

Developing Innovative Work Behavior in Retail E-Commerce Workers: Investigating the Effects of High-Performance Work Systems and Other Mediating Variables

Muhammad Farras Said* and Niken Ardiyanti

Faculty of Economics and Business, University of Indonesia, Indonesia

Abstract. *The e-commerce industry is considered a key driver of the digital economy in Indonesia. Therefore, the progress and sustainability of companies in the e-commerce industry, particularly in e-commerce retail, are of great importance. Fostering innovative behavior among employees in e-commerce retail companies is crucial. Hence, this research investigates the influence of high-performance work systems (HPWS) on innovative work behavior (IWB) in employees, and how psychological capital (PsyCap) and work engagement mediate this relationship. This study utilizes covariance-based structural equation modeling (CB-SEM) to analyze direct and mediating effects on IWB. The research findings indicate that there is a simultaneous (t -value = 4.4) and separate mediating influence of PsyCap (t -value = 5.87) and Work Engagement (t -value = 3.67) on the relationship between HPWS and IWB. The direct impact of HPWS on IWB is also significant (t -value = 1.70). This study provides practical insights for management to cultivate innovative behavior among employees through recommended HPWS practices, and how individual factors may explain the effect of HPWS in cultivating IWB. Additionally, it offers an overview of the flow of influence from HPWS to IWB, which can provide further research opportunities in the IWB development field.*

Keywords: HPWS, IWB, PsyCap, Work Engagement, e-commerce

1. Introduction

The fast-growing digital economy in Indonesia maintains a significant position in the priorities of the Indonesian government. The Indonesian Ministry of Economic Affairs strategic plan for the period 2020-2024 highlights the significant role of the country's digital economy in driving economic development. It identifies the digital economy as part of a crucial strategy for overall economic growth in Indonesia Ministry of Economic Affairs of the Republic of Indonesia Regulation No. 13/2020, 2020. According to a research study (Google, Temasek, and Bain & Company, 2022), the digital economy in Indonesia witnessed a compound annual growth rate of 22% from 2021 to 2022, as measured by gross merchandise value (GMV) (Google et al.,

2022, 2023). The GMV increased from \$66 billion to \$77 billion during this period, and it is projected to potentially reach \$360 billion by 2030. The findings underscore the substantial capacity of the digital economy to contribute to Indonesia's overall economic expansion.

E-commerce is seen as the main catalyst for the growth of the digital economy among the different sub-sectors (Google et al., 2022, 2023). E-commerce consistently accounts for more than 50% of the entire GMV of the digital economy. In 2022, e-commerce accounted for \$59 billion out of the overall digital economy GMV of \$77 billion. The significant contribution has prompted the government of the Republic of Indonesia to highlight the advancement of e-commerce as a priority for the overall growth of the

*Corresponding author. Email: muhammad.farras11@ui.ac.id

Received: July 8th, 2024; Revised: July 31st, 2024; Accepted: August 16th, 2024

Doi: <http://dx.doi.org/10.12695/ajtm.2024.17.2.1> Print ISSN: 1978-6956; Online ISSN: 2089-791X.

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. (<http://creativecommons.org/licenses/by-nc-sa/4.0/>).

Published by Unit Research and Knowledge- School of Business and Management-Institut Teknologi Bandung

How to cite: Said, M. F., & Ardiyanti, N. Developing Innovative Work Behavior in Retail E-Commerce Workers: Investigating the Effects of High-Performance Work Systems and Other Mediating Variables. *The Asian Journal of Technology Management (AJTM)*, 17(2), 73-92. <https://doi.org/10.12695/ajtm.2024.17.2.1>

country's digital economy (Limanseto, 2022). Ultimately, the government emphasizes ensuring the growth of its digital economy, mainly via the growth of e-commerce.

An analysis of Tokopedia (a subsidiary of the PT GoTo Gojek Tokopedia Tbk group), Bukalapak, and Blibli (a part of the PT Global Niaga Tbk holding group), three publicly listed e-commerce firms in Indonesia, reveals that they are strategically leveraging the government's support for digital economic growth. These three companies and their holding groups, namely PT Bukalapak.com Tbk, PT Global Digital Niaga Tbk, and PT GoTo Gojek Tokopedia Tbk, aim to increase their market share and achieve profitability. However, they had not yet succeeded as of 2023 (PT Bukalapak.com Tbk, 2023; PT Global Digital Niaga Tbk, 2023; PT GoTo Gojek Tokopedia Tbk, 2023). Moreover, the yearly reports of these organizations demonstrate a strong dedication to cultivating an inventive culture inside their work settings. Hence, it is possible to say that innovation is essential for the growth and progress of these e-commerce enterprises.

The growth of the e-commerce industry in Indonesia is highly significant. From 2021 to 2022, Indonesia's digital economy GMV experienced a remarkable growth of 22%, increasing from \$48 billion in 2021 to \$59 billion in 2022 (Google et al., 2022, 2023). This growth is anticipated to continue, with a projected figure of \$100 billion by 2030 (Google et al., 2023). Looking at the GMV data in Indonesia's digital economy, e-commerce plays a substantial role in driving the growth of GMV in the country. In Indonesia, e-commerce is an industry with promising prospects and positive impacts on the socio-economic conditions of Indonesian society (Das et al., 2018), and it consistently contributes over 50% to overall GMV growth (Google et al., 2023). There are several critical success factors for success, and some critical challenges that need to be addressed, including the establishment of a robust logistics network and infrastructure, a practical, secure, and easily scalable online

payment system, a professional digital commerce ecosystem, and a high-quality talent pool, and the fostering of a healthy investment climate (Das et al., 2018). Creating a healthy investment climate and cultivating a high-quality talent pool fall under the responsibility of regulatory bodies and the government, but other factors, such as cultivating innovative behaviors among employees, and innovations in processes, products, and technology, can be internally developed by companies (Al-Ali et al., 2022; Khattak, 2022; Wang et al., 2022).

Innovation plays an enabling role for organizations to navigate changes and uncertainties (Al-Ali et al., 2022) and to navigate the rapid growth of the e-commerce industry (Wang et al., 2022). Indonesia's digital economy, including e-commerce, also faces challenges, such as a decline in funding from private investors. Google, Temasek, & Bain & Company (2023) reported an overall decrease in funding for participants in the digital economy to below \$1 billion, with e-commerce being one of the sectors receiving the least funding in 2023. According to the report, this decline is due to uncertain macroeconomic conditions in 2022-2023, rising interest rates, and increased cost of borrowing. These factors contribute to an overall decrease in funding, particularly in the e-commerce industry, which has yet to demonstrate sustained profitability. These obstacles can prevent e-commerce companies, especially in the retail sector, from succeeding in the future.

Despite the urgency to find out how e-commerce companies, especially those in the retail sector, can develop the IWB of employees, research related to this topic in the context is still scarce, especially in the context of Indonesia. Several studies related to how e-commerce can grow are around improving the quality of the supply chain, payments, infrastructure, and other factors not related to human resources. Therefore, there was a research gap in the field of HR, especially related to the innovative behavior of employees in e-commerce companies, which

was an interesting research opportunity (AlEssa & Durugbo, 2022). Its significance lies in the fact that innovation can be a strategy for e-commerce companies to differentiate themselves from competitors in the same industry (Wang et al., 2022).

IWB is a self-initiated behavior in which someone intentionally generates, introduces, promotes, and implements innovative ideas by thinking critically, acknowledging potential and existing problems, exploring opportunities and solutions, identifying performance gaps (ideal and reality), and seeking new methods and procedures to improve organizational performance, to create value, gain competitive advantage, and ensure company sustainability (AlEssa & Durugbo, 2022). IWB consists of three aspects: the processes of generating ideas, introducing, and applying ideas.

IWB employees in the organization are considered a driver of organizational innovation (Wu et al., 2014), and therefore, it is important that companies seek ways to improve IWB. Some studies have suggested that good human resource management (HRM) practices can improve IWB (Aboramadan, 2022; Ahmed et al., 2018; Bhattacharjee & Sarkar, 2023; Bos-Nehles et al., 2017; Jan et al., 2021; Jebali & Meschitti, 2021; Karadas & Karatepe, 2019; Noopur & Dhar, 2020; Prieto & Pérez-Santana, 2014; Sanz-Valle & Jiménez-Jiménez, 2018; Yasir & Majid, 2020), since HRM is key way to influence their employees behavior. Exploring how HRM influence employees IWB is therefore an interesting topic to research.

Past studies have taken a fragmented view of HRM; that is, they examined how HRM practices affected IWB in individuals (Bos-Nehles et al., 2017). However, this approach to researching the effect of HRM practices on individuals is deemed to be difficult to implement in the real world. This is because HRM practices are rarely implemented and felt by the employee individually, rather they are usually implemented in the organization as a bundle or system. Thus, previous studies

recommend or use the view of HRM as a system (Aboramadan, 2022; Bhattacharjee & Sarkar, 2023; Karadas & Karatepe, 2019; Prieto & Pérez-Santana, 2014; Sanz-Valle & Jiménez-Jiménez, 2018), with most using high-performance, high-commitment, or high involvement work systems as their choice of HRM system to be researched.

Though there are some differing terms, these three HRM systems all aim to improve employees' ability to do their jobs, motivate employees to put in maximum effort, and provide opportunities for employees to showcase their abilities. (Boxall & Macky, 2009 in Karadas & Karatepe, 2019; Takeuchi et al., 2007). High-performance work systems (HPWSs) emphasize employee engagement, creating a culture based on commitment rather than control (Caldwell, 2014). HPWSs usually involve several HRM practices, such as selective staffing, extensive training and development, mentoring, performance management, and incentives (Fu, 2013; Fu dkk., 2013; Gittell dkk., 2010 in Fu et al., 2015; Takeuchi et al., 2007). Other studies, such as Karadas and Karatepe (2019), argue that HPWSs involve HRM practices, such as selective staffing, training, rewards, teamwork, career opportunity/advancement, job security, and empowerment.

HPWSs can have positive effects on employee outcomes. One example is employee's innovative behavior (IWB/EIB). This positive effect can be direct (Ahmed et al., 2018; Farrukh et al., 2022; Prieto & Pérez-Santana, 2014; Sanz-Valle & Jiménez-Jiménez, 2018; Yasir & Majid, 2020) or indirect through full or partial mediation (Ahmed et al., 2018; Bhattacharjee & Sarkar, 2023; Farrukh et al., 2022; Karadas & Karatepe, 2019; Prieto & Pérez-Santana, 2014; Yasir & Majid, 2020).

Looking at what mediates the relationship between HPWS and IWB, some researchers argue that work engagement (Bhattacharjee & Sarkar, 2023) and psychological capital (PsyCap) (Farrukh et al., 2022) may explain the process of how HPWS influences IWB.

Drawing upon the conservation of resources (COR) theory, Farrukh et al. (2022) argue that PsyCap is a personal resource, implemented and perceived by the employee, which employees acquire through HPWSs. This, in turn, improves their IWB. Each aspect of PsyCap (hope, self-efficacy, resilience, and optimism) can be enhanced through HPWSs, and they are found to influence IWB (Farrukh et al., 2022).

Another mediating factor between HPWS and IWB is work engagement (Bhattacharjee & Sarkar, 2023). The researcher draws on the motivational path of the job demands-resources (JD-R) model, in which they argue employees are engaged in their work because they are motivated by the resources and HPWSs provided by the organization. This, in turn, improves their performance, which in this case includes IWB.

Based on the explanations related to IWB and its influencing factors, the authors focus on how HPWSs and work engagement can influence an individual's level of IWB, mediated by PsyCap. In addition, the author will also examine other mediation paths, namely HPWS → work engagement → IWB, and HPWS → PsyCap → work engagement.

This research will contribute by examining how PsyCap and WE can develop IWB. It will add to the theoretical antecedents of innovative behavior, through the use of the JD-R and COR models. Additionally, this research will provide insights into how e-commerce companies can develop and improve IWB, which can be crucial for success and building future sustainable profits. This research will also focus on IWB at the individual level, which is a perspective that past research suggests is lacking.

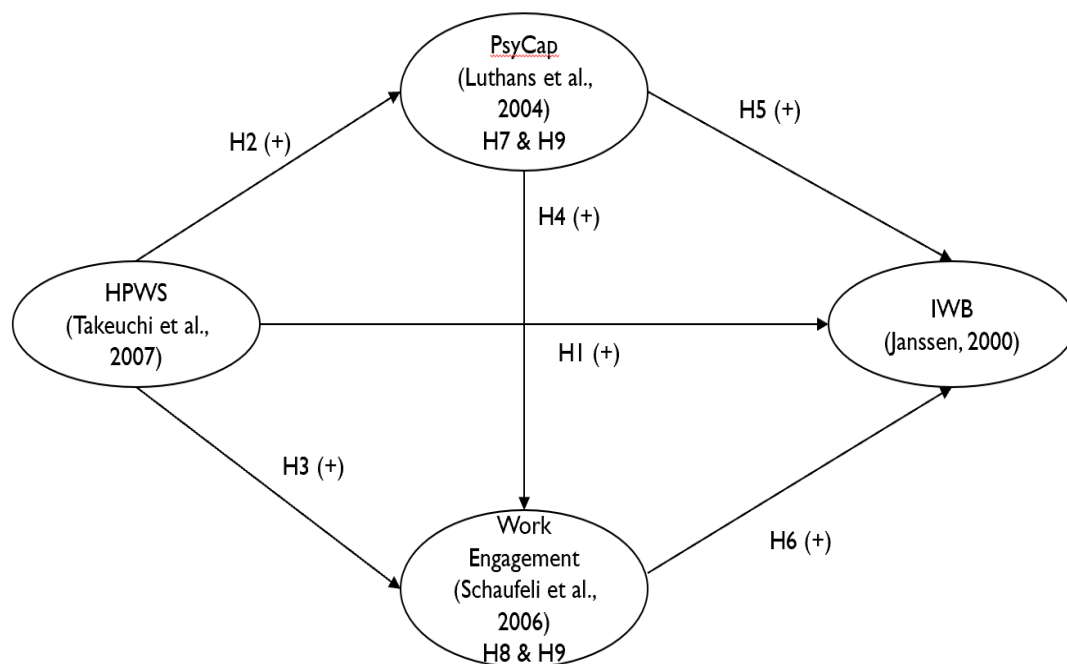


Figure 1.
Conceptual Model

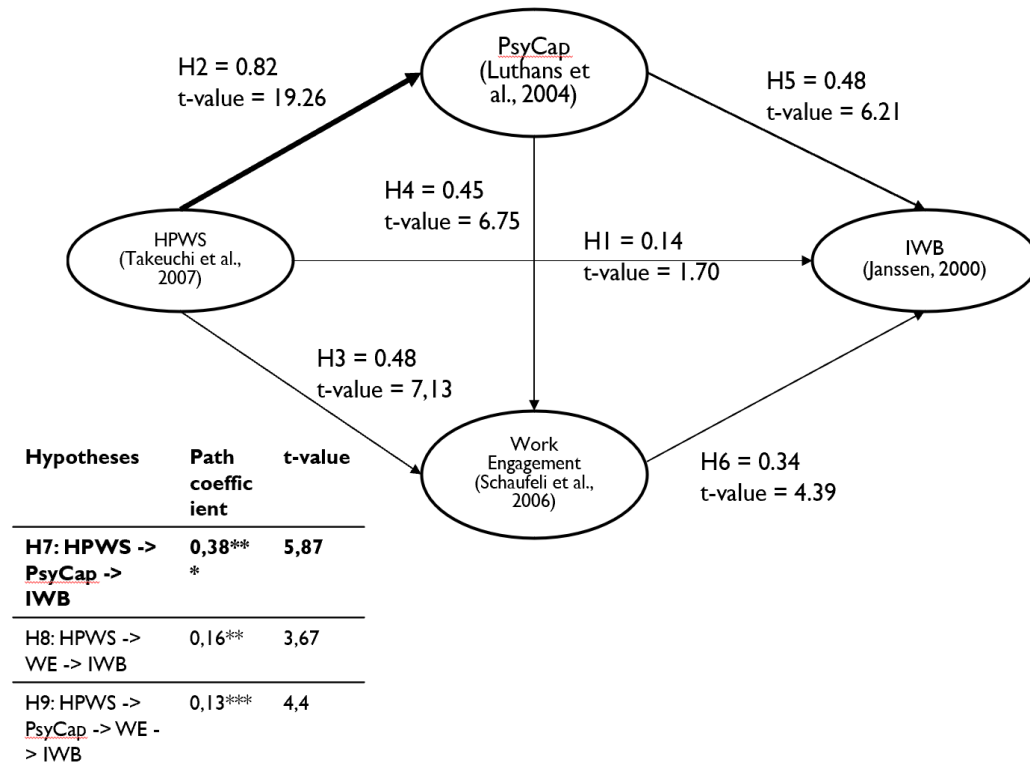


Figure 2.
Hypothesis Testing Result

2. Literature Review / Hypothesis Development

Job Demands-Resources Theory

The JD-R theory posits that the work environment can be divided into two categories: demands and resources. The demands of a job require sustained effort from an individual, which typically has physiological and psychological costs, while resources are aspects of a job that can assist an individual in achieving work-related goals, alleviate pressure from job demands, and contribute to personal development (Demerouti et al., 2001). JD-R theory posits that the resources and demands of a job may affect an individual performance in their job through several mediating and moderating factors (Bakker & Demerouti, 2017). An example of a resource in the workplace is HPWSs, which can be considered as a job resource that helps employees achieve their work goals and develops their potential through effective HRM.

The JD-R model has various pathways to explain how resources and demands can influence individual performance or outcomes, including the motivational pathway (Bakker & Demerouti, 2017).

On the motivational pathway, resources assist individuals in achieving their work targets, which enhances their work motivation and results in good performance (Bakker & Demerouti, 2017). One type of motivation explained in the JD-R theory is work engagement. In this context, an individual will feel more engaged in their work because they perceive that the company provides support through the resources provided, such as HPWSs, thereby increasing employee motivation (Bhattacharjee & Sarkar, 2023). Another construct that can be categorized into the motivation aspect of JD-R theory is PsyCap, which improves job performance (Bakker & Demerouti, 2017).

To summarize, this theory posits that job resources can help employees achieve their work targets, while also considering that a motivated, engaged employee can benefit more through the quality and the availability of the resources provided in their workplace. This theory will be one of two theories that this research uses to develop hypotheses.

Conservation of Resources Theory

The conservation of resources (COR) theory explains that individuals tend to acquire and maintain various forms of resources that are perceived as valuable (Hobfoll, 1989). In the COR theory, resources can encompass goods, conditions, personal characteristics, or energy which are perceived as valuable because they enable individuals to acquire and preserve other valuable resources, and the loss or threat of losing such resources will impact individuals' wellbeing (Hobfoll, 1989). COR theory is a type of "stress-theory," whereby the absence of resources will cause individuals to experience stress, as argued by Hobfoll (1989, 2002).

Farrukh et al. (2022) argues that PsyCap is a personal resource that can be developed through workplace resources, such as through HRM practices embedded in HPWSs, which can assist individuals in managing job-related stress and contribute to improving their work outcomes, including IWB. The accumulation of resources helps employees feel more satisfied with their job and experience higher levels of wellbeing, which may lead to an increase in their job performance and IWB.

Innovative Work Behavior (IWB)

IWB is when employees intentionally create, introduce, and implement new ideas in the workplace, groups, or organizations which are beneficial to the company's performance (Janssen, 2000). New ideas that are beneficial to the firm may be ideas for creating new products or technologies, new work or administrative processes, or the implementation of new ideas or technologies intended to increase work productivity (Kleysen & Street, 2001).

It can be concluded that IWB is a complex behavior, consisting of several dimensions and stages.

IWB is different from creative behavior, although creative behavior can be said to be part of innovative behavior (Scott & Bruce, 1994). In IWB, creativity is part of idea generation, so it can be said that creativity is part of IWB, but it is not the only behavior that determines IWB (Janssen, 2000; Scott & Bruce, 1994). In addition to generating innovative ideas, IWB is also characterized by championing or promoting the innovative ideas generated, as well as implementing innovative ideas to become an innovation (AlEssa & Durugbo, 2022; Bos-Nehles et al., 2017; Janssen, 2000; Sanz-Valle & Jiménez-Jiménez, 2018; Scott & Bruce, 1994; Veenendaal & Bondarouk, 2015).

High-Performance Work Systems (HPWS)

A HPWS is a set of HRM practices that improve employee performance and motivation (Takeuchi et al., 2007). This system aims to improve staff skills, commitment, and performance to give the company a competitive edge. HPWSs are well-known, yet defining and composing HPWS methodologies is difficult. Zhang and Morris (2014) conceptualized an HPWS as a unitary construct, but Fu et al. (2015), Karadas and Karatepe (2019), and Karadas and Vatankhah (2015) argue that a composite of HRM practices form an HPWS. These findings suggest that HRM practices boost employee performance synergistically. This study will view HPWSs as a holistic HRM approach that improves employee performance.

In their study, Obeidat, Mitchell, and Bray (Obeidat et al., 2016) suggested using the ability-motivation-opportunity (AMO) framework to structure HRM practices in a high-performing work environment, explaining how HR procedures affect employee performance using Appelbaum (2000) model. Appelbaum suggested that HR strategies influence employee performance by improving competencies and motivation,

providing opportunities for excellence and including employees in crucial corporate decision-making. In organizational behaviour, optimal performance is studied. According to Boxall and Purcell (2003) as mentioned in Obeidat et al. (2016), high levels of talent and motivation lead to optimal performance, and a work environment with many success prospects is also essential for good performance. The AMO framework can now clearly distinguish a mix of high-performance work HPWSs and HRM strategies.

The first HRM practice involves strategies that improve staff skills, aptitudes, and expertise (Obeidat et al., 2016). Implementing techniques to improve employees' knowledge, skills, and abilities goes beyond training current staff. It also involves recruiting skilled employees (Delery & Doty, 1996). This study examines capability-enhancing HRM approaches using Bos-Nehles et al. (2017) and Obeidat et al. (2016). These methods include careful hiring and proper training.

The next category is where HRM practices attempt to motivate employees to improve performance. Obeidat et al., 2016 examine motivation-boosting methods. Bos-Nehles et al. (2017) found that job security as well as appropriate compensation and incentives can boost employee engagement. The expression refers to employees feeling treated fairly at work. Employees are motivated to perform well by this perception (Obeidat et al., 2016), and work stability can make employees feel good, which improves job performance (Bos-Nehles et al., 2017). Previous research has shown that a sense of security boosts employee dedication and innovation, which can improve (Bos-Nehles et al., 2017).

The next category involves HRM practices that enhance employee motivation to demonstrate high performance (Obeidat et al., 2016). Providing fair wages and appropriate recognition can boost engagement among employees (Bos-Nehles et al., 2017), as employees feel treated fairly, leading to reciprocal high-performance outcomes (Obeidat et al., 2016).

On the other hand, job security instills positive feelings in employees, prompting them to reciprocate with high performance (Bos-Nehles et al., 2017). A sense of security also increases employee commitment and boosts their confidence to try new things, potentially enhancing individual performance (Bos-Nehles et al., 2017). Having a clear idea of their career path can also motivate employees to give their best performance, as they understand that showcasing their performance will contribute to career advancement (Karadas & Karatepe, 2019).

The last category encompasses HRM practices that develop opportunities for employees to participate and demonstrate high performance. Empowerment and teamwork can be included in the opportunity-enhancing category (Karadas & Karatepe, 2019; Karatepe & Karadas, 2015). Recent studies show that providing employment autonomy, flexible work arrangements, and information exchange can increase opportunities (Obeidat et al., 2016). Hayes (1994) found that empowerment strategies increase employee autonomy, allowing them to make decisions within their job tasks. Coyle-Shapiro and Morrow (2003) argue that a good collaborative environment can improve employee performance by reducing team friction and distractions.

Therefore, it can be concluded that HPWSs recognize employees as a source of competitive advantage for the company, and focus on developing employees' abilities, motivation, and opportunities to help them perform at their best. In this study, the components of HPWS include selective staffing, training (ability-enhancing), rewards, job security, career opportunities (motivation-enhancing), and empowerment, collaboration, (opportunity-enhancing), which in this study are hypothesized as being able to improve employee's performance, as demonstrated through IWB.

Another role of HPWS is to help develop individual PsyCap (Farrukh et al., 2022). Viewed from the COR theory standpoint,

appropriate training can boost employees' self-confidence and enhance their abilities to perform their respective tasks, consequently increasing their self-efficacy levels (Evans & Davis, 2005 as cited in Farrukh et al., 2022). Training is considered part of an HPWS as another job resource that can be used to develop individuals' personal resources (PsyCap). Other HRM practices within HPWSs have also been identified as antecedents of PsyCap (Newman et al., 2014).

The last role of an HPWS is to enhance motivation among employees. According to the JD-R theory (Demerouti et al., 2001). HPWS is considered a resource that can increase IWB by increasing employee motivation, which is reflected in the behavior of employees who are engaged with their work (work engagement or WE). Work engagement is defined as a person's positive state related to their work, which is characterized by vigor, dedication, and absorption. In line with JD-R theory (Demerouti et al., 2001), Bhattacharjee and Sarkar (2023) argue that job resources can increase employee motivation both internally and externally. Job resources fulfill basic intrinsic human needs for autonomy, competence, learning, and development, and extrinsic job resources provide everything employees need to achieve their goals. Broadly speaking, employees who feel that their company creates a resourceful work environment will be more passionate, dedicated, and fully concentrated on doing their work. Therefore, this study proposes the following hypothesis:

H1: HPWSs have positive significant influence on employees' IWB level.

H2: HPWS implementation has a positive significant influence on employees PsyCap.

H3: HPWS implementation has a positive significant influence on employees work engagement.

Psychological Capital

PsyCap is a positive psychological state characterized by confidence (self-efficacy) complete challenging tasks, optimism about success in the present and the future, perseverance in efforts to achieve goals

(hope), and the ability to survive and bounce back even better than before when facing problems and difficulties (resilience) (Luthans & Youssef, 2004; Luthans & Youssef-Morgan, 2017; Luthans et al., 2004). The four dimensions of PsyCap are usually abbreviated as HERO and are a combination of pre-existing constructs. Therefore, PsyCap is referred to as a second order psychological resource (Luthans & Youssef-Morgan, 2017). In their daily work, employees will face unexpected obstacles. Their success in overcoming these obstacles will make them believe that they are capable of doing it again (Karadas & Karatepe, 2019), building their confidence in their abilities and competence, which builds their sense of self-efficacy (Karadas & Karatepe, 2019). Someone who is hopeful and resilient will have an excellent ability to find alternative ways to overcome obstacles (Luthans, Avolio, et al., 2007), while high levels of optimism in employees will help them to always expect positive things to happen, regardless of what is happening now or bad experiences in the past (Luthans, Avolio, et al., 2007). When viewed through the lens of JD-R theory, PsyCap is a personal resource that can help employees foster motivation and work engagement (Karadas & Karatepe, 2019; Newman et al., 2014).

Several previous studies found that individuals who have high PsyCap were found to have high IWB (Blasco-Giner et al., 2023; Farrukh et al., 2022; Kumar et al., 2022; Uen et al., 2021; Ullah et al., 2023). The findings suggest that each dimension of PsyCap has a positive impact on one's ability to innovate.

For example, individuals who have high levels of hope will have a clear view of the goal to be achieved (goal), ways to achieve the goal (pathway thinking), and the motivation to stick with the path that has been formed to achieve the goal (agency thinking) (Snyder, 2002). Thus, the individual will tend to be more capable of finding ways to achieve their goals, even with all the obstacles they face (small budget, lack of material resources, etc.), and in the process, will face these problems by creating innovations that can help them to

achieve their goals (Luthans, Avolio, et al., 2007). For example, a person with high hope is more likely to create and implement innovative ideas to achieve their goals (Ullah et al., 2023). High optimism contributes to psychological wellbeing, because with high optimism, a person will not struggle with failure, due to their belief that failure or obstacles are only temporary (Seligman 2002, in Luthans et al., 2004). The innovation process involves many failures, obstacles, and experimental trials, and optimistic individuals will tend not to blame themselves if they experience these obstacles, which will then make them stay on the innovation path (Blasco-Giner et al., 2023; Kumar et al., 2022; Ullah et al., 2023). Highly resilient individuals are adaptable despite failures, setbacks, or changes that occur during the innovation process (Luthans, Avolio, et al., 2007; Ullah et al., 2023). Finally, individuals who have high self-efficacy will feel confident in their ability to innovate (Bandura, 1997 in Kumar et al., 2022). Together, the four dimensions of PsyCap give individuals a source of psychological strength to be innovative. Therefore, this study proposes the below hypothesis:

H4: PsyCap has a positive significant influence on work engagement.

H5: PsyCap has a positive significant influence on innovative work behavior.

Work Engagement

Work engagement is a positive state related to work, which is characterized by vigor, dedication, and absorption (Schaufeli et al., 2006). Schaufeli et al. (2006) suggest that work engagement is a pervasive cognitive-affective state that is not limited to a certain object, event, behavior, or individual.

Vigor is an individual's personal willingness to work hard and exhibit tenacity in the face of challenges (W. B. Schaufeli et al., 2006). High work participation, pride, importance, passion, inspiration, and challenge demonstrate dedication (Schaufeli et al., 2006). Finally, absorption is being happy and entirely focused on one's task, which causes

one to lose track of time and find it hard to disengage (W. B. Schaufeli et al., 2006).

Work engagement is commonly confused with employee engagement (Kosaka & Sato, 2020). Distinguishing between them helps clarify research directions and hypothesis development when researching both (Kosaka & Sato, 2020). The most significant difference lies in the focus of each concept. Schaufeli (2014) argues that work engagement is a more specific concept, referring exclusively to the relationship between an employee and their work. In contrast, employee engagement encompasses an employee's relationship with the organization. Schaufeli (2014) suggests that by concentrating attention on the employee's relationship with their work alone, confusion with similar concepts, such as organizational commitment and extra-role behavior can be avoided.

This study measures work engagement as distinct from other concepts, such as organizational commitment and extra-role behavior, which are part of the employee engagement construct (Schaufeli, 2014). Measuring work engagement provides a clearer understanding of the motivational aspect, aligning with previous studies that utilized the J D-R theory as one of the foundational theories in their research (Bhattacharjee & Sarkar, 2023).

One of the pathways of the J D-R model developed by Demerouti et al. (2001) explains that motivation has a positive role in influencing work performance. One measure of employee performance is IWB (AlEssa & Durugbo, 2022). Individuals who are engaged with their work show a high IWB because these individuals tend to feel positive emotions (Bakker & Demerouti, 2017), and they tend to adjust their work content to achieve their work goals (crafting) (Rudolph, et al., 2017 in Bhattacharjee & Sarkar, 2023). Therefore, this study proposes the following hypothesis:

H6: Work engagement increases IWB

The mediating role of psychological capital on work engagement.

Previous studies have examined the mediating role of PsyCap on the relationship between HPWSs and employee outcomes (Farrukh et al., 2022; Karadas & Karatepe, 2019). Research conducted by Farrukh et al. (2022) found that PsyCap has a mediating role on employee outcomes in the form of IWB. In accordance with COR theory, individuals will try to build and maintain valuable resources to help them do their jobs, and avoid the potential loss of these resources in the future (Hobfoll, 1989). One type of resource, according to Hobfoll (1989), is something that helps individuals handle stress. Farrukh et al. (2022) argue that PsyCap is such a resource.

HPWSs can be said to be a job resource, because they help individuals develop their personal resources (Farrukh et al., 2022). HPWSs will develop individuals who are motivated to demonstrate the desired behavior, in this case, innovative behavior (Farrukh et al., 2022). Thus, hypothesis 7 in this study is:

H7: PsyCap mediates the effect of high-performance work systems on innovative work behavior

Bhattacharjee and Sarkar (2023) found that the relationship between HPWS and IWB is mediated by work engagement, which is one of the motivational factors in JD-R theory. The study argues that HPWS is a resource provided by the company, which helps employees become more motivated in their work (work engagement). Engaged employees, according to the study, will demonstrate more IWB. The JD-R model argues that job resources, in this case HPWS, can increase employee motivation (engagement) (Demerouti et al., 2001). Work situations that are rich in resources, for example, those with optimal training, good rewards, and quality colleagues, are found to increase employee motivation to work and show their best performance, part of which is to show innovative behavior (Aboramadan, 2022; Bhattacharjee & Sarkar, 2023).

Thus, in this study, hypothesis 8 is:

H8: Work engagement mediates the relationship between HPWSs and IWB.

The authors propose one additional mediation path, namely the sequential mediating role of PsyCap and work engagement in explaining the effect of HPWS on IWB. This hypothesis is based on several previous studies (Avey et al., 2008; Karadas & Karatepe, 2019; Karatepe & Avci, 2017; Xanthopoulou et al., 2007, 2008) which found that PsyCap is an antecedent of work engagement. Viewed through the perspective of JD-R theory, PsyCap as one of the personal resources that can affect work engagement which has a role as a motivator (Bakker & Demerouti, 2017). Accordingly, the authors propose hypothesis 9 as follows:

H9: PsyCap and work engagement sequentially mediate the effect of HPWSs on IWB

3. Methodology

Measures

This research used several scales to test the proposed hypotheses, all of which used a 6-point Likert Scale. Data was gathered via an online survey, administered by a survey company. HPWSs were measured using instruments derived from prior research, all of which were used by Karadas and Karatepe (2019) in their study. Four items were used to measure the selective staffing dimension, four items for job security, and five items for career opportunity. Six items were used to measure training, and five for rewards. Five items were used to measure teamwork, and five items for empowerment. IWB was measured using a scale developed by De Jong and Den Hartog (2010) which consists of ten items modified to better fit the context. PsyCap was measured using the psychological capital questionnaire (PCQ) instrument, developed by Luthans et al. (2007) that originally contained 24 items, however the author added three questions as a counterbalance to unfavorable items, which brings the total item to 27 questions. PCQ measured PsyCap through the four dimensions of hope, self-efficacy, resilience,

and optimism. Lastly, work engagement variable was measured using the Utrecht work engagement scale-9 (UWES-9) developed by Schaufeli et al. (2006). The instrument measures work engagement through three dimensions, namely vigor, absorption, and dedication. Each dimension is operationalized through three questions. All of the items were translated from English into Indonesian.

Participants

This research used the maximum likelihood method to determine the sample size, following Hair et al. (2019). It is calculated based on the number of items multiplied by 5. Since the total number of items in the questionnaire was 80, the minimum sample size needed for this research to provide a sound analysis is around 400. To account for poor data quality issues and expected errors, the sample size was increased by 100 to create a buffer, resulting in 500 respondents. Participants were selected via a non-probability method, on a third-party platform. This platform was a paid platform, which provides researcher ease of access towards the needed demographic data. Participants were currently employed in retail e-commerce companies in Indonesia, and had a minimum work experience of one year. Retail e-commerce refers to companies that provide web-based platforms for the online sale of relatively small fast-moving goods, directly to consumer (Al-Ali et al., 2022; Febransyah & Camelia Goni, 2022; Wang et al., 2022). That 500 participants were further reduced after data cleansing to omit respondents that did

not answer the questionnaire properly and did not pass the screening questions. As a result, 439 respondents' data qualified for analysis.

Analysis

This study employed covariance-based structural equation modeling (SEM). SEM is an analytical method that depicts the relationships among variables in research and tests the interconnections within a set of equations, similar to multiple regression. SEM is an analysis technique used to confirm phenomena and assess the validity of the utilized model. This research used the SEM (CB-SEM), which is the more traditional approach to SEM method. CB-SEM is used as the method of analysis for this research due to this research stated objective, which is to confirm an established theory. In this research, the author will use SEM as a terminology for referring to CB-SEM.

The validity of each item and dimension was confirmed using confirmatory factor analysis, which utilizes each standardized loading factor (SLF) value to determine each item's validity. Hair et al. (2019) suggest looking at the number of participants to determine the minimum value of SLF, so that an indicator or dimension can be considered valid. For a sample of this size ($n = 439$), the minimum SLF value to achieve statistical significance is 0.3 (Hair et al., 2019).

Due to page constraints, detailed validity and reliability results are presented in the Table 1).

Table 1.
Validity And Reliability Test Output

First-order Constructs	Second-order constructs	Indicators	SLF	CR	AVE
	High-performance work system (HPWS)	COP	0.95	0.96	0.75
		STA	0.90		
		JSE	0.88		
		EMO	0.73		
		RE	0.90		
		TR	0.88		
		TW	0.83		

Table 1. (Continued)

First-order Constructs	Second-order constructs	Indicators	SLF	CR	AVE	
Career Opportunity (COP)		COP1	0.83	0.88	0.65	
		COP2	- 0.10			
		COP3	0.74			
		COP4	0.81			
		COP5	0.89			
Selective Staffing (STA)		STA1	0.84	0.85	0.60	
		STA2	0.49			
		STA3	0.84			
		STA4	0.83			
Job security (JSE)		JSE1	0.65	0.68	0.36	
		JSE2	0.45			
		JSE3	0.79			
		JSE4	0.46			
Empowerment (EMO)		EMO1	0.74	0.82	0.49	
		EMO2	0.66			
		EMO3	0.53			
		EMO4	0.79			
		EMO5	0.75			
Reward (RE)		RE1	0.86	0.94	0.76	
		RE2	0.87			
		RE3	0.88			
		RE4	0.90			
		RE5	0.86			
Training (TR)		TR1	0.77	0.94	0.73	
		TR2	0.83			
		TR3	0.89			
		TR4	0.87			
		TR5	0.85			
		TR6	0.89			
Teamwork (TW)		TW1	0.86	0.93	0.71	
		TW2	0.89			
		TW3	0.86			
		TW4	0.73			
		TW5	0.87			
	Psychological (PsyCap)	Capital	SE	0.93	0.96	0.86
			RES	0.90		
			OPT	0.91		
			HOP	0.98		

Table 1. (Continued)

First-order Constructs	Second-order constructs	Indicators	SLF	CR	AVE
Self-efficacy		SE1	0.83	0.93	0.69
		SE2	0.89		
		SE3	0.85		
		SE4	0.83		
		SE5	0.77		
		SE6	0.82		
Resilience		RES1	0.64	0.87	0.54
		RES2	0.73		
		RES3	0.79		
		RES4	0.8		
		RES5	0.79		
		RES6	-		
Optimism		RES7	0.22	0.75	0.44
		OPT1	0.64		
		OPT2	0.77		
		OPT3	0.68		
		OPT4	0.82		
		OPT5	0.76		
Hope		OPT6	-0.4	0.89	0.57
		OPT7	-		
		OPT8	0.34		
		HOP1	0.67		
		HOP2	0.71		
		HOP3	0.81		
Vigour	Work engagement	HOP4	0.74	0.96	0.88
		HOP5	0.82		
		HOP6	0.68		
		VI	0.79		
		DE	0.66		
		AB	0.94		
Dedication		VI1	0.98	0.89	0.73
		VI2	0.91		
		VI3	0.90		
Absorption		DE1	0.78	0.89	0.74
		DE2	0.87		
		DE3	0.89		
		AB1	0.81	0.80	0.57
		AB2	0.82		
		AB3	0.71		
			0.68		

Table 1. (Continued)

First-order Constructs	Second-order constructs	Indicators	SLF	CR	AVE
IWB		IWB1	0.47	0.94	0.60
		IWB2	0.68		
		IWB3	0.70		
		IWB4	0.80		
		IWB5	0.81		
		IWB6	0.83		
		IWB7	0.85		
		IWB8	0.87		
		IWB9	0.85		
		IWB10	0.84		

Several variables had SLF values below 0.3, all loaded negatively; namely the second indicator in one of the dimensions of the HPWS variable, career opportunity with the indicator code COP2; the sixth indicator in one of the dimensions of the psychological capital variable, resilience with indicator code RES6, and in psychological capital's indicator coded OPT5 and OPT6 for the optimism dimension. These items were deleted from the analysis, since these items did not account for at least 10% of the variance that occurred in the latent dimensions (Hair et al., 2019), and were not included in the composite reliability and average variance extracted calculation. All the other dimensions of each variable had satisfactory SLF values. This means that all dimensions have the power to explain each variable significantly, so there was no need to remove any dimension from further analysis.

To measure reliability, this study used average variance extracted (AVE) and composite reliability (CR) scores. AVE measures similarity in the proportion of variance while CR looks at the internal consistency of a measuring instrument to see whether it consistently represents the same latent construct (Hair et al., 2019). The AVE and CR scores for each dimension were generally satisfactory. There were two dimensions of HPWS and one dimension of PsyCap that had low AVE scores, namely the job security dimension (0.37), the empowerment dimension (0.49), and the optimism dimension (0.44).

However, following Fornell and Larcker (1981), these two dimensions were retained because they had CR values above 0.6. Overall, all dimensions and variables had sufficiently high CR values, so that no variables or dimensions were excluded from further analysis.

4. Findings and Discussion

Findings

In direct effect testing, significance in the direct effect relationship is determined by *t*-values greater than the critical *t*-table values. Since this study hypothesizes both the significance and the direction of the relationship, the critical value for such hypotheses to be considered significant with 95% confidence is 1,645. (Levine et al., 2017). Figure 2 illustrates that HPWSs have significant positive direct effects on IWB (*t*-value = 1.70), psychological capital (*t*-value = 19.26), and work engagement (*t*-value = 7.13), thus supporting H1, H2, and H3. PsyCap has a direct influence on work engagement (*t*-value = 6.75), and therefore H4 is supported. It can also be inferred that both PsyCap (*t*-value = 6.21) and work engagement (4.39) have a positive direct influence over IWB, supporting H5 and H6.

Further, there are several indirect effects to be tested, namely the influence of HPWS on IWB mediated through the variables PsyCap and work engagement separately and

sequentially. Before testing the indirect effects, there are several prerequisites that must be fulfilled. Hair et al. (2019) stated that before testing mediation, a researcher must examine the direct relationships between the independent variable and the mediator variable, the mediator variable and the dependent variable, as well as between the independent variable and the dependent variable. Mediation analysis can only be conducted if the relationships between the independent variable and the mediator variable, as well as between the mediator variable and the dependent variable, are significant (Hair et al., 2019). In this study, the relationships between the independent variable and the mediator variable, the mediator variable and the dependent variable, and the relationship between the independent dependent variables are significant.

Therefore, testing of indirect effects can be conducted. Parallel mediation testing was conducted using the Sobel test calculator (Soper, 2023) because the results of parallel mediation separately are not available in the LISREL output. Based on the output of the Sobel test (Figure 2), it can be inferred that PsyCap plays a significant positive mediating role between HPWS and IWB (t -value = 5.87). Another indirect relationship that has a significant role is that of work engagement in mediating the relationship between HPWS and IWB (t -value = 3.67) and between PsyCap and work engagement in the sequential/simultaneous mediation between HPWS and IWB (t -value = 4.4). Thus, we can conclude that H7, H8, and H9 are supported. More detailed data on the hypothesis testing results can be found in Table 2.

Table 2.
The Hypothesis Testing Results

Hypothesis	Relationship	Estimates	t-values	Conclusion
H1	HPWS → IWB	0.14	1.70	Significant
H2	HPWS → <i>PsyCap</i>	0.82	19.26	Significant
H3	HPWS → WE	0.48	7.13	Significant
H4	<i>PsyCap</i> → WE	0.45	6.75	Significant
H5	<i>PsyCap</i> → IWB	0.48	6.21	Significant
H6	WE → IWB	0.34	4.39	Significant
H7	HPWS → <i>PsyCap</i> → IWB	0.38	5.87	Significant
H8	HPWS → WE → IWB	0.16	3.67	Significant
H9	HPWS → <i>PsyCap</i> → WE → IWB	0.13	4.4	Significant

Discussion

The research emphasizes the importance of innovation for the survival and growth of retail e-commerce companies, linking it to key success factors such as practical, secure, and easily developable online payment systems, the development of professional digital commerce ecosystems, the formation of a high-quality talent pool, and the establishment of a healthy investment climate. The study investigates how IWB among employees in retail e-commerce companies can be developed and strengthened by various factors. The analysis reveals that PsyCap and

work engagement directly influence IWB, with PsyCap having the most significant direct impact.

Furthermore, the study examines the direct influence of HPWSs on IWB, finding a relatively smaller direct effect. However, it suggests a partial mediating role, indicating that HPWS influenced PsyCap and work engagement, which in turn affected IWB. Notably, the research identifies specific aspects of HPWS, such as training in handling stakeholder complaints, which require improvement. The study underscores the

potential for enhancing employee work engagement through the effective implementation of HPWSs, particularly in the areas of selective staffing and career opportunities.

The study also uses the COR (Hobfoll, 1989) and the JD-R (Demerouti et al., 2001) models to explain the indirect effects of HPWSs on IWB. The findings support the idea that HPWSs contribute to the development of PsyCap, fostering positive psychological states that, in turn, drive IWB. The study concludes by emphasizing the need for retail e-commerce companies to focus on PsyCap development through HR practices such as training and career opportunities to boost IWB.

In exploring the direct and indirect influences of HPWS on IWB, the study contributes to existing literature by affirming the mediating roles of PsyCap and work engagement. It reinforces the relevance of job resource theories in explaining the complex relationships within the context of retail e-commerce. The research concludes by emphasizing the need for continuous development of HPWS, considering specific aspects, to foster PsyCap and work engagement, ultimately leading to improved innovative behavior among employees.

In conclusion, the research contributes to understanding the mechanisms through which HPWS influences IWB, highlighting the mediating roles of PsyCap and work engagement. The findings provide insights for companies to tailor their HR practices, emphasizing the development of psychological capital and engagement to foster innovation among employees in the retail e-commerce sector.

5. Conclusions

This research examines the influence of HPWSs on IWB through the mediation of PsyCap and work engagement in e-commerce retail employees in Indonesia. The findings

highlight the positive impact of HPWS on PsyCap, work engagement, and IWB. The study emphasizes the pivotal role of PsyCap in mediating the relationship between HPWS and IWB. This research contributes to explaining how e-commerce companies can enhance their employees' innovative work behavior, through various avenues.

Recommendations and Suggestions for Further Research

Enhancing HRM practices, particularly in the areas of career opportunities, selective staffing, rewards, and training, can boost IWB. Furthermore, screening for PsyCap components, such as work planning abilities, optimism, resilience, and self-confidence, can aid in selecting individuals with a propensity for innovation. Future research opportunities include analyzing innovative behavior at higher managerial levels and exploring additional variables related to job demands and their impact on innovation. It is especially important to analyze IWB at higher managerial levels, since this research finds a significant difference between staff and supervisors' responses and between those who are longer tenured and those that have not been long in their current company.

Declarations

Author contribution

All authors contributed equally as the main contributors of this paper. All authors read and approved the final paper.

Funding statement

The authors declare that this research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Competing interest

The authors declare that they have no conflicts of interest to report regarding the present study.

References

- Aboramadan, M. (2022). High-performance work systems in an Arab Middle Eastern context: Analysis from multisource data. *Evidence-Based HRM*, 10(4), 403–422. doi: 10.1108/EBHRM-04-2021-0070
- Ahmed, F., Hassan, A., Ayub, M. U., & Klimoski, R. (2018). High commitment work system and innovative work behavior: The mediating role of knowledge sharing. *Pakistan Journal of Commerce and Social Science*, 12(1), 29–51.
- Al-Ali, A. S. M. A., Sisodia, G. S., Gupta, B., & Venugopalan, M. (2022). Change management and innovation practices during pandemic in the Middle East e-commerce industry. *Sustainability (Switzerland)*, 14(8), 4566. doi: 10.3390/su14084566
- AlEissa, H. S., & Durugbo, C. M. (2022). Systematic review of innovative work behavior concepts and contributions. *Management Review Quarterly*, 72(4), 1171–1208. doi: 10.1007/s11301-021-00224-x
- Avey, J. B., Wernsing, T. S., & Luthans, F. (2008). Can positive employees help positive organizational change?: Impact of psychological capital and emotions on relevant attitudes and behaviors. *Journal of Applied Behavioral Science*, 44(1), 48–70. doi: 10.1177/0021886307311470
- Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. doi: 10.1037/ocp0000056
- Bhattacharjee, A., & Sarkar, A. (2023). High-performance work systems and employees' innovative work behaviour: An empirical investigation based on job demands-resources (JD-R) theory. *Global Business Review*, 1–21. doi: 10.1177/09721509221145414
- Blasco-Giner, C., Battistelli, A., Meneghel, I., & Salanova, M. (2023). Psychological capital, autonomous motivation and innovative behavior: A study aimed at employees in social networks. *Psychological Reports*, 1–29. doi: 10.1177/00332941231183614
- Bos-Nehles, A., Renkema, M., & Janssen, M. (2017). HRM and innovative work behaviour: A systematic literature review. *Personnel Review*, 46(7), 1228–1253. doi: 10.1108/PR-09-2016-0257
- Caldwell, C. (2014). High performance work systems: Building commitment to increase profitability. *Graziadio Business Report*, 17(3), 1–8.
- Coyle-Shapiro, J. A. M., & Morrow, P. C. (2003). The role of individual differences in employee adoption of TQM orientation. *Journal of Vocational Behavior*, 62(2), 320–340. doi: 10.1016/S0001-8791(02)00041-6
- Das, K., Tamhane, T., Vatterott, B., Wibowo, P., & Wintels, S. (2018). *The digital archipelago: How online commerce is driving Indonesia's economic development*. McKinsey & Co. Indonesia.
- De Jong, J., & Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and Innovation Management*, 19(1), 23–36. doi: 10.1111/j.1467-8691.2010.00547.x
- Delery, J. E., & Doty, D. H. (1996). Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions. *The Academy of Management Journal*, 39(4), 802–835. <https://about.jstor.org/terms>
- Demerouti, E., Nachreiner, F., Bakker, A. B., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512. doi: 10.1037/0021-9010.86.3.499
- Farrukh, M., Ansari, N. Y., Raza, A., Meng, F., & Wang, H. (2022). High-performance work practices do much, but H.E.R.O does more: An empirical investigation of employees' innovative behavior from the hospitality industry. *European Journal of Innovation Management*, 25(3), 791–812. doi: 10.1108/EJIM-11-2020-0448
- Febransyah, A., & Camelia Goni, J. I. (2022). Measuring the supply chain competitiveness of e-commerce

- industry in Indonesia. *Competitiveness Review*, 32(2), 250–275. doi: 10.1108/CR-05-2020-0059
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Fu, N., Flood, P. C., Bosak, J., Morris, T., & O'Regan, P. (2015). How do high performance work systems influence organizational innovation in professional service firms? *Employee Relations*, 37(2), 209–231. doi: 10.1108/ER-10-2013-0155
- Google, Temasek, & Bain & Company. (2022). *E-conomy SEA 2022*.
- Google, Temasek, & Bain & Company. (2023). *E-conomy SEA 2023*. https://services.google.com/fh/files/misc/indonesia_e_conomy_sea_2023_report.pdf
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning. www.cengage.com/highered
- Hayes, B. E. (1994). How to measure empowerment. *Quality Progress*, 27(2), 41–46.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. doi: 10.1037/0003-066X.44.3.513
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6(4), 307–324. doi: 10.1037/1089-2680.6.4.307
- Jan, G., Zainal, S. R. M., & Lee, M. C. C. (2021). HRM practices and innovative work behavior within the hotel industry in Pakistan: Harmonious passion as a mediator. *Journal of Human Resources in Hospitality and Tourism*, 20(4), 512–541. doi: 10.1080/15332845.2021.1959803
- Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology*, 73, 287–302.
- Jebali, D., & Meschitti, V. (2021). HRM as a catalyst for innovation in start-ups. *Employee Relations*, 43(2), 555–570. doi: 10.1108/ER-03-2020-0140
- Karadas, G., & Karatepe, O. M. (2019). Unraveling the black box: The linkage between high-performance work systems and employee outcomes. *Employee Relations*, 41(1), 67–83. doi: 10.1108/ER-04-2017-0084
- Karatepe, O. M., & Avci, T. (2017). The effects of psychological capital and work engagement on nurses' lateness attitude and turnover intentions. *Journal of Management Development*, 36(8), 1029–1039. doi: 10.1108/JMD-07-2016-0141
- Karatepe, O. M., & Karadas, G. (2015). Do psychological capital and work engagement foster frontline employees' satisfaction?: A study in the hotel industry. *International Journal of Contemporary Hospitality Management*, 27(6), 1254–1278. doi: 10.1108/IJCHM-01-2014-0028
- Khattak, A. (2022). Hegemony of digital platforms, innovation culture, and e-commerce marketing capabilities: The innovation performance perspective. *Sustainability (Switzerland)*, 14(1), 1–13. <https://doi.org/10.3390/su14010463>
- Kleysen, R. F., & Street, C. T. (2001). Toward a multi-dimensional measure of individual innovative behavior. *Journal of Intellectual Capital*, 2(3), 284–296.
- Kosaka, D., & Sato, H. (2020). Employee engagement and work engagement. *Annals of Business Administrative Science*, 19(6), 227–239. doi: 10.7880/abas.0200911a
- Kumar, D., Upadhyay, Y., Yadav, R., & Goyal, A. K. (2022). Psychological capital and innovative work behaviour: The role of mastery orientation and creative self-efficacy. *International Journal of Hospitality Management*, 102, 1–10. doi: 10.1016/j.ijhm.2022.103157
- Levine, D. M., Stephan, D. F., & Szabat, K. A. (2017). *Statistics for managers using microsoft excel* (8th ed.). Pearson Education Limited. www.mystatlab.com

- Limanseto, H. L. (2022, April 1). *Digital economy acceleration in e-commerce and online travel becomes one of the effective strategies to encourage national economic performance*. <https://ekon.go.id/publikasi/detail/4092/digital-economy-acceleration-in-e-commerce-and-online-travel-becomes-one-of-the-effective-strategies-to-encourage-national-economic-performance>
- Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, 60, 541–572.
- Luthans, F., Luthans, K. W., & Luthans, B. C. (2004). Positive psychological capital: Beyond human and social capital. *Business Horizons*, 47(1), 45–50.
- Luthans, F., & Youssef, C. M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics*, 33(2), 143–160. doi: 10.1016/j.orgdyn.2004.01.003
- Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital: developing the human competitive edge* (1st ed.). Oxford University Press.
- Luthans, F., & Youssef-Morgan, C. M. (2017). Psychological capital: An evidence-based positive approach. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 339–366. doi: 10.1146/annurev-orgpsych-032516-113324
- Newman, A., Ucbasaran, D., Zhu, F., & Hirst, G. (2014). Psychological capital: A review and synthesis. *Journal of Organizational Behavior*, 35(S1), 120–138. doi: 10.2307/26610877
- Noopur, N., & Dhar, R. L. (2020). Knowledge-based HRM practices as an antecedent to service innovative behavior: A multilevel study. *Benchmarking*, 27(1), 41–58. doi: 10.1108/BIJ-10-2018-0329
- Obeidat, S. M., Mitchell, R., & Bray, M. (2016). The link between high performance work practices and organizational performance: Empirically validating the conceptualization of HPWP according to the AMO model. *Employee Relations*, 38(4), 578–595. doi: 10.1108/ER-08-2015-0163
- Prieto, I. M., & Pérez-Santana, M. P. (2014). Managing innovative work behavior: The role of human resource practices. *Personnel Review*, 43(2), 184–208. doi: 10.1108/PR-11-2012-0199
- PT Bukalapak.com Tbk. (2023). *Laporan tahunan 2022: Tumbuh bersama UMKM melalui digitalisasi*. https://s1.bukalapak.com/content/Bukalapak_Annual_Report_2022_Final_.pdf
- PT Global Digital Niaga Tbk. (2023). *Laporan tahunan 2022: Membangun ekosistem terintegrasi untuk masa depan yang berkelanjutan*. <https://storage.googleapis.com/static-cms-prod/2023/06/Annual-Report-2022-PT-Global-Digital-Niaga-Tbk-new.pdf>
- PT GoTo Gojek Tokopedia Tbk. (2023). *Laporan tahunan 2022: One enduring ecosystem*. <https://assets.tokopedia.net/asts/GO%20Laporan%20Tahunan%202022.pdf>
- Sanz-Valle, R., & Jiménez-Jiménez, D. (2018). HRM and product innovation: Does innovative work behaviour mediate that relationship? *Management Decision*, 56(6), 1417–1429. doi: 10.1108/MD-04-2017-0404
- Schaufeli, W. (2014). What is engagement? In C. Truss, K. Alfes, R. Delbridge, A. Shantz, & E. Soane (Eds.), *Employee engagement in theory and practice* (1st ed., pp. 15–35). Routledge.
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66(4), 701–716. doi: 10.1177/0013164405282471
- Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in

- the workplace. *The Academy of Management Journal*, 37(3), 580–607. <https://about.jstor.org/terms>
- Snyder, C. R. (2002). Hope theory: rainbows in the mind. *Psychological Inquiry*, 13(4), 249–275.
- Takeuchi, R., Lepak, D. P., Wang, H., & Takeuchi, K. (2007). An empirical examination of the mechanisms mediating between high-performance work systems and the performance of Japanese organizations. *Journal of Applied Psychology*, 92(4), 1069–1083. doi: 10.1037/0021-9010.92.4.1069
- Uen, J. F., Vandavasi, R. K. K., Lee, K., Yepuru, P., & Saini, V. (2021). Job crafting and psychological capital: A multi-level study of their effects on innovative work behaviour. *Team Performance Management*, 27(1–2), 145–158. doi: 10.1108/TPM-08-2020-0068
- Ullah, I., Hameed, R. M., & Mahmood, A. (2023). The impact of proactive personality and psychological capital on innovative work behavior: Evidence from software houses of Pakistan. *European Journal of Innovation Management*. doi: 10.1108/EJIM-01-2022-0022
- Veenendaal, A., & Bondarouk, T. (2015). Perceptions of HRM and their effect on dimensions of innovative work behaviour: Evidence from a manufacturing firm. *Management Review*, 26(2), 138–160. doi: 10.1688/mrev-2015-02-Veenendaal
- Wang, Y., Chin, T., Caputo, F., & Liu, H. (2022). How supportive leadership promotes employee innovation under uncertainty: Evidence from chinese e-commerce industry. *Sustainability (Switzerland)*, 14(12). <https://doi.org/10.3390/su14127491>
- Wu, C. H., Parker, S. K., & de Jong, J. P. J. (2014). Need for cognition as an antecedent of individual innovation behavior. *Journal of Management*, 40(6), 1511–1534. doi: 10.1177/0149206311429862
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14(2), 121–141. doi: 10.1037/1072-5245.14.2.121
- Xanthopoulou, D., Bakker, A. B., Heuven, E., Demerouti, E., & Schaufeli, W. B. (2008). Working in the sky: A diary study on work engagement among flight attendants. *Journal of Occupational Health Psychology*, 13(4), 345–356. doi: 10.1037/1076-8998.13.4.345
- Yasir, M., & Majid, A. (2020). High-involvement HRM practices and innovative work behavior among production-line workers: Mediating role of employee's functional flexibility. *Employee Relations*, 42(4), 883–902. doi: 10.1108/ER-02-2018-0061
- Zhang, B., & Morris, J. L. (2014). High-performance work systems and organizational performance: Testing the mediation role of employee outcomes using evidence from PR China. *International Journal of Human Resource Management*, 25(1), 68–90. doi: 10.1080/09585192.2013.781524