

The Impact of Psychological Capital on Adaptive Performance in E-Commerce Enterprises: A Pilot Test Analysis

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Abstract: This study investigated the relationship between psychological capital (PsyCap) and employees' adaptive performance in Shaanxi Province's e-commerce sector, with innovative work behavior examined as a mediator. PsyCap, which includes self-efficacy, optimism, hope, and resilience, was hypothesized to help employees navigate challenges in the dynamic e-commerce environment. In a pilot test, we found preliminary evidence that high PsyCap is associated with better adaptability to rapidly changing work conditions, and that innovative work behavior may mediate this effect. These findings suggest that fostering employees' psychological resources can enhance their performance in dynamic e-commerce settings.

Keywords: Psychological Capital; Adaptive Performance; E-Commerce; Innovative Work Behavior; Employee Adaptability

1. Introduction

The rapid pace of digital transformation, especially in the e-commerce sector, has fundamentally altered global business operations (Sharma et al., 2023). In regions like Shaanxi Province, where agricultural and rural e-commerce are burgeoning, employees face substantial challenges in adapting to new technologies and market shifts (Tao et al., 2025). Given these continuously evolving conditions, adaptive performance has become a critical employee competency in e-commerce environments characterized by constant innovation and changing market demands (Yuzi et al., 2025). In particular, Shaanxi's e-commerce enterprises have been expanding due to supportive regional policies and the adoption of emerging technologies. However, a significant gap exists in understanding how psychological capital (PsyCap) influences employee performance in such dynamic settings (Witasari & Gustomo, 2020). This study addresses that gap by examining how the psychological resources of self-efficacy, optimism, hope, and resilience contribute to employees' adaptive performance in Shaanxi's e-commerce industry. It also investigates whether innovative work behavior mediates the relationship between these psychological resources and adaptive performance.

The e-commerce sector is undergoing continuous, rapid transformations driven by technological advancements and shifting market trends (Sharma et al., 2023). These changes include the adoption of artificial intelligence, automation, big data analytics, and new digital platforms, all of which have redefined how businesses operate, interact with customers, and optimize internal processes (Shmatko & Ivchik, 2024). In addition, consumer preferences are evolving quickly, pushing companies to adopt new business models to stay competitive. As a result, employees in e-commerce increasingly need to demonstrate adaptive performance, the ability to effectively adjust to new tasks, environments, and challenges in the workplace. Adaptive performance has indeed become a crucial competency in this fast-paced environment. Employees who quickly learn new skills, adopt emerging technologies, and navigate shifting work conditions are better equipped to meet the demands of e-commerce businesses (Bradač Hojnik & Hudjek, 2023). Such employees not only adjust to technological changes but also contribute to problem-solving and innovation, allowing organizations to thrive amid digital-economy challenges. The ability to maintain high performance under changing conditions, such as fluctuating market demands or unforeseen disruptions (e.g., the COVID-19 pandemic), is now essential for organizational survival and growth (Moşteanu, 2024).

However, despite the growing demand for adaptive performance, many e-commerce employees struggle with rapid, continuous changes (Moroz, 2024). One key reason is that they often lack sufficient psychological resources to cope with the stress of these changes. These psychological resources, self-efficacy, hope, optimism, and resilience, which are the core components of psychological capital, are critical supports for employees as they navigate complex job demands. Without a strong PsyCap foundation, employees may lose confidence, experience burnout, or become overwhelmed by the pace of technological change and market volatility. Despite a growing recognition of the importance of psychological capital for employee performance, limited research has examined how these resources influence employees' adaptive performance in e-commerce, particularly in Shaanxi Province (Yuzi et al., 2025).

E-commerce enterprises must maintain a competitive edge through innovation and adaptability (Afiat & Rijal, 2023). Employees who demonstrate high adaptive performance cope better with challenges, solve problems effectively, and sustain high performance under rapidly changing conditions (Park & Park, 2021a). While the importance of adaptive performance is well recognized, the specific role of psychological capital in fostering this capability within the e-commerce sector remains underexplored (Yuzi et al., 2025). This study aims to address that gap by examining how PsyCap influences employees' adaptive performance in a rapidly changing digital landscape. It also specifically investigates the mediating role of innovative work behavior in this relationship.

The limited research on the relationship between psychological capital and adaptive performance in Shaanxi highlights the need for this study. By investigating how self-efficacy, optimism, hope, and resilience affect the ability of e-commerce employees in the region to adapt to technological changes and market fluctuations, this research aims to fill a significant gap in existing literature. Furthermore, by examining the role of innovative work behavior as a mediator in this relationship, the study will provide valuable insights into the mechanisms through which psychological capital influences adaptive performance, offering practical recommendations for e-commerce enterprises looking to optimize employee performance and foster a culture of innovation in an era of digital transformation.

Given the growing significance of adaptive performance in the e-commerce industry, the study seeks to answer the following research questions: (1) How do psychological capital dimensions (self-efficacy, optimism, hope, and resilience) influence the adaptive performance of employees in e-commerce enterprises in Shaanxi Province? (2) What role does innovative work behavior play as a mediator between psychological capital and adaptive performance in e-commerce employees? (3) How can e-commerce enterprises foster innovative work behavior to enhance adaptive performance among their employees?.

2. Theoretical Framework

2.1 Psychological Capital

Psychological capital (PsyCap) is a higher-order construct encompassing four key dimensions: self-efficacy, optimism, hope, and resilience (Asare, 2023). These dimensions represent an individual's positive psychological resources that help them cope with challenges, manage stress, and perform effectively under uncertainty. Employees with high PsyCap are better equipped to navigate the unpredictable, often stressful nature of modern workplaces. This is especially true in dynamic industries such as e-commerce, where constant change is the norm (Zhang & Xu, 2024).

2.1.1 Self-efficacy

Self-efficacy refers to an individual's belief in their ability to successfully complete tasks and achieve specific goals in various situations (Bandura, 2023). According to Bandura's social cognitive theory, people with high self-efficacy approach challenges with confidence, persistence, and greater effort. In the e-commerce context, self-efficacy is especially crucial because employees must constantly learn and master new digital tools, technologies, and systems (Guo & Kiratikarnkul, 2024). For example, an employee with high self-efficacy is more likely to embrace a new e-commerce platform or customer management system and quickly adapt to changing roles or processes. This confidence in one's capabilities fosters greater motivation and engagement, which are essential for maintaining productivity and high performance in a fast-paced work environment (Setyaningrum & Muafi, 2023).

2.1.2 Optimism

Optimism is an individual's tendency to expect positive outcomes and maintain hope for the future, even when faced with setbacks (Carver et al., 2010). Optimistic employees view obstacles as temporary and solvable, which prompts them to take proactive steps to address issues as they arise (Jimenez & Moorhead, 2021). They are more likely to remain motivated, pursue their goals, and sustain positive relationships with colleagues and customers. In the e-commerce sector, optimism is critical because employees must navigate uncertain, ever-changing conditions (shifts in consumer preferences, new technological trends, sudden market disruptions) (Williams et al., 2022). An optimistic outlook helps employees perceive challenges as opportunities for growth and innovation, and it contributes to a hopeful, collaborative work culture that can enhance team adaptability and performance.

2.1.3 Hope

Hope involves setting clear goals and finding the motivation to identify pathways to achieve those goals, even when obstacles arise (Milona, 2020).

In the context of e-commerce, hope is crucial because it encourages employees to stay focused and driven when they encounter challenges or setbacks. Hopeful employees tend to seek creative solutions to problems and remain committed to improving their performance, even under difficult or rapidly changing conditions. Hope isn't just having a vision of the future, it's also about figuring out practical ways to reach that vision (Dursun, 2021). This sense of hope allows employees to feel more control over their work outcomes, which leads to better decision-making and problem-solving in complex e-commerce scenarios (Yuzi et al., 2025). For example, in a fast-paced e-commerce setting like Shaanxi's, a hopeful employee may experiment with new marketing strategies, adopt emerging technologies, or devise innovative methods to meet customer demands. These proactive efforts, driven by hope, directly contribute to higher adaptive performance.

2.1.4 Resilience

Resilience is the ability to bounce back from setbacks, recover quickly from failures, and continue pursuing goals despite adversity. Resilient employees maintain a positive attitude and high motivation even in tough or stressful situations (Whitfield & Wilby, 2021). In e-commerce, resilience is essential because employees frequently face challenges such as volatile market trends, customer complaints, or technical difficulties. The capacity to adapt to these pressures, learn from mistakes, and persist in their efforts can significantly influence an employee's long-term success (Moşteanu, 2024). Resilience enables employees not only to endure hardships but also to grow from them. Resilient individuals treat setbacks as learning opportunities to improve future performance (Alwan et al., 2023). For e-commerce employees, especially those in regions like Shaanxi with rapidly developing digital landscapes, resilience is crucial for overcoming obstacles and sustaining high performance despite external pressures and uncertainty.

2.2 Adaptive Performance

Adaptive performance refers to an employee's ability to adjust to new or unfamiliar work situations, solve problems, and maintain high performance despite the challenges posed by changing job demands. In dynamic industries like e-commerce, where technological advancements, customer expectations, and market conditions change rapidly, adaptive performance is essential for maintaining competitiveness (Bednall & Henricks, 2021). E-commerce employees are often faced with new challenges, such as learning new technologies, adjusting to new marketing strategies, or responding to unexpected shifts in customer preferences (Chaudhary et al., 2025a). Employees who demonstrate adaptive performance can swiftly navigate these challenges by applying their existing skills, developing new ones, and modifying their approach to meet evolving demands.

Adaptive performance in e-commerce is not only about reacting to change but also about proactively seeking innovative ways to improve processes, solve problems, and engage customers (Selvan et al., 2025). For instance, e-commerce employees must constantly adapt to shifting customer behaviors, evolving digital marketing techniques, and the introduction of new technological tools. Those who can quickly learn and apply new skills, innovate within their roles, and sustain high performance despite such challenges greatly contribute to their organization's long-term success (Sott & Bender, 2025). Adaptive performance also involves learning agility, the ability to rapidly learn from experience and apply those lessons to new situations. E-commerce enterprises that foster adaptive performance in their workforce are better positioned to stay ahead of competitors and meet the demands of an increasingly dynamic market (Chaudhary et al., 2025b).

2.3 Innovative Work Behavior (IWB)

Innovative work behavior is the generation, promotion, and implementation of new ideas, processes, or products within the workplace. Employees who exhibit IWB proactively suggest improvements, devise creative solutions to problems, and contribute to the evolution of the organization's products, services, or work processes (AlEessa & Durugbo, 2022). In the e-commerce context, innovation isn't limited to technology; it also involves adapting to new consumer behaviors, experimenting with novel business models, and staying ahead of industry trends.

In e-commerce enterprises, such innovation is crucial for maintaining competitive advantage. As the industry faces constant disruptions from new technologies, emerging platforms, and evolving consumer needs, employees who engage in IWB help the company adapt (Chin et al., 2023). For example, an employee might develop a new digital marketing strategy, improve customer engagement with personalized services, or design user-friendly features for a website or app. These kinds of contributions are essential for organizations aiming to remain relevant in a rapidly changing digital marketplace. Moreover, employees engaged in IWB tend to be more adaptable themselves, as they continually explore ways to improve work processes and address challenges creatively (Alshahrani et al., 2025).

Innovative work behavior also involves a high degree of collaboration and idea-sharing among employees. In the e-commerce sector, those who actively contribute to innovation often work in cross-functional teams, sharing insights from their areas of expertise and fostering a culture of creativity (Tiwari et al., 2025). This collaborative approach to

innovation is essential in e-commerce, where businesses must respond quickly to changing customer demands and technological advances.

2.4 Conservation of Resources (COR) Theory

The Conservation of Resources (COR) Theory, proposed by Hobfoll (1989), suggests that individuals strive to acquire, protect, and maintain valuable resources in order to cope with stress and environmental demands (Hobfoll & Hou, 2025). These resources can include both material resources (e.g., money, time) and psychological resources, such as emotional support, self-efficacy, optimism, hope, and resilience. According to COR theory, individuals with higher levels of psychological capital are better equipped to handle the demands of challenging and changing work environments because they have more psychological resources to draw upon when faced with adversity (Chong & Malakhova, 2025).

In the e-commerce context, employees with high psychological capital are more likely to engage in innovative work behavior (Dzahini, 2025a). They feel confident in their abilities, optimistic about the future, and resilient when facing setbacks. COR theory suggests that when employees protect and build their psychological resources, they perform better under stress and exhibit more adaptive behaviors (Sha & Chang, 2025). This enhanced performance increases their capacity for innovation, which in turn contributes to higher adaptive performance.

By ensuring employees have the confidence, optimism, hope, and resilience needed to tackle challenges, e-commerce companies create an environment where innovation thrives and adaptation comes more easily (Dzahini, 2025b). In short, psychological capital supports both innovation and adaptability in contexts where continuous change is normal. According to COR theory, employees who successfully build and maintain their psychological resources tend to perform better under stress and adapt more readily (Dechawatanapaisal, 2025). This adaptability enables greater innovation and ultimately boosts overall performance.

2.5 Conceptual Model

The research framework, as illustrated in Figure 1.1, provides a comprehensive view of the relationships between Psychological Capital (PsyCap), Innovative Work Behaviour (IWB), and Adaptive Performance (AP). In this framework, psychological capital is conceptualized as the independent variable (IV), consisting of four core dimensions: Self-efficacy, Optimism, Hope, and Resilience (Luthans et al., 2024). These dimensions collectively represent an employee's psychological resources, which influence their ability to perform in dynamic and uncertain work environments (Kharismasyah & Perdhana, 2025).

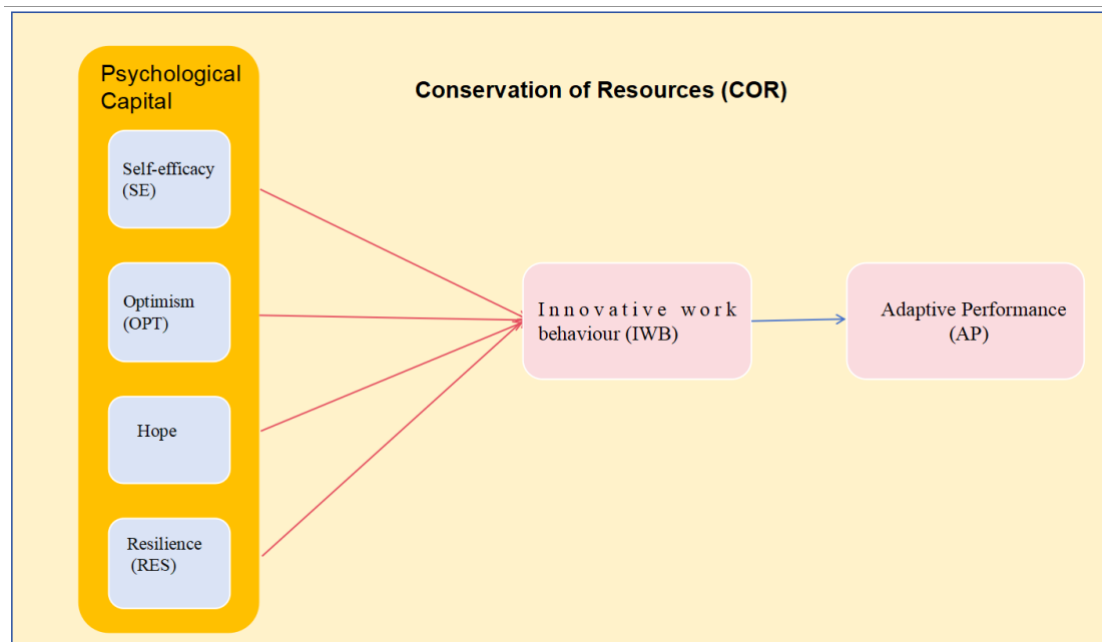


Table 1: Conceptual Framework

3. Pilot Test Methodology

3.1 Participants

This study conducted a pilot test with 150 employees from various e-commerce enterprises in Shaanxi Province, China. These participants were drawn from different sectors of the industry, including agricultural e-commerce, cross-border trade, and digital retail. Each participant had at least one year of e-commerce work experience, ensuring they were

familiar with the kinds of technological changes and market fluctuations common in the field. The pilot test's aim was to evaluate the clarity and feasibility of the survey instrument and to ensure that it effectively measures psychological capital, adaptive performance, and innovative work behavior in an e-commerce context.

The sample was designed to reflect the wider population of e-commerce employees in Shaanxi. Including participants from a diverse range of e-commerce sectors in the pilot allowed us to more comprehensively assess the questionnaire's validity and reliability. This diversity ensured that the instrument was applicable across various areas of the industry and that we received feedback from a broad cross-section of employees.

3.2 Instruments

The pilot test utilized a structured questionnaire that was developed to measure three main constructs: psychological capital, adaptive performance, and innovative work behavior. The items used for these constructs were adapted from established scales in the literature and modified to suit the specific context of e-commerce. The initial survey instrument contained 45 items divided into three sections: psychological capital, adaptive performance, and innovative work behavior.

The questionnaire also included a demographic section with seven questions about the participants' age, gender, education, and work experience. The psychological capital section included 18 items measuring self-efficacy, optimism, hope, and resilience, based on the work of Luthans et al. (2007). Adaptive performance was assessed through 19 items, adapted from Pulakos et al. (2000) and Tao and Wang (2006), focusing on employees' ability to adjust to changes in their work environment. The innovative work behavior section, based on Janssen (2000), contained nine items to measure employees' creativity and innovation in the workplace.

All items were rated on a 7-point Likert scale, with responses ranging from "Strongly Disagree" to "Strongly Agree". This scale was chosen to capture more nuanced responses and to reduce respondents' tendency to choose neutral mid-points, thereby ensuring clearer insight into their attitudes (Taherdoost, 2019).

3.3 Data Analysis: Feedback from Experts and Respondents

Expert feedback was gathered from a panel of three HR and organizational behavior experts who reviewed the questionnaire for clarity and relevance. Their feedback focused on improving the wording of the items and ensuring that the questions accurately reflected the experiences of e-commerce employees. Experts suggested simplifying some questions, particularly those related to psychological capital and innovative work behavior, and making them more relevant to the specific challenges faced by employees in the e-commerce sector.

Respondent feedback was collected from the pilot test participants, with a focus on the usability and clarity of the questions. Several respondents reported that some items, particularly those in the innovative work behavior section, were unclear or too abstract. Based on this feedback, some items were revised to be more context-specific. For example, questions were adjusted to ask for examples from participants' daily work experience, which helped improve comprehension. Additionally, some respondents indicated that the questionnaire was somewhat lengthy and expressed concern about the time required to complete the survey. Consequently, several redundant or overly complex questions were removed or reworded to streamline the survey and reduce respondent fatigue.

3.4 Reliability and Validity of the Pilot Test

To assess the reliability and validity of the instrument, several statistical tests were performed. Exploratory Factor Analysis (EFA) indicated a clear factor structure for each construct (KMO values > 0.84, Bartlett's test $p < 0.05$). Cronbach's alpha coefficients for all scales were well above 0.8, demonstrating high internal consistency (Hair et al., 2019). (Detailed results of these tests are presented in Section 5.1).

3.5 Revisions Based on Pilot test Feedback

Based on the expert and participant feedback, we made several revisions to improve the questionnaire. We reworded ambiguous items, removed redundancies, and ensured all questions were contextually relevant to e-commerce employees. After revisions, the final questionnaire contained 37 items, preserving the core constructs but with greater clarity and conciseness. These changes produced a final instrument that the pilot test indicated was valid and reliable for use in the main study.

4. Results of Pilot Test

Exploratory Factor Analysis (EFA) was used to examine the underlying factor structure of the measurement scales (Hair et al., 2019). A summary of all items retained for the final analysis is shown in Table 1. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was calculated for each construct, and Bartlett's Test of Sphericity was performed to assess the suitability of the data for factor analysis. The results indicated that all constructs met the criteria for factor analysis. The KMO values for the different constructs were all above the recommended threshold of 0.6, with the KMO for adaptive performance reaching 0.932, psychological capital at 0.844, and innovative work behavior at 0.884. Bartlett's

Test of Sphericity was significant for all constructs ($p < 0.05$), confirming that the data were suitable for factor analysis (Tabachnick, 2007).

The EFA results revealed that for adaptive performance, a unidimensional structure was appropriate, explaining 62.97% of the total variance. For psychological capital, the EFA resulted in four factors: self-efficacy, optimism, hope, and resilience, accounting for 69.37% of the total variance. The innovative work behavior scale showed a similar structure, with the eight items explaining 51.40% of the variance.

To ensure convergent validity, the factor loadings of each item were checked, with all items showing factor loadings above 0.45, the accepted threshold for retaining items (Hair et al., 2019). Items that failed to load on the appropriate factors or showed cross-loadings were removed, ensuring that the final set of items represented the intended constructs effectively.

Reliability Analysis was conducted using Cronbach's alpha to assess internal consistency. The Cronbach's alpha values for each construct exceeded the acceptable threshold of 0.7, indicating good internal reliability. Specifically, the Cronbach's alpha for adaptive performance was 0.941, for psychological capital it ranged from 0.810 (optimism) to 0.896 (self-efficacy), for hope it was 0.858, and for resilience, it was 0.894. The innovative work behavior scale had a Cronbach's alpha of 0.864. These values indicate that the scales used to measure the constructs were highly reliable (Hair et al., 2019). Additionally, item-total correlation analyses showed that all items had correlations above the recommended 0.30 threshold with their respective scale totals. This finding reinforces that each item contributes meaningfully to its construct, particularly for the adaptive performance and psychological capital scales which had very high overall reliability (Tabachnick, 2007).

Table 1: Summary of EFA and Reliability Analysis Results

Construct	Finding	Decision	Number of items	
			Before Analysis	After Analysis
Exploratory Factor Analysis (EFA)				
Adaptive Performance	KMO=0.957, Bartlett's test significant at α =0.05, Total variance explained = 62.972%, Anti-image correlation>0.5, Communalities>0.3, Loadings>0.5, significant cross-loading for a3, a6, a7, a8, a9, a14, a15 and a19.	Item a3, a6, a7, a8, a9, a14, a15, a19 deleted	19 items	11 items
self-efficacy	KMO=0.844, Bartlett test significant at α =0.05, total	No item deleted	5 items	5 items
Optimism	variance explained = 69.372%, anti-image correlation values >	No item deleted	4 items	4 items
Hope	0.5, communalities > 0.3, loadings > 0.5	No item deleted	5 items	5 items
Resilience		No item deleted	4 items	4 items
Innovative Work Behaviours	KMO = 0.949, Bartlett test significant at α =0.05, total variance explained = 65.28%, anti-image correlation values > 0.5, communalities > 0.3, loadings > 0.5	No item deleted	8 items	8 items
Exploratory Factor Analysis (EFA): Simultaneous				
Adaptive Performance	KMO = 0.864 , Bartlett test significant at α =0.05, total	No item deleted	11 items	11 items
self-efficacy	variance explained = 64.803% , anti-image correlation values >	No item deleted	5 items	5 items
Optimism	0.5, communalities > 0.3, loadings > 0.5	No item deleted	4 items	4 items
Hope		No item deleted	5 items	5 items
Resilience		No item deleted	4 items	4 items
Innovative Work Behaviours		No item deleted	8 items	8 items
Reliability Analysis				
Adaptive Performance	Cronbach's α = 0.941, item to total correlation > 0.5	No item deleted	11 items	11 items

Construct	Finding	Decision	Number of items	
			Before Analysis	After Analysis
self-efficacy	Cronbach's $\alpha = 0.896$, item to total correlation > 0.5	No item deleted	5 items	5 items
Optimism	Cronbach's $\alpha = 0.810$, item to total correlation > 0.5	No item deleted	4 items	4 items
Hope	Cronbach's $\alpha = 0.858$, item to total correlation > 0.5	No item deleted	5 items	5 items
Resilience	Cronbach's $\alpha=0.894$, item to total correlation > 0.5	No item deleted	4 items	4 items
Innovative Work Behaviours	Cronbach's $\alpha=0.864$, item to total correlation > 0.5	No item deleted	8 items	8 items
Total Items			45 items	37 items

5. Discussion

The pilot test findings offer valuable theoretical insights into how psychological capital influences adaptive performance in an e-commerce context (Yuzi et al., 2025). In line with Conservation of Resources (COR) theory, results of this study suggest that psychological resources such as optimism, hope, and resilience play a significant role in fostering adaptive performance (Bardoel & Drago, 2021). These resources help employees overcome obstacles, engage in innovative work behavior, and remain resilient amid rapidly changing work environments (Wang, 2021). By demonstrating this in the e-commerce sector, the study provides empirical support for COR theory's assertion that individuals with greater personal resources cope better with stress and change.

This finding extends COR theory's application to the e-commerce context by showing that psychological capital not only helps employees manage stress and change but also empowers them to generate new ideas and implement solutions that ultimately improve their ability to adapt to new situations (Luthans & Broad, 2020). And employees with higher levels of psychological capital are better equipped to navigate the uncertainties and demands of e-commerce environments, where constant technological and market shifts are the norm (Zhang & Xu, 2024). Furthermore, the study provides empirical support for innovative work behavior's critical mediating role between psychological capital and adaptive performance (Devassy & Jindal, 2024). These insights deepen understanding of how specific psychological resources contribute to performance in digital and fast-paced industries like e-commerce.

From a practical standpoint, the findings suggest that e-commerce enterprises should prioritize psychological capital development in their workforce to enhance adaptive performance (Liu et al., 2024). Creating supportive work environments that foster optimism, hope, and resilience is key, as these resources were shown to significantly improve employees' ability to adapt to changing conditions (Radu, 2023). Training programs aimed at developing these psychological assets can help employees better manage the pressures and uncertainties that are inherent in the e-commerce sector (Zhang & Xu, 2024). For example, training initiatives could focus on cultivating hope through goal-setting and pathway development, while resilience training could help employees recover more effectively from setbacks.

Moreover, innovative work behavior emerged as a key mediator in the relationship between psychological capital and adaptive performance (Devassy & Jindal, 2024). Therefore, e-commerce organizations should foster a culture that encourages creativity and innovation. For instance, this could involve providing employees with opportunities to propose new ideas, experiment with novel approaches, and collaborate on creative problem-solving initiatives (Judijanto et al., 2024). Organizations should actively encourage innovation as well. An innovative culture not only drives employee engagement, but it also enhances the organization's ability to adapt and thrive in a rapidly changing digital marketplace (Deep, 2023).

Additionally, organizations should establish support systems to promote psychological well-being (Fraboni et al., 2023). These programs can enhance employees' overall satisfaction, performance, and engagement. In the long run, a workforce that feels supported is more likely to display resilience and adaptability, contributing to greater innovative behavior and adaptive performance (Park & Park, 2021b).

6.0 Conclusion

This pilot test analysis provides valuable insights into the role of psychological capital in influencing adaptive performance in e-commerce enterprises. The findings suggest that optimism, hope, and resilience are critical psychological resources that enable employees to cope with the challenges of the rapidly changing e-commerce environment. Moreover, innovative work behavior was identified as a key mediator between psychological capital and adaptive performance, highlighting the importance of fostering innovation to improve employees' adaptability.

These results contribute to the theoretical and practical understanding of how psychological resources impact employee performance in dynamic, technology-driven industries. Future research should extend these findings by testing the proposed model in a larger sample, a full-scale study across e-commerce companies in multiple regions, longitudinal

studies on the effects of developing psychological capital over time, and examining examining the generalizability of these findings to other industries. Further studies could also investigate how e-commerce enterprises can integrate psychological capital development into their organizational strategies to potentially optimize employee performance and resilience in the face of ongoing digital transformation.

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Conflict of Interest

The authors declare no conflicts of interest.

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