



## **The Role of Innovative Work Behavior and Proactive Behavior in Mediating Employee Engagement and Performance at Public Universities**

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### **ABSTRACT**

Recent research studies increasingly point to employee engagement (EE) as a key factor driving employee performance (EP). However, theoretically and empirically, there is still a gap in the relationship between EE and EP. Therefore, the role of innovative work behavior (IWB) and proactive behavior is used to mediate this gap. This study examines the relationship between EE and EP mediated by IWB and proactive behavior. This research was conducted on 164 employees (academic staff) selected from 11 public universities in Semarang. The results of the data analysis showed that EE has a significant effect on IWB, proactive behavior, and EP. Meanwhile, IWB and proactive behavior significantly mediated the relationship between EE and EP. This study will assist organizational management in improving organizational performance and effectiveness through EE. This will encourage employee behavior through IWB and proactive behavior can improve EP. This research will provide positive results for academic staff in state universities who will benefit from EE, IWB, and proactive behavior to drive increased EP. The originality of this study is that it uses employee behavior in the form of IWB and proactive behavior to mediate EE and EP, which study in this area is still limited. Similarly, EE studies are generally used in private organizations, whereas this research is conducted in the context of public universities.

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## INTRODUCTION

Currently, organizations from various sectors face complex challenges such as globalization, digitalization, demographic changes, and high-performance expectations so that organizations make sustainable changes to remain competitive (Faupel and Süß, 2019; Doppler et al., 2011). New strategies, adjusting structures, and implementing new, more flexible forms of work are processes of organizational change (Doppler et al., 2011). However many organizations fail to achieve the goals set (Kalogiannidis, 2021; Burnes, 2011). Meanwhile, Bormann and Rowold (2016) and Busari et al. (2020) found that employees themselves have a large impact on organizational change while research around the world shows that more engaged employees can help companies achieve better results (Budriene and Diskiene, 2020).

Employee engagement (EE) can be seen as an important element in positive organizational change, which leads to improved organizational and employee performance EP (Kim et al., 2013). Therefore, there is a demand for effective human resource management in various areas including EE and EP. Organizational management has realized that EE is an important strategic pillar for competitive advantage (Eldor, 2020; Kerdpitak and Jermstittiparsert, 2020). Engaged employees mean they are passionate about their work and will be committed and willing to complete the task assigned to them which will have an impact on organizational and individual performance (Turner, 2020; Al Hamdan and Issa, 2022). EE can be used as a mediator to develop employees' attitudes, intentions, and behaviors toward better EP (Andrew and Sofian, 2012). EE has become the main construct in many studies, but there are still gaps in understanding conceptualization and empirical research (Kossyva et al., 2022). First, there is no universally accepted definition of engagement. The use of the term engagement varies in EE, work engagement, and organization engagement although several empirical studies use the same term (Lee et al., 2017). Second, there is a decline in the global economy and worldwide employee productivity due to low levels of EE in the workplace. In Gallup's (2018) study, it was found that only 34% of employees are engaged, while 66% are not. There appears to be a need and potential to build a sustainable model of EE. Third, EE has a dark side that workers will be more interested in completing their work, triggering conflict between work and family (work-family conflict), and can cause more demands on workers (job demand) (Bakker et al., 2011). Fourth, there is a gap in the relationship between EE and EP. Research by Dalal et al. (2012) showed that the best predictor of EP is the influence of negative traits which is the strongest predictor compared to EE. Likewise, Heriyati and Ramadhan (2012) found that EE does not have a significant effect on work performance or employee retention. Even the study of Nguyen and Nguyen (2022), Junusi et al. (2021), Mughal (2020), and Kim and Koo (2017) showed that EE does not affect EP. To address this gap, innovative work behavior (IWB) and proactive behavior as mediation need to be explored. IWB and proactive behavior are expected to improve EP.

IWB can make a positive contribution to work outcomes. The studies by Rahman et al. (2022), van Zyl et al. (2021), and Kim and Koo (2017) show that IWB affects EP. Employees are expected to engage in a variety of work roles within the organization. The studies by Buil et al. (2019), Shi et al. (2011), Parker and Collins (2010), and Grant and Ashford (2008) show the proactive behavior affects EP.

This study aims to determine the role of IWB and proactive behavior in mediating EE and EP in the context of state universities. So far, most of the studies on EE and EP have been conducted in private organizations. This study is expected to provide valuable evidence on the role of IWB and proactive behavior in mediating EE with EP in the workplace of the higher education sector.

## LITERATURE REVIEW

### Employee Engagement (EE)

Engagement is a concept that zooms in on the emotional bond between employees and their job. Schaufeli et al. (2002) describe EE as "a positive, satisfying, work-related state of mind characterized by enthusiasm (e.g., being very energetic), dedication (e.g., being highly engaged in work), and absorption (e.g., very concentrating on work)."

Job Demands-Resources (JD-R) is the basic theory used to explain the relationship between EE, IWB, proactive behavior, and EP. Bakker and Demerouti (2007) confirm that job demands and resources. Job demands refer to the physical, psychological, social, or organizational aspects of a job that require sustained

physical and/or psychological effort. Job resources refer to job characteristics that help cope with job demands. Thus, employees are highly engaged when job resources and job demands are high (Bakker and Demerouti, 2007; 2008). Saks (2019) studied models of antecedents and consequences of work and organizational engagement. Recently Kossyva et al. (2022) conducted an engagement study that focused on EE and work. Based on 110 journal articles for the years 2000–2021, we can map, identify, and categorize definitions of engagement and its antecedents that are relevant at the individual and organizational levels.

### **Employee Engagement (EE) and Innovative Work Behavior (IWB)**

De Spiegelaere et al. (2014) and Hanif and Bukhari (2015) describe “IWB is the efforts and behavior undertaken by employees directed at the introduction, generation, and/or implementation of ideas, products, procedures, or processes aimed at benefiting the adoption unit which is significantly relevant and new to the unit of IWB that consists of (a) idea creation, (b) idea promotion, and (c) idea realization. Idea generation is the phase where employees identify problems and generate new and useful ideas to tackle problems in any domain in the idea promotion phase, support, and recognition from potential allies (friends, colleagues, and sponsors) sought through the promotion of the ideas generated. Finally, the idea realization phase refers to the phase where newly developed ideas are prototyped and implemented in work roles, groups, or the organization as a whole.”

According to West and Farr (1989), IWB is a product of individual capacity and intentional behavior. Nair and Gopal (2011) emphasized “that IWB includes activities that move ideas from generation to realization.” So, it can be concluded that the IWB concept refers to employees who aim to start new things and introduce new ideas that are useful for producing new products, services, and work procedures to achieve the expected targets (Pukkeeree et al., 2020). Amah (2020) views intentional individual characteristics that become the antecedents of IWB. While Afsar and Badir (2016) emphasized that IWB requires a high level of involvement to encourage compatibility between employees and organizational values. EE is highly innovative and seeks opportunities to be creative and improve organizational functioning. This opinion suggests a possible potential relationship between EE and IWB (Rahman et al., 2022; Van Zyl et al., 2021; Kim and Koo, 2017). For that the hypothesis is:

*H1: EE affects IWB.*

### **Employee Engagement (EE) and Proactive Behavior**

Crant (2000) asserts “that proactive refers to behavior that starts from oneself, focuses on change, and is oriented towards the future.” Grant and Ashford (2008) define proactive behavior as “anticipatory action that employees take to impact themselves and/or their environments.” Bateman and Crant (1993) assert that proactivity is a relatively stable individual disposition towards proactive behavior. Proactive employees show personal initiative and are action-oriented, goal-oriented, seek new challenges, and persist in the face of obstacles (Salanova and Schaufeli, 2008).

Employee proactive behavior has been examined at different levels, from the individual level to the organizational level (Parker et al., 2006). At the team and organizational level, proactive behavior has been largely investigated concerning its relationship to effective team performance within and across organizations (Griffin et al., 2007). It has been documented that higher levels of proactivity are associated with the generation of creative ideas (Frese et al., 1996), and help transform current work situations and improve overall long-term working conditions (Frese et al., 2007). At the individual level, proactive behavior is defined as behavior that brings change to oneself or one's situation (Grant and Ashford, 2008). Proactive behavior at the individual level is documented as contributing to increasing employee effectiveness in doing work (Thompson, 2005). EE refers to a high level of energy, persistence, identification, and goal direction. It can be expected that a high level of engagement increases proactive work behavior in terms of personal initiative (Salanova and Schaufeli, 2008). While Strauss and Parker (2014) assert that individuals will engage in more effective and sustainable proactive behavior when it is driven by engagement. For that the hypothesis is:

*H2: EE affects proactive behavior.*

### **Employee Engagement (EE) and Employee Performance (EP)**

Armstrong and Taylor (2014) argue that EP is a combination of employee behavior and output in completing results. Meanwhile, Pradhan and Jena (2017) emphasized that EP contains a set of behaviors resulting from employee technical knowledge (special knowledge in one's area of expertise), skills, and adaptability (knowing the process to implement and run it according to circumstances), and interpersonal relationships (building team spirit, loyalty, and connectedness). This behavior is expected to lead to productivity, EP, satisfaction, and organizational performance (Pradhan and Jena, 2017).

To create organizational efficiency and productivity, EP management is necessary for organizational sustainability, and implementing effective performance management will lead to increased EE and organizational success (Stanton and Pham, 2014; Stanton and Nankervis, 2011). Whereas EE is a predictor of EP (Rana et al., 2019; Ten Brummelhuis and Bakker, 2012; Salanova et al., 2005). EE is not only to carry out work but also to involve intelligence and emotions in carrying out their duties and responsibilities (Ashforth and Humphrey, 1995). Previous research stated that engagement affects EP (Singh and James, 2016; Schaufeli and Bakker, 2004). Therefore, the hypothesis proposed is:

*H3: EE affects EP*

### **Innovative Work Behavior (IWB) and Employee Performance (EP)**

Birdi et al. (2016) state "IWB refers to an individual's ability to generate original and potentially useful ideas, including the process of implementing these new ideas into practice." Meanwhile, Messmann and Mulder (2011) emphasize "that IWB is a physical and cognitive work activity carried out by employees in the context of their work, both individually and in groups to achieve a series of tasks to develop innovation." Afsar and Umrani (2019) state "that IWB makes employees pursue proactive behavior in the form of personal initiatives and new ideas that are directly related to effective EP in the organization, employees' creative ideas can improve job supervisory performance." Zhou and Shalley (2003) state "innovation ideas can be in the form of new products, services, and improvements to existing procedures or processes and finding efficient and effective alternative solutions to carry out tasks." Innovative ideas enable employees to improve personal work performance." For that the hypothesis is:

*H4: IWB affects EP*

### **Proactive Behavior and Employee Performance (EP)**

Parker and Collins (2010) assert "proactive behavior is acting in anticipation of future problems, needs, or changes." Thompson (2005) argues "that employees who are proactive work more efficiently than employees with low proactivity." Employees who have highly proactive behavior will take initiative, improve the way they do their jobs, and positively influence their co-workers. A study by Diamantidis and Chatzoglou (2019) about the factors that affect EP using empirical approach shows that proactive behavior affects EP. Therefore, the hypothesis is:

*H5: proactive behavior affects EP*

## **METHODOLOGY**

### **Samples and Procedures**

This study is a quantitative survey that allows the identification of the relations among EE, IWB, proactive behavior, and EP. The population of this study was employees (academic staff) at 11 public universities in Semarang. This study uses a convenience sampling technique in collecting data from respondents, as in the research by Radhakrishnan and Sujatha (2020) and Riyanto et al. (2021). In addition, choosing a convenience sampling technique is cost-effective and has a short period. Structured questionnaires were distributed online to 250 employees, of which 183 questionnaires were returned or 76% were responded. While 19 incomplete questionnaires and 164 filled questionnaires can be used for further analysis.

The characteristics of respondents are 76 (46%) females and 88 (54%) males representing their respective genders. The majority (48%) of respondents are in the age group between 30-40 years, 30% in the age of 40-50 years, 13% at the age of fewer than 30 years, and 9% at the age of more than 50 years. The majority of respondents (54%) have an undergraduate degree (S1), while 33% have a master's degree, the remaining 13% have an education and the rest have a high school education or equivalent. Most of the respondents (45%) have worked for 5 -10 years, 37% for 10-15 years, 10% for less than 5 years, and 8% for more than 15 years.

### **Measurement**

The constructs measurement uses a seven-point Likert scale, 1 “Strongly disagree”, and 7 “Strongly agree.” EE is measured using the 9-item Utrecht work engagement scale (UWES-9) (Schaufeli et al., 2006). The sample items are “At my job, I feel strong and vigorous”, “I am enthusiastic about my job”, and “I feel happy when I am working intensely.” The Cronbach alpha reliability for this scale is 0.873.

IWB is measured using a 6-item scale developed by Scott and Bruce (1994). The sample items are “I often generate ideas to improve work practices” and “I actively contribute to the development of new products or services.” The Cronbach alpha reliability for this scale is 0.824.

Proactive behavior is measured using a 3-item scale developed by Griffin et al. (2007). The sample items are “Initiated better ways of doing your core tasks” and “Come up with ideas to improve how your core tasks are done.”

EP is measured using a 5-item scale developed by Janssen and Van Yperen (2004) and Li et al. (2019). The EP scale is used to refer to participant self-report. The sample items are “I always complete the tasks specified in the job description” and “I can often perform important tasks.” Cronbach's alpha reliability for this scale is 0.757.

### **Data Analysis**

To test the hypothesis, structural equation models (SEM) are used with the help of the Amos 20.0 program. Chi-square statistics, root mean square error of approximation (RMSEA), comparative fit index (CFI), Tucker–Lewis index (TLI), normed fit index (NFI), goodness-of-fit index (GFI), and mean goodness-of-fit index (AGFI) are used to assess the goodness of the fit model. Hu & Bentler (1999) state “a score of 0.95 for CFI, TLI, and NFI and above 0.90 for GFI and AGFI indicates a good fit. For RMSEA, a score less than 0.05 indicates a good fit, while a score between 0.05 and 0.08 indicates an acceptable score.”

### **Findings**

Confirmatory factor analysis is used to ensure the validity and reliability of the research instrument. Average variance extract (AVE) and composite construct reliability (CCR) are used to check the convergent validity of constructs. The measurement scale has convergent validity if the factor loading item is greater than or equal to 0.50, and the CCR is greater than 0.8 (Hair et al., 2011). Table 1 shows the AVE value for all the items is above 0.50, and CCR is above 0.8, showing convergent validity. The AVE score for EE is 0.73914, the IWB score is 0.57884, the proactive behavior score is 0.52716, and the EP score is 0.54825. It can be concluded that the AVE value of all items is greater than 0.5 ( $p < 0.05$ ). This means that all items are valid.

The CCR score for EE is 0.96184, the IWB score is 0.89152, the proactive behavior score is 0.76980, and the EP score is 0.85832. It can be concluded that this value is greater than 0.80, which means the construction is reliable.

Table 1 Confirmatory factor analysis

Item	Factor Loading	AVE	CCR
<b>EE</b>		<b>0.73380</b>	<b>0.96083</b>
<i>Vigor</i>			
X1 “At my work, I feel bursting with energy”	0.85904		
X2 “At my job, I feel strong and vigorous”	0.82206		
X3 “When I get up in the morning, I feel like going to work”	0.75068		
<i>Dedication</i>			
X4 “I am enthusiastic about my job”	0.68774		
X5 “My job inspires me”	0.62488		
X6 “I am proud of the work that I do”	0.71388		
<i>Absorption</i>			
X7 “I feel happy when I am working intensely”	0.85603		
X8 “I am immersed in my work”	0.81515		
X9 “I get carried away when I am working”	0.87225		
<b>IWB</b>		<b>0.53447</b>	<b>0.85148</b>
In your job, how often do you...			
X10 “...make suggestions to improve current products or services”	0.72671		
X11 “...produce ideas to improve work practices”	0.67747		
X12 “...acquire new knowledge”	0.61558		
X13 “...actively contribute to the development of new products or services”	0.65606		
X14 “...acquire new groups of customers”	0.63597		
X15 “... optimize work organization”	0.62148		
<b>Proactive behavior</b>		<b>0.52716</b>	<b>0.76980</b>
X16 “Initiated better ways of doing your core tasks”	0.62661		
X17 “Come up with ideas to improve how your core tasks are done”	0.64709		
X18 “Made changes to the way your core tasks are done”	0.63587		
<b>EP</b>		<b>0.54495</b>	<b>0.85669</b>
X19 “I always complete the duties specified in my job description”	0.69553		
X20 “I meet all the formal perform requirements of the job.”	0.65259		
X21 “I fulfill all responsibilities required by my job”	0.62502		
X22 “I never neglect aspects of the job that I am obligated to perform”	0.62262		
X23 “I am often able to perform essential duties”	0.64615		

### Discriminant validity

Henseler et al. (2015) emphasize “Fornell–Larcker criterion and examination of cross-loadings have been the primary methods used for measuring discriminant validity.” Measurement of discriminant validity uses the criteria proposed by Fornell-Larcker and cross-loadings. The Fornell-Larcker postulate states that latent variables share more variance with the underlying indicators than other latent variables. Ghozali (2016) states “to fulfill discriminant validity, the AVE value of each latent variable must be greater than the highest  $R^2$  value with the values of other latent variables.” Table 2 proves that all research variables have met discriminant validity.

Table 2 Discriminant validity

	EE	IWB	Proactive Behavior	EP
EE	0.73379			
IWB	0.30223	0.53446		
Proactive Behavior	0.19177	0.23913	0.52715	
EP	0.38936	0.35492	0.30562	0.54495

### Structural Equation Modeling (SEM)

The Full Model in figure 1 shows the statistical fit of the model with the data. The SEM results show goodness of fit with the data  $\chi^2 = 225.257$  (low expectation);  $p = 0.426$  (good);  $CMIN/df = 1.015$  (good);  $RMSEA = 0.009$  (good);  $GFI = 0.901$ (good);  $AGFI = 0.877$  (marginal);  $TLI = 0.997$  (good);  $CFI = 0.998$  (good).

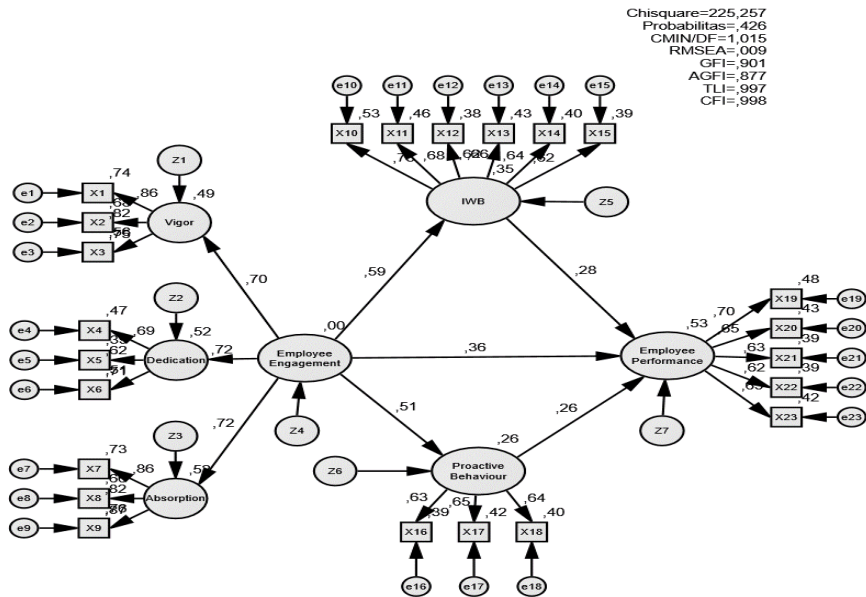


Figure 1 Full model

Table 3 and Figure 1 show that there is a direct and significant positive effect of EE on IWB ( $\beta = 0.59383$ ,  $t = 4.52797$ ,  $p < 0.01$ ), thus supporting H1. The findings also reveal that EE has a significant and positive effect on proactive behavior ( $\beta = 0.50833$ ,  $t = 3.86612$ ,  $p < 0.01$ ), which supports H2. Other findings show that EE has a significant and positive direct effect on EP ( $\beta = 0.35776$ ,  $t = 2.37871$ ,  $p < 0.05$ ), while there is an indirect effect with the standard path coefficient ( $\beta = 0.29688$ ,  $t = 1.973925$ ,  $p < 0.05$ ), so that the total effect of EE on EP is as follows:  $\beta = 0.65464$ ,  $t = 4.352635$ ,  $p < 0.01$ , which supports H3. Furthermore, IWB has a significant effect on EP ( $\beta = 0.28078$ ,  $t = 2.35462$ ,  $p < 0.05$ ), so H4 is supported. Finally, proactive behavior has a significant and positive effect on EP ( $\beta = 0.25602$ ,  $t = 2.12227$ ,  $p < 0.05$ ), and H5 is supported.  $R^2$  shows that EE explains 35% of variations in IWB, and 26% explains variations in proactive behavior; while EE, IWB, and proactive behavior explain 53% of the variation in EP.

Table 3 SEM results

Hypothesis	Direct effects	Indirect effects	Total effects	Conclusion
H1: EE affects IWB	0.59383**		0.59383**	H1 accepted
H2: EE affects proactive behavior	0.50833**		0.50833**	H2 accepted
H3: EE affects EP	0.35776*	0.29688*	0.65464**	H3 accepted
H4: IWB affects EP	0.28078*		0.28078*	H4 accepted
H5: Proactive behavior affects EP	0.25602*		0.25602*	H5 accepted

Notes: \*  $p < 0.05$ ; \*\*  $p < 0.01$

## DISCUSSION

Our study has significant implications for management theory and practice as it addresses EE and EP gaps by including the likelihood of IWB and proactive behavior as mediating variables, thereby having an important influence on organizational managers when making decisions about EE strategies. In addition, the results support the five hypotheses proposed and yield meaningful findings. As expected, the results show that EE can directly and positively influence employee IWB, proactive behavior, and EP.

Our first finding shows that EE and IWB have a significant relationship, consistent with the results of previous studies (Swaroop and Dixit, 2018; Agarwal et al., 2012; Pukkeeree et al., 2020, Kim and Koo, 2017; Dixit and Upadhyay, 2021). A study by Swaroop and Dixit (2018) on employee engagement, work autonomy, and IWB with a sample of 267 employees, from the manufacturing, service, and information technology organization sectors in India showed that EE were positively related to IWB, while EE did not moderate the positive relationship between work autonomy and IWB. Equally, Pukkeeree et al. (2020) found EE has a positive effect on IWB. This means that when a person or employee has an attachment, they tend to show their IWB.

The results of our second study show that EE has an effect on proactive behavior at work. This finding supports the previous research (Nguyen et al., 2021; Bakker et al., 2012; Salanova and Schaufeli, 2008; Sonnentag, 2003). Consistently, Hakanen et al. (2008) in a longitudinal study among dentists found a positive relationship between engagement on the one hand and personal initiative and innovation on the other. They found that engaged dentists were more likely to do more than what was asked and to try to be actively involved in the affairs of the organization. Salanova and Schaufeli (2008) in a cross-sectional survey study among company managers with a sample of 338 Dutch telecommunications employees and 386 Spanish technology employees found a positive relationship between engagement and personal initiative at work. Through multi-group analysis, it was shown that EE fully mediates the relationship between job resources and proactive behavior at work in both samples. Similarly, Bakker et al. (2012) found a relationship between EE and proactive behavior. Engaged employees maintain their work engagement by proactively shaping the work environment. Furthermore, Sonnentag (2003) showed in his diary study that day-level recovery was positively related to day-level work engagement. Daily engagement, in turn, is positively related to day-level proactive behavior (personal initiative and pursuit of learning) during the workday. Finally, a recent study on employee proactive behavior with a sample of 675 employees in Vietnam shows that EE encourages proactive behavior at work (Nguyen et al., 2021).

Our third finding reveals that EE has a positive and significant effect on EP and is consistent with previous studies (Cesário and Chambel, 2017; Waseem and Mehmood, 2019; Sendawula et al., 2018). A study by Cesário and Chambel (2017) asked 274 employees of a Portuguese company to indicate the last year's performance appraisal ratings reported by their managers. The results of multiple regression show that EE is relevant to explain EP. This means that high EE is a critical success factor for achieving higher EP. A similar study by Waseem and Mehmood (2019) was conducted on drivers of EE and relations with EP using a sample of 189 full-time permanent teachers in higher education institutions in Malaysia. The statistical results show that EE at work is found to have a positive and significant effect on EP. This means that increasing the level of EE will ultimately help improve EP.

This finding is also reinforced by the opinion of Schneider and Bowen (1993) which states that when employees feel excited, engaged, and happy at work, they may feel positive perceptions of their job characteristics. Psychosocial studies in organizations have shown that when people work together, they can share affective beliefs and experiences and, in so doing, exhibit similar patterns of motivation and behavior, which ultimately leads to increased individual as well as team performance in organizations. Likewise, Saks (2006) argues that employees with high perceived organizational support, such as management, administration, and employee development, are more likely to have higher levels of work experience and organizational involvement, which can affect EP. Highly engaged employees feel enthusiastic about their jobs, so they work with energy, dedication, and a willingness to go the extra mile. This situation allows them to evoke positive emotions, be optimistic, and be open to opportunities at work, which allows them to be motivated to work well which ultimately leads to an increase in their performance.

Our fourth finding shows that IWB has an effect on EP which is consistent with previous studies (van Zyl et al., 2021; Atatsi et al., 2019; Demircioglu and Audretsch, 2017; Leong and Rasli, 2014; Kim et al., 2013; Slåtten and Mehmetoglu, 2011). This finding is in line with the results of a cross-sectional survey study by van Zyl et al. (2021) at a global information and communication technology consulting firm in the Netherlands (n = 232). The results show that EE is a significant driver for innovative work behavior, which in turn affects EP. In addition, innovative work behavior is important for translating the energy of these employees into driving EP. Likewise, Slåtten and Mehmetoglu (2011) show that EE and IWB have a high correlation. The level of EE is considered a precursor for innovative work behavior. Engaged employees have high levels of energy and are passionate about their work which results in a positive emotional state that triggers IWB. Equally, Atatsi et al. (2019) found that EE is a trigger for IWB that has an impact on EP. IWB is important for translating the positive energy of employees into performance. Finally, our findings support the opinion of Demircioglu and Audretsch (2017) who state "that it is very important for organizations to motivate employees to improve their performance by being innovative and creative in their work processes" while creative and innovative are sub-dimensions of IWB. Employees are more likely to engage in IWB, hoping that it will benefit their jobs. When employees are truly engrossed in their work, they have the psychological capacity to activate IWB successfully." This situation creates innovative behavior to improve



work quality, find new and more effective ways to complete tasks, and seek new opportunities, all of which result in higher EP reports.

Our final findings show that proactive behavior affects EP, which are in line with previous research (Diamantidis and Chatzoglou, 2019; Shi et al., 2011; Seibert et al., 1999). A study by Diamantidis and Chatzoglou (2019) on factors affecting EP with a sample of 79 managers and 392 employees as respondents show that proactive behavior is one of the factors that influence EP. Additionally, employee proactivity (e.g. reluctance to take initiative during work execution leading to “passivity” regarding problems and stressful work situations) can create barriers to completion and result in reduced EP. Equally, Seibert et al. (1999) suggest that proactive behavior can facilitate EP because individuals proactively select and create situations that increase the likelihood of high levels of performance. Proactive behavior tendencies can especially affect performance by encouraging individuals to study their environment in a rigorous way that helps them anticipate potential problems and affect environmental change. Proactive behavior can also help employees to actively adapt to their environment by highlighting individual strengths and optimizing performance. Proactive individuals can increase EP by engaging in a variety of instrumental behaviors such as information seeking, skill development, understanding, negotiation, resource gathering, problem selling, socialization, and role restructuring.

## CONCLUSION

The results of hypothesis testing show that EE has a significant effect on IWB, proactive behavior, and EP, while IWB and proactive behavior have a significant effect on EP. EE can improve EP, while the role IWB and of proactive behavior is very beneficial for individual and organizational performance. IWB and proactive behavior as mediators play a very important role in strengthening the relationship between EE and EP. IWB, and proactive behavior are very beneficial for employees, for example, improving their performance, making employees work more efficiently and effectively, increasing adaptability in the workplace, and good self-development.

IWB and proactive behavior are a form of employee behavior that can be used as a strategy to improve employee capabilities related to their duties and responsibilities, by developing and implementing new ideas or methods in the workplace. Employees who have high engagement allow employees to have a proactive and positive attitude that will help IWB's employee skills at work, which allows employees to be more productive in the work environment. Likewise, employees will have a higher IWB and proactive behavior, and when they have a good work environment, they will express their new ideas and ideas, usually, they achieve a higher level of performance, compared to those with lower levels of IWB and proactive behavior. Proactive behavior and IWB characterize the behavior of employees who are actively involved in the workplace that contribute to the continuity of the organization. In particular, more engaged employees can find new solutions to a problem at work. Employees who feel more engaged will have increased motivation for IWB and proactive behavior at work, resulting in higher EP.

### Limitations

Apart from the contributions and implications of the research, there are limitations to the research. First, this research is survey-based so it cannot be used to generalize causal relationships between variables. Second, our results may be partially subject to error, due to the measurement of variables based on self-reported results. Future studies need to reexamine the relationship between EE and EP mediated by IWB and proactive behavior. The findings show a relationship between EE, IWB, and proactive behavior which explains EP with only a 53% variance. Therefore, the relationship between EE and EP requires the intervention of other variables, such as meaningful work, agility, and smart work.

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