success of an organization (Campbell & Wiernik, 2015). Put, job performance can be measured by employees' actions, behaviors, and outcomes aligned with organizational objectives (Viswesvaran & Ones, 2000). According to Katebi et al. (2022), job performance is the output of an employee's work within an organization. Such a performance is influenced by the employee's knowledge, personal behavior, skills, and abilities. An employee's job performance can significantly affect the goals and mission of the organization where the employee works.

According to Arthur et al. (2021), a positive relationship exists between HPWS and job performance. This finding is consistent with several previous studies, including Edgar et al. (2021), Imran et al. (2020), and Imran & Atiya (2020). The studies suggest that implementing HPWS can improve the attainment of optimal organizational goals with the support of human resources. In other words, a work environment promoting high performance can condition employees to provide satisfactory performance, directly increasing the organization's value (Spagnoli et al., 2020). This can lead to increased organizational effectiveness and provide opportunities for employees to develop themselves through training and other means. Based on these findings, the first hypothesis of this study is that there is a positive relationship between HPWS and job performance.

**H1:** HPWS has a positive effect on job performance.

### 2.2 Proactive Personality and Job Performance

Proactive personality refers to stable personality traits and behavior patterns that allow individuals to exhibit reasonable control in all situations (Yu et al., 2022). People with proactive personalities do not see limitations as hindrances as they are capable of changing their circumstances (Bateman & Crant, 1993). They are also characterized by anticipation and the ability to adapt to the demands of their environment (Wei et al., 2021). Proactive individuals view job demands as opportunities for personal growth and proactively handle any burdens that come their way (Hsiao et al., 2020). The stability of these behavior patterns in employees, especially regarding proactive personalities, has a significant impact on job performance (Huang et al., 2021). In other words, proactive personalities make individuals more responsible for their work, leading to improved work performance (Chong et al., 2021).

According to Hsiao et al. (2020) having a proactive personality is a strong indicator of good job performance. Individuals with proactive personalities are likelier to engage with their work, leading to effective and optimal job performance (Chong et al., 2021). Engagement theory further reinforces this idea, stating that when individuals feel connected to their organization, they are more willing to make sacrifices to improve their performance (Conklin et al., 2009; Thompson, 2005). Therefore, the second hypothesis of this study is that proactive personality has a positive impact on job performance (H2).

**H2:** Proactive personality has a positive effect on job performance.

### 2.3 Psychological Capital and Job Performance

Psychological capital is a positive state of mind that individuals can cultivate, and it includes four key aspects: self-efficacy, optimism, hope, and resilience (Luthans et al., 2007). Self-efficacy means having the confidence to take on challenging tasks. Optimism is the belief that one can succeed in the present and future. Hope refers to the determination

to achieve goals and the ability to develop strategies for success. Resilience is the capacity to persist and recover from setbacks and difficulties (Avey et al., 2011; Luthans et al., 2007; Luthans et al., 2015). These four aspects are essential components of psychological capital, which individuals must foster to embrace development and change and improve their performance at work (Lupşa et al., 2019). Psychological capital is closely linked to an individual's psychological strength, which can be measured, developed, and directed to enhance performance, particularly in the workplace (Baig et al., 2021).

According to Huang et al.'s (2021) research, psychological capital can positively impact an individual's work performance by making them more diligent and optimistic. The study found that having psychological capital can improve job performance. Baig et al. (2021) note that psychological capital is necessary for certain work conditions as it helps individuals control the situation and work efficiently. Additionally, psychological capital acts as an attitude control that can boost an individual's efficacy, hope, and optimism, especially when working towards achieving their goals (Baig et al., 2021). This suggests that job performance requires an intrinsic boost in the individual, encouraging them to work more meaningfully (Castillo & Lopez-Zafra, 2022). The study also reveals that psychological capital influences employee job performance by helping them cope with various job demands. Thus, the third hypothesis in this study is:

**H3:** Psychological capital has a positive effect on job performance.

#### *2.4 HPWS and Psychological Capital*

A high-performance work system (HPWS) is a set of interconnected human resource management practices. It aims to attract, select, manage, and retain the best talent through practices like empowerment, decision-making, training, and promotion opportunities (Abubakar et al., 2019). HPWS is characterized by motivation-enhancing policies, training policies, opportunity-enhancing policies, and selection policies (Peláez-León & Sánchez-Marín, 2023; Jiang et al., 2017). Investing in employees through assessment, feedback, and career opportunities conveys organizational care for employee development (Whitener, 2001).

Psychological capital develops in employees through increasing self-efficacy, optimism, hope, and resilience - resulting in a positive state of mind (Avey et al., 2011; Luthans et al., 2007). Previous research has indicated that High-Performance Work Systems (HPWS) lead to increased positive psychology among employees, which can, in turn, boost their self-efficacy (Chen et al., 2016), resilience (Bardoel et al., 2014), and hope (Luthans, 2008). Additionally, HPWS can generate higher levels of optimism (Agarwal & Farndale, 2017). A study conducted by Miao et al. (2021) in the context of high-tech manufacturing companies in urban areas of China has found that implementing High-Performance Work Systems (HPWS) is positively related to the psychological capital of individuals within the organization. The study suggests that HR practices and adopting HPWS can enhance psychological capital, leading to a resourceful workplace and allowing employees to be more confident, optimistic, hopeful, and resilient. This supports the notion that HPWS can produce a workplace that fosters positive attitudes and behaviors in employees. As a result, organizations implementing HPWS can create a resourceful workplace that promotes employee confidence, optimism, hope, and resilience (Abubakar et al., 2019). Based on this, the fourth hypothesis in this study is:

**H4:** HPWS has a positive effect on psychological capital.

#### *2.5 Proactive Personality and Psychological Capital*

Proactive personality refers to an individual's inclination to take proactive actions that impact their environment (Parker et al., 2006; Seibert et al., 2001). People with proactive personalities have both the ability and the desire to actively and independently control their environment (Crant, 1995). This trait is associated with optimism and self-efficacy. Proactive individuals can better cope with work-related stress as their tendency towards control enables them to develop resilience (Lorenz et al., 2016).

Research has shown that having a proactive personality can directly affect an individual's psychological capital. Studies conducted by Avey in China (2014) and America (2011) reveal that having a proactive personality is a significant predictor of the various dimensions of psychological capital. Recent studies by Hao et al. (2019) and Ullah et al. (2023) confirm these findings, indicating that individuals with proactive personalities possess greater self-efficacy, optimism, resilience, and hope. Furthermore, earlier studies suggest that individuals with proactive personalities generally have higher levels of self-esteem and a positive outlook on life and work (Clarence et al., 2021). Thus, the fifth hypothesis in this study is:

**H5:** Proactive personality positively affects psychological capital.

#### *2.6 The Mediation Role of Psychological Capital*

In a study conducted by Castillo and Lopez-Zafra (2022), it was discovered that psychological capital acted as a mediator in 74 of the 99 samples of research literature. In a separate longitudinal study conducted in the American context by Carter and Youssef-Morgan (2019), it was found that psychological capital fully mediates the influence of mentoring on employee performance. This suggests that positive psychological resources, such as psychological capital, play a crucial role in the relationship between mentoring programs and employee performance. Psychological capital is a variable that can link motivation and human capital. It is a possible mediation mechanism in human resource practices and individual outcomes (Chen, 2018). However, the evidence for psychological capital as a mediator between proactive

personality and job performance must be and has not been directly tested by previous empirical research (Castillo & Lopez-Zafra, 2022). It has been found in previous research that psychological capital can act as a mediator between proactive personality and well-being (Hao et al., 2019). Studies have also indicated that individual differences, such as proactive personality traits, result in high levels of psychological capital (Avey, 2014). Additionally, employees with high psychological capital are more motivated to improve their performance. Hence, this study aims to investigate the impact of continued proactive personality and psychological capital in predicting an increase in employee job performance.

This relationship can be based on the broaden-and-build theory of positive emotions (Fredrickson, 2004) and the job demands-resource model or the JD-R model (Bakker & Demerouti, 2007). According to the broaden-and-build theory of positive emotions, HR practices reflected in HPWS stimulate personal growth and development and the momentary thought-action repertoire and broadened mindsets of individuals (Fredrickson, 2004). Individuals with proactive personalities identify opportunities, show initiative, take corrective action, and are strongly determined to achieve goals (Buil et al., 2019; Ullah et al., 2023). HPWS and proactive personality stimulate positive emotions (emotional state), which is a condition for the construction of positive organizational behavior (POB) (Abubakar et al., 2019; Clarence et al., 2021). Then, the four dimensions of psychological capital are based on and aligned with the construction of POB; this mechanism allows HPWS and proactive personality to generate an impact on employee psychological capital.

The JD-R model suggests that HPWS (High-Performance Work System) provides employees with job resources, including social support from the organization, enhancing their resources. This experience helps employees develop psychological capital, including optimism, hope, self-efficacy, and resilience, as emphasized by Avey et al. (2011) and Bakker & Demerouti (2007). As a result, proactive employees tend to adapt to their work environment and display the ability and willingness to shape it to suit their needs and abilities better. This way, the work environment is better aligned with work demands and proactive employee resources. This is explained by Bakker & Demerouti (2017). Employees with a proactive personality are most likely to ask for help and feedback (social resources) and proactively enrich the work environment, for example, asking for autonomy, creating skill variations, and attending training (structural resources) (Bakker et al., 2012).

Moreover, individuals possessing high psychological capital exhibit a greater level of optimism and confidence in executing job responsibilities compared to those with low psychological capital (Avey, 2014). Consequently, individuals with high psychological capital possess a stronger belief in their abilities and are more likely to overcome obstacles (Avey et al., 2011). Employees who possess high psychological capital have more personal resources, which are indirectly provided by HPWS as organizational factors and proactive personality as individual differences in the form of tools and capacities (job resources) and challenges (high job demand) (Alfes et al., 2020; Li et al., 2014). These resources, in turn, lead to increased employee job performance (Boxall, 2021). Therefore, HPWS and proactive personality encourage employees to develop psychological capital, which makes them more positive in pursuing job success and better equipped to handle obstacles, ultimately resulting in improved job performance. Thus, the hypothesis is stated as follows:

**H6:** Psychological capital mediates the effect of HPWS on job performance.

**H7:** Psychological capital mediates the influence of proactive personality on job performance.

Based on the hypothesis that has been described, the conceptual model in this study can be seen in Figure 1.

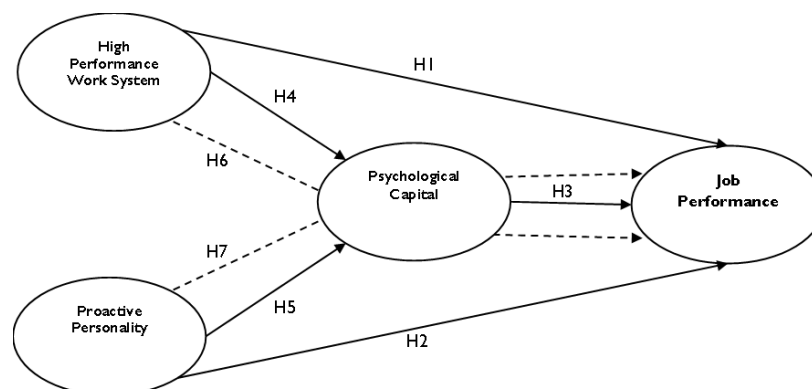


Figure 1. Research Model

### 3. Method

#### 3.1 Data Collection

In this study, data was collected through an online questionnaire created using Google Forms. The questionnaires were distributed through various social media platforms such as WhatsApp, Twitter, and Instagram, as well as through research colleagues working in multi-sector companies located in Jakarta, Surabaya, and Banjarmasin. The questionnaire is divided into two parts. The first section is focused on personal information, including gender, age, education, work

experience, job status, position, work location, and industry sector. The second section comprises four variables, with 48 items, each using a five-point Likert scale as answer choices. Likert scale descriptions used for HPWS, proactive personality, and psychological capital variables are 1 = strongly disagree; up to 5 = strongly agree. The job performance variable uses a five-point Likert scale with a frequency description of 1 = never; 5 = always. As an attention test, the online questionnaire included simple math questions such as "what is the result of 3-1?" for the respondents. Those who answered the attention test question incorrectly were excluded from the test data.

The questionnaire was distributed cross-sectionally from April 1, 2023, to May 22, 2023, using purposive sampling techniques. This technique involves selecting samples based on specific criteria and considerations (Zikmund et al., 2010). The criteria set are employees who work in multi-sector companies in the Jakarta, Surabaya, and Banjarmasin areas, with a minimum working period of two years. According to Meyer et al. (2002), employees with a working period of  $\geq 2$  years have more experience, maturity, and better perceptions regarding workplace and work attitudes.

The data obtained from the results of the distribution of questionnaires amounted to 273 respondents. After the screening process, 41 respondents failed to fill out the attention test questions and were excluded from the sample of respondents for data testing. In the end, the amount of data that met the criteria and was eligible for testing was 231 respondents (84.6%). Information on the demographics and characteristics of the respondents tested and analyzed can be seen in Table 1. Female employees dominated respondents, amounting to 146 people (63.2%). The age of respondents was dominated by the category of 25-30 years, which amounted to 72 people (31.2%). The education level of respondents was dominated by the bachelor level, which amounted to 188 people (81.4%). The working period of respondents was dominated by the 2-5-year category, which amounted to 112 people (48.5%), with worker status dominated by permanent employees of 137 people (59.3%). Furthermore, respondents in this study were employees working in the Surabaya area, namely 99 people (42.9%), the Jakarta area with 76 people (32.9%), and the Banjarmasin area with 56 people (24.2%). For the employment sector, the education sector is dominated by 94 people (40.7%).

Table 1. Characteristics of respondents

	<b>Demography</b>	<b>Total</b>	<b>%</b>
<b>Gender</b>	Male	85	36.8
	Female	146	63.2
<b>Age</b>	<25 Years Old	53	22.9
	25-30 Years Old	72	31.2
	31-35 Years Old	13	5.6
	36-45 Years Old	37	16.0
	>45 Years Old	56	24.2
<b>Education</b>	High school	12	5.2
	Diploma	6	2.6
	Bachelor	188	81.4
	Master	23	10.0
	Doctor	2	0.9
<b>Tenure</b>	2-5 Years	112	48.5
	5-10 Years	34	14.7
	11-15 Years	17	7.4
	>15 Years	68	29.4
<b>Employment Status</b>	Permanent	137	59.3
	Contract	88	38.1
	Internship	6	2.6
<b>Region</b>	Jakarta	76	32.9
	Surabaya	99	42.9
	Banjarmasin	56	24.2
<b>Work Industry</b>	Education	94	40.7
	Finance & Banking	17	7.4
	Technology	27	11.7
	Public Sector	38	16.5
	Health	10	4.3
	Service	11	4.8
	Distribution	4	1.7
	Retail	7	3.0
	Others	23	10.0

### 3.2 Measurement

This study uses four variables, namely high-performance work system (HPWS) and proactive personality as independent variables, psychological capital as a mediation variable, and job performance as a dependent variable. The measurement tools of these four research variables are adapted from previous studies. The HPWS measurement instrument consists of 16 items adapted from Peláez-León & Sánchez-Marín (2023). There are four dimensions in HPWS consisting of motivation-enhancing policies (5 items), training policies (4 items), opportunity-enhancing policies (4 items), and selection policies (3 items). All items are measured on a five-point Likert scale (strongly disagree – strongly agree). Furthermore, the instrument used to measure proactive personality consists of 10 items adapted from Seibert et al. (1999). All proactive personality items were measured on a five-point Likert scale (strongly disagree – strongly agree). For mediation variables, psychological capital measurement instruments consist of four dimensions: hope, optimism, resiliency, and self-efficacy, adapted from Luthans et al. (2015). The psychological capital measurement instrument is measured with 12 items, with three items for each dimension. All items are measured on a 5-point Likert scale (strongly disagree – strongly agree). The dependent variable is job performance, using measurement instruments consisting of two dimensions, namely task performance and contextual performance. Job performance is measured by ten items adapted from Andrade et al. (2020), which are divided into five items for each dimension. All items are measured on a 5-point Likert scale with frequency captions (never – always). A detailed description of operational definitions and measurement items can be seen in Table 2.

Table 2. Operational definitions & measurement items

Construct	Operational Definition	Indicator	Measurement Item	Source	
<b>High-Performance Work System</b>	Employee perceptions of human resource management	HPWS_MEP01	My organization has assessed employee's performance based on objective and quantifiable results.	Peláez-León & Sánchez-Marín (2023)	
	Motivation-Enhancing Policies	practices in their organizations include	HPWS_MEP02		My organization has assessed employee's performance based on multiple sources.
		motivation-enhancing policies,	HPWS_MEP03		My organization has given feedback to employees based on their performance appraisals.
		opportunity-enhancing policies, selection	HPWS_MEP04		My organization has paid employees based on their performance.
		policies, and training policies.	HPWS_MEP05		My organization has provided incentives based on the results achieved.
Opportunity-Enhancing Policies		HPWS_OEP01	My organization has encouraged employees to make suggestions for improving the work.		
		HPWS_OEP02	My organization has asked employees to participate in work-related decisions.		
		HPWS_OEP03	My organization has cared about work-life balance of employees.		
		HPWS_OEP04	My organization has considered employee off-work situations when making schedules.		
Selection Policies		HPWS_SP01	My organization has made a great effort to select the right person.		
		HPWS_SP02	My organization has selected according to specialties required of the job.		
		HPWS_SP03	My organization has selected according to general traits and abilities to complete diverse functions.		

Construct	Operational Definition	Indicator	Measurement Item	Source	
Training Policies		HPWS_TP01	My organization has provided continued training programs.		
		HPWS_TP02	My organization has invested considerable time and money in training.		
		HPWS_TP03	My organization has implemented training programs to achieve high quality of work.		
		HPWS_TP04	My organization has provided comprehensive training, not limited to skill training.		
Proactive Personality	Employee self-perception is related to self-principles that are responsive, initiative, and play an active role in seeing opportunities and showing a role in anticipating problems that hinder the achievement of goals to change the environment or situation at hand.	PP01	I am constantly on the lookout for new ways to improve my life.	Seibert et al. (1999)	
		PP02	Wherever I have been, I have been a powerful force for constructive change.		
		PP03	Nothing is more exciting than seeing my ideas turn into reality.		
		PP04	If I see something I don't like, I fix it.		
		PP05	No matter what the odds, if I believe in something, I will make it happen.		
		PP06	I love being a champion for my ideas, even against others' opposition.		
		PP07	I excel at identifying opportunities.		
		PP08	I am always looking for better ways to do things.		
		PP09	If I believe in an idea, no obstacle will prevent me from making it happen.		
		PP10	I can spot a good opportunity long before others can.		
Psychological Capital	Employees' self-perceptions related to positive psychological states are owned and reflected in four aspects, namely self-efficacy, optimism, hope, and resilience.	PC_HO01	At the present time, I am energetically pursuing my goals.	Luthans et al. (2015)	
		PC_HO02	There are a lot of ways around any problem that I am facing now.		
		PC_HO03	I can think of many ways to reach my current goals.		
		PC_OP01	In uncertain times, I usually expect the best.		
		PC_OP02	I always expect things to go my way.		
		PC_OP03	Overall, I expect more good things to happen to me than bad.		
		Resilience	PC_RE01		I quickly get over and recover from being startled.
			PC_RE02		I am generous with my colleagues.
			PC_RE03		I get over my anger at someone reasonably quickly.
		Self-Efficacy			PC_SE01



Construct	Operational Definition	Indicator	Measurement Item	Source
<b>Job Performance</b>	Employee self-perception is related to self-report performance, which consists of contextual performance and task performance.	PC_SE02	I feel confident of presenting my work area in meetings with senior management.	Andrade et al. (2020)
		PC_SE03	I feel confident of presenting information to a group of colleagues.	
		JP_CP01	I try to update my technical knowledge to do my job.	
		JP_CP02	I take initiatives to improve my results at work.	
		JP_CP03	I seek new solutions for problems that may come up in my job.	
		JP_CP04	I work hard to do the tasks designated to me.	
		JP_CP05	I execute my tasks by foreseeing their results.	
		JP_TP01	I perform hard tasks properly.	
		JP_TP02	I do my job according to what the organization expects from me.	
		JP_TP03	I plan the execution of my job by defining actions, deadlines and priorities.	
		JP_TP04	I plan actions according to my tasks and organizational routines.	
		JP_TP05	I seize opportunities that can improve my results at work.	

### 3.3 Data Analysis

This study used the analysis technique Partial Least Square-Structural Equation Modeling (PLS-SEM) using SmartPLS 3.2.9 software. PLS-SEM is a variant-based statistical method that can simultaneously test measurement models followed by structural model testing (Hair et al., 2017). This study used the PLS-SEM technique because this technique is superior for regression analysis when testing mediation (Hair et al., 2019). In addition, PLS-SEM with its causal-predictive power that balances between explanations and predictions that perfectly matches the current research environment, which is not only concerned with testing hypothetical models but also with obtaining managerial recommendations (Chin et al., 2020; Hair & Sarstedt, 2021).

Model testing using an embedded two-stage approach (Becker et al., 2023). The first stage is done through connected modeling of all dimensions which is then calculated with the PLS Algorithm to obtain a latent variable score. Then at the second stage latent variables which are dimensions are modeled as indicators of the variable construction. In short, first-stage measurement compresses dimension indicators into a single item as indicators on the second stage (van Riel et al., 2017). Thus, the two-stage approach makes it possible to place the entire dimension of the variable under test in an endogenous position in the structural model (Ringle et al., 2012).

In testing with the PLS-SEM technique carried out, it consists of three stages in the measurement model, which includes model specification, outer model evaluation, and inner model evaluation (Hair et al., 2014). Observations on outer model evaluation to test the validity and reliability of data consisting of convergent validity, discriminant validity, indicator reliability and internal consistency reliability (Hair et al., 2014). Furthermore, the structural model test is carried out by adjusting bootstrapping with 5000 subsamples. In the inner model evaluation stage. This test was carried out by analysis through five stages, namely collinearity assessment, path coefficients, coefficient of determination ( $R^2$ ), effect size ( $f^2$ ), and cross-validated redundancy ( $Q^2$ ) (Hair et al., 2017). The next step, for hypothesis testing of direct influence is identified by looking at t-value and p-value with significance provisions if the t-value  $> 1.645$  (one-tailed) and p value  $< 0.05$  (5%) (Hair et al., 2017). To test the mediation hypothesis, it is identified by analysis of the types of mediation according to Baron & Kenny (1986), namely full mediation, partial mediation, and no mediation.

## 4. Result and Discussion

### 4.1. Measurement Model

The first stage of testing showed promising results for the model's validity and reliability (refer to Table 3). The Cronbach's alpha values for all dimensional constructs (HPWS, psychological capital, job performance) and unidimensional constructs (proactive personality) reported internal consistency reliability values between 0.752-0.902 and composite reliability values between 0.851-0.932, which were all above the acceptable threshold of 0.7. Moreover, the results of the outer loading of all indicators were all greater than 0.5, ranging from 0.596-0.914. Additionally, the AVE values of each construct for the HPWS, psychological capital, and job performance dimension constructs were all above 0.5, ranging between 0.556-0.795. The unidimensional construct of proactive personality had an AVE value of 0.469, below the acceptable threshold. However, according to Fornell & Larcker (1981), if the AVE value is less than 0.5 in a construct but has a composite reliability higher than 0.6, the convergent validity of the construct is still adequate. Thus, the latent variables from the first-stage measurement model can be feasibly used to build a second-stage measurement model.

Table 3. First stage measurement model

Construct	Indicator	First Stage					
		Mean	Outer Loadings	Cronbach's Alpha	Composite Reliability	AVE	
<b>High-Performance Work System</b>	HPWS_MEP01	4.087	0.792	0.802	0.862	0.556	
	Motivation-Enhancing Policies	HPWS_MEP02	4.095	0.763			
		HPWS_MEP03	4.017	0.784			
		HPWS_MEP04	3.710	0.709			
		HPWS_MEP05	3.792	0.674			
	Opportunity-Enhancing Policies	HPWS_OEP01	3.952	0.794	0.765	0.851	0.589
		HPWS_OEP02	3.939	0.655			
		HPWS_OEP03	3.654	0.816			
		HPWS_OEP04	3.675	0.795			
	Selection Policies	HPWS_SP01	3.987	0.904	0.854	0.911	0.774
		HPWS_SP02	4.013	0.871			
		HPWS_SP03	3.931	0.864			
	Training Policies	HPWS_TP01	3.675	0.904	0.902	0.932	0.774
		HPWS_TP02	3.325	0.871			
HPWS_TP03		3.688	0.864				
HPWS_TP04		3.688	0.904				
<b>Proactive Personality</b>	PP01	4.247	0.856	0.875	0.898	0.469	
	PP02	4.212	0.914				
	PP03	4.000	0.904				
	PP04	4.074	0.687				
	PP05	3.879	0.695				
	PP06	3.385	0.613				
	PP07	3.628	0.740				
	PP08	4.186	0.700				
	PP09	3.446	0.596				
	PP10	3.515	0.642				
<b>Psychological Capital</b>	Hope	PC_HO01	4.082	0.875	0.846	0.907	0.765
		PC_HO02	4.048	0.865			
		PC_HO03	3.970	0.883			
	Optimism	PC_OP01	3.922	0.867	0.763	0.863	0.677
		PC_OP02	3.714	0.794			
		PC_OP03	4.372	0.805			
	Resilience	PC_RE01	3.900	0.823	0.752	0.857	0.666
		PC_RE02	4.190	0.812			
		PC_RE03	3.758	0.814			
	Self-Efficacy	PC_SE01	3.892	0.856	0.871	0.921	0.795
		PC_SE02	3.892	0.914			
		PC_SE03	4.052	0.904			

<b>Job Performance</b>	Contextual Performance	JP_CP01	4.247	0.814	0.861	0.900	0.644
		JP_CP02	4.134	0.860			
		JP_CP03	4.165	0.801			
		JP_CP04	4.260	0.784			
		JP_CP05	4.052	0.747			
	Task Performance	JP_TP01	3.835	0.784	0.855	0.896	0.633
		JP_TP02	4.126	0.770			
		JP_TP03	4.113	0.832			
		JP_TP04	4.078	0.760			
		JP_TP05	4.186	0.831			

Furthermore, the second stage test model found satisfactory results in terms of validity and reliability (see Table 4). In internal consistency reliability reports, all latent constructs (HPWS, psychological capital, job performance, proactive personality) show Cronbach's alpha value (0.823-1.000) and composite reliability (0.833-1.000) > 0.7. Then, the outer loading of all latent indicators shows results (0.7-1.000) > 0.5 so that it meets the reliability indicator. Next, the AVE value of each latent construct reported the HPWS, psychological capital, and job performance dimension constructs > 0.5, while the unidimensional constructs of proactive personality showed an AVE value of 0.469. In case AVE is less than 0.5 but composite reliability is higher than 0.6, the convergent validity of the construct is still adequate (Fornell & Larcker, 1981). The discriminant validity results in the second stage measurement model (see Table 5) show that the Fornell-Lacker values of each construct are higher than the others, and the heterotrait-monotrait values (HTMT) show all below 0.9, thus indicating the feasibility of discriminant validity in the second stage measurement model. In addition, all VIF values, inner and outer, show > 10; this result shows that the model is free from multicollinearity. Thus, reliability and validity are shown from the results of internal consistency reliability, indicator reliability, convergent validity, discriminant validity, and free from common method bias, so that the second stage measurement model in this study is qualified for further analysis.

Table 4. Second stage measurement model

Construct	Second Stage				
	Mean	Outer Loadings	Cronbach's Alpha	Composite Reliability	AVE
<b>High-Performance Work System</b>			0.823	0.883	0.654
Motivation-Enhancing Policies	-0.022	0.790			
Opportunity-Enhancing Policies	0.022	0.850			
Selection Policies	-0.087	0.789			
Training Policies	0.039	0.804			
<b>Proactive Personality</b>			1.000	1.000	1.000
Proactive Personality	0.009	1.000			
<b>Psychological Capital</b>			0.852	0.900	0.692
Hope	0.095	0.851			
Optimism	0.026	0.789			
Resilience	0.004	0.861			
Self-Efficacy	0.095	0.824			
<b>Job Performance</b>			0.872	0.940	0.886
Contextual Performance	0.000	0.942			
Task Performance	0.009	0.941			

Table 5. Second stage discriminant validity

	Fornell-Lacker Criterion				Heterotrait-Monotrait Ratio			
	HPWS	JP	PC	PP	HPWS	JP	PC	PP
<b>HPWS</b>	0.809				<b>HPWS</b>			
<b>JP</b>	0.608	0.941			<b>JP</b>	0.715		
<b>PC</b>	0.560	0.739	1.000		<b>PC</b>	0.617	0.791	
<b>PP</b>	0.608	0.753	0.760	0.832	<b>PP</b>	0.720	0.866	0.818

Note:

HPWS: High-Performance Work System      PC: Psychological Capital

PP: Proactive Personality      JP: Job Performance

4.2. Structural Model

The results of the structural equation model show that job performance has an  $R^2$  of 0.653 and  $Q^2$  of 0.556. Then, psychological capital shows  $R^2$  of 0.627 and  $Q^2$  of 0.415. Thus, both show moderate predictive power and a strong degree of predictive relevance (Hair et al., 2017, pp. 198-202). Furthermore, the effect size  $f^2$  results on the five direct effects in the model showed results that varied between small, medium, and large effects (Hair et al., 2017, p.201). A small effect (0.02-0.14) is generated on HPWS→job performance, HPWS→psychological capital, and proactive personality→job performance. Meanwhile, medium effects (0.15-0.34) are shown by psychological capital→job performance, and large effects (>0.35) on proactive personality→psychological capital (see Table 6).

Table 6. Predictive power, predictive relevance, and effects size

Dependent Variable	R <sup>2</sup>	f <sup>2</sup>			Q <sup>2</sup>
		HPWS	PP	PC	
JP	0.653	0.059	0.144	0.152	0.556
PC	0.627	0.131	0.687		0.415

Then, the results of hypothesis testing on the structural model in this study were carried out by looking at the results of path coefficients for the five direct effects tests and the results of specific indirect effects for both indirect effects testing. Through observations on path coefficients and specific indirect effects by reviewing the P value and T value, the study's overall results will be obtained. With the bootstrapping procedure performed with 5000 subsamples with the one-tail setting, the significance determination must show T-statistics > 1.64 (significance level = 5%) and P-Values < 0.05 (Hair et al., 2017 p.195).

Results report that all the study's hypotheses are supported (see Table 7 and Figure 2). The direct effects test showed that H1 was supported ( $\beta = 0.183$ ,  $t = 3.423$ ,  $p < 0.05$ ), H2 was supported ( $\beta = 0.351$ ,  $t = 4.679$ ,  $p < 0.05$ ), H3 was supported ( $\beta = 0.375$ ,  $t = 4.549$ ,  $p < 0.05$ ), H4 was supported ( $\beta = 0.266$ ,  $t = 4.580$ ,  $p < 0.05$ ), and H5 was supported ( $\beta = 0.611$ ,  $t = 9.685$ ,  $p < 0.05$ ). Next, indirect effects testing showed that H6 was supported ( $\beta = 0.100$ ,  $t = 3.188$ ,  $p < 0.05$ ) and H7 was supported ( $\beta = 0.229$ ,  $t = 3.797$ ,  $p < 0.05$ ).

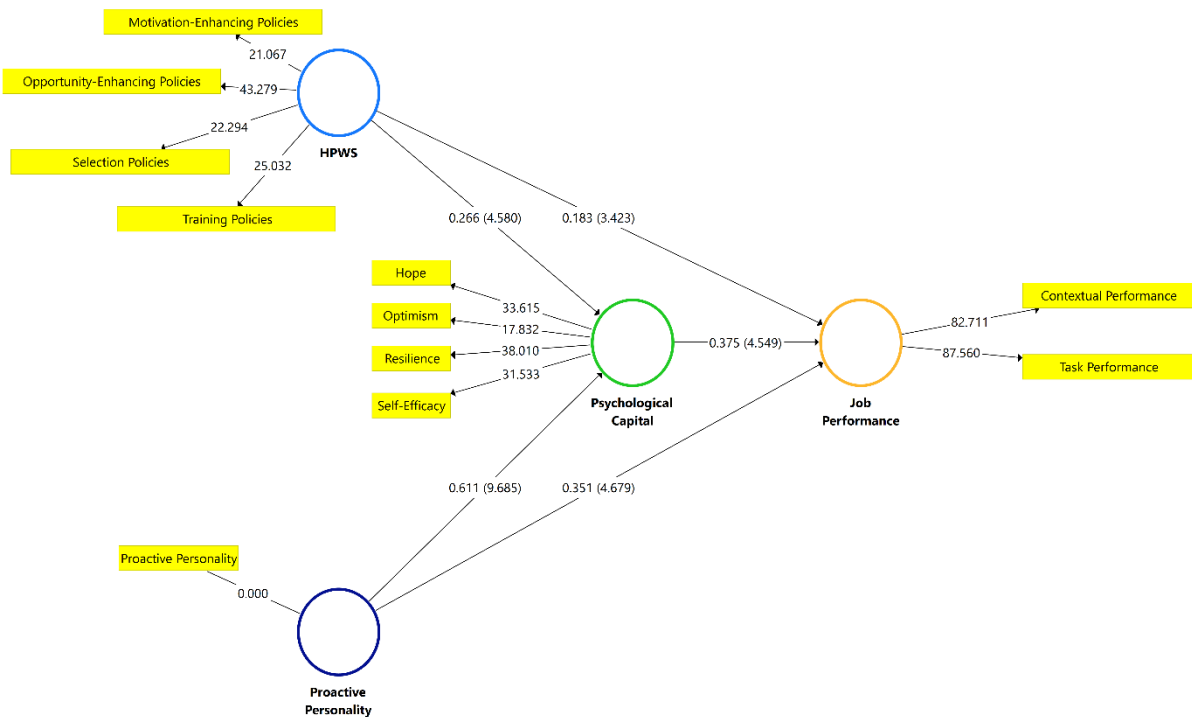


Figure 2. Structural model

Table 7. Hypothesis test result

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values	Hypothesis
HPWS → JP	0.183	0.185	0.053	3.423	0.000	H <sub>1</sub> supported
PP → JP	0.351	0.344	0.075	4.679	0.000	H <sub>2</sub> supported
PC → JP	0.375	0.379	0.083	4.549	0.000	H <sub>3</sub> supported.
HPWS → PC	0.266	0.271	0.058	4.580	0.000	H <sub>4</sub> supported
PP → PC	0.611	0.607	0.063	9.685	0.000	H <sub>5</sub> supported
HPWS → PC → JP	0.100	0.103	0.031	3.188	0.001	H <sub>6</sub> supported. Partial Mediation
PP → PC → JP	0.229	0.231	0.060	3.797	0.000	H <sub>7</sub> supported. Partial Mediation

Note:

HPWS: High-Performance Work System PC: Psychological Capital

PP: Proactive Personality JP: Job Performance

\*: significant at the 0.05 level n.s.: not significant at the 0.05 level

### 4.3. Discussion

The first finding of this study shows that the high-performance work system (HPWS) has a direct effect on job performance. This finding supports several previous studies that show that HPWS in organizations can affect employee job performance (Arthur et al., 2021; Edgar et al., 2020; Imran & Atiya, 2020). This result also contradicts the findings of Karadas & Karatepe (2019), which show that HPWS does not have a direct effect on improving employee performance contextually while affirming that HPWS is a predictor of job performance. The existence of a supportive work environment, such as having an organized organizational setting, is one of the factors that can encourage job performance to reach an optimal point. Job performance is related to employees, so it is often associated with employee contributions to the organization, even vice versa (Campbell & Wiernik, 2015). If employees contribute to work that aligns with the organization's goals, the organization can provide them with opportunities for training and development. This means that it is necessary to show their contribution so that the organization's goals can be achieved and neither party feels disadvantaged. This aligns with Spagnoli et al. (2020), who revealed that HPWS affects job performance. HPWS impacts good performance results in work done by employees to increase the organization's value directly.

Second, this study further demonstrates that a proactive personality has a direct effect on job performance. In line with previous research conducted by Hsiao et al. (2020), proactive personality is a strong predictor of job performance. Individuals who emphasize a proactive personality tend to have a proactive attitude and always anticipate being able to overcome the situational guidance they face at work (Wei et al., 2021). That way, it will be easier to be able to minimize the occurrence of errors in the workplace, primarily related to work tasks that have become responsibilities. This finding aligns with a study by Chong et al. (2021), which states that proactive personality can help individuals push themselves to high work engagement to ensure effective and optimal job performance. In other words, a proactive personality makes individuals more responsible for their work to benefit their performance (Chong et al., 2021). A stable personal attitude and reasonable control allow individuals to think more maturely in response to everything that happens in life, including work.

Third, the result of this study found that psychological capital has a direct influence on job performance. This finding is in line with a previous study by Huang et al. (2021), who explained that psychological capital can make individuals become more diligent and optimistic individuals in the work they undergo, thus having an impact on improving performance. Psychological capital contained in individuals makes them always have positive thoughts and have an optimistic, determined, and persistent soul. These attitudes can then lead individuals to become strong and not easily shaken if they experience shocks in the world of work (Lupsa et al., 2019). This is because they can easily overcome this through good self-control, in line with a study conducted by Baig et al. (2021), which states that psychological capital is needed in job performance as an individual mechanism that plays a role in controlling various situations. A good attitude of control can certainly encourage individuals to work effectively and meaningfully through the skills and abilities they have (Baig et al., 2021). These findings indicate that psychological capital is vital in encouraging individuals to have self-control, especially if needed to complete challenging tasks.

Fourth, the findings of this study report that HPWS has a direct effect on psychological capital. This result aligns with research by Miao et al. (2021) and Luthans et al. (2007), which found that HPWS in organizations allows employees to have confidence, optimism, hope, and resilience to increase individual psychological capital. This research indicates that HPWS causes actual changes in the psychological capacity of individuals for the better and nourishes the resources of the individual's psychological capital. According to Cizreliogullari & Babayiğit (2022), HPWS was positively correlated

with the person's psychological capital because HPWS creates productive workplaces to help people develop their self-efficacy, optimism, hope, and resilience. HPWS provides social, psychological, and physical job resources that support employee's work goals and objectives, which results in increased psychological capital (Abubakar et al., 2019). In this regard, organizations that choose the right person and are supported by a comprehensive and continuous training program as one of the HPWS implementations will increase employees' psychological capital to become confident, optimistic, hopeful, and resilient.

Fifth, the result of this study also shows that proactive personality has a substantial direct influence on psychological capital. This finding is in line with studies conducted by Avey (2011), Avey (2014), and Hao et al. (2019), who explained that individuals who have a proactive attitude are influential in increasing the level of individual psychological capital. This research indicates that organizations that have employees with proactive personalities have the potential to obtain higher psychological capital so that proactive individuals can support the organization in achieving goals. The results of this study proved that individuals with proactive personality who have sincerity and realize ideas can analyze long-term problems to find the right solution according to organizational goals, which result in more outstanding psychological capital. Proactive people frequently have positive influences, which helps to foster and shape the high degree of psychological capital of employees in daily life (Ullah et al., 2023).

In exploring the indirect relationship or mediation role of psychological capital, the sixth finding of this study shows that psychological capital can mediate the effect of HPWS influence on job performance. These results align with the findings of Carter & Youssef-Morgan (2019), who found the indirect influence of HPWS on job performance through psychological capital. HPWS provide a resourceful workplace that can support employee to have higher psychological capital (Li et al., 2014), which then increases employees' job performance (Boxall, 2021). This indicates that comprehensive job training increases employees' confidence in working with their superiors and colleagues. Furthermore, this confidence affects employee work behavior related to carrying out technical initiatives and taking advantage of opportunities for improving work results.

Furthermore, this study also found that psychological capital could mediate the effects of the influence of proactive personality on job performance. This finding supports the argument of Ullah et al. (2023) that individuals with proactive personalities identify opportunities, show initiative, take corrective actions, and have a solid determination to achieve goals. Proactive individuals build confidence, hope, optimism, and resilience that are channeled into completing work tasks and showing hard work (Baig et al., 2021). Specifically, these findings indicate that proactive individuals who demonstrate sincerity in making changes tend to have strong confidence to convey their aspirations for change in the workplace to take advantage of opportunities that can improve work outcomes. Finally, the findings of mediation testing in this study explain that psychological capital can channel the effects derived from HPWS as an organizational factor and proactive personality as an individual differences factor.

## 5. Conclusion

The results of this study provide insight through empirical findings related to how organizations can improve the individual job performance of employees. Through HR practices such as HPWS, individual differences such as proactive personality, and individual mechanism factors such as psychological capital, this study examines the influence of individual job performance, a constellation of proposed models with the support of various previous studies. In addition to all the influence relationships in the supported research model, the findings of this study show the effect of the strong influence of proactive personality on psychological capital. This predicts that employees who have a proactive personality will always show a positive attitude characterized by high self-efficacy, looking at things with optimism, having hope for success, and resilience in facing challenges at work. In the end, employees with a proactive personality will show superior performance both in their in-role work and willing to do extra-role to minimize work obstacles.

Moreover, the findings of this study show that HPWS practices within organizations encourage employee work motivation. Furthermore, the effect of HPWS in the organization positively impacts employee job performance. Organizational policies that focus on boosting motivation, providing growth and development opportunities, and conducting job-specific training programs can cultivate positive attitudes and behaviors among employees in the workplace. This, in turn, leads to increased psychological capital and job performance. Thus, these results predict that organizations from various sectors that implement HPWS can benefit positively from implementing HPWS can benefit positively from increasing individual job performance, raising individual job performance both directly and indirectly via psychological capital.

This research presents several contributions to the literature related to HPWS and proactive personality, especially in the context of Indonesia, which has not been discussed much. In addition, testing the indirect influence of proactive personality on job performance through psychological capital that has not been widely studied emphasizes the

prominent capabilities of psychological capital as the trait-state continuum and potential mediation of proximal states (Luthans & Youssef-Morgan, 2017). Then, the findings of this research can be a reference for various business organizations in Indonesia, especially in Jakarta, Surabaya, and Banjarmasin, related to the development of HPWS in organizations and consideration of choosing people with proactive personality in recruitment criteria and talent development. In addition, this study may provide a further basis for future research, where further testing of the effect of HPWS and proactive personality on individual mechanisms and individual outcome variables in specific contexts (e.g., generation and gender) and broader contexts (e.g., Southeast Asia) is still needed.

There are several limitations to this study that need to be considered for future research. Firstly, the data was collected cross-sectionally, meaning the results can only partially be conclusive. Secondly, using self-assessed performance ratings may introduce some bias due to respondents being over-confident. Thirdly, this study did not consider control variables such as gender and age, which could allow for deeper analysis. For this reason, future research should include model testing with longitudinal studies, such as distributing questionnaires in two or three waves to test time lag or cross-lag effects to provide more in-depth and insightful results. Additionally, further research could use alternative performance measures such as ratings from supervisors or aggregate performance appraisals from both superiors and subordinates. This would make job performance assessments more balanced and objective despite the challenges of collecting and assessing data.

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### Author Contribution

Author 1: conceptualization, writing original draft, data curation, formal analysis, investigation, methodology. Author 2: review and editing, writing original draft, investigation, data curation, visualisation.

Author 3: writing original draft, investigation, formal analysis, methodology.

Author 4: conceptualization, supervision, validation

Author 5: formal analysis, supervision, validation.

### Financial Disclosure

None

### Conflict of Interest

The authors declare that the research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

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