The Transformative Impact Of Innovative Work Behavior On Entrepreneurial Orientation And Organizational Performance

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Abstract.

Innovative work behavior, entrepreneurial orientation, and organizational performance are central to achieving competitive advantage and resilience in dynamic business environments. This study examines how innovative work behavior affects organizational performance within firms. The study also explores the critical role of entrepreneurial orientation as both a direct influence on organizational performance and as a mediator in the relationship between innovative work behavior and organizational performance. This research was conducted on small & medium enterprise in the Province of Bali, Indonesia. Data were collected by 396 questionnaires from managers representing small & medium enterprise as research respondents and analysis was carried out using structural equation modelling. Results indicate that innovative work behavior has a positive impact on organizational performance, though its effect is enhanced significantly when mediated by entrepreneurial orientation. Specifically, the analysis reveals a strong relationship between innovative work behavior and entrepreneurial orientation, demonstrating that organizations fostering innovative behaviors are more likely to develop a proactive and risk-oriented culture. entrepreneurial orientation, in turn, shows a substantial direct positive effect on organizational performance, confirming its role as a critical driver of organizational success. Importantly, the mediation analysis suggests that entrepreneurial orientation partially mediates the relationship between innovative work behavior and organizational performance, channeling innovation efforts toward strategic objectives for optimal performance gains. The study contributes to the fields of innovation and entrepreneurship by elucidating the synergistic relationship between innovative work behavior and entrepreneurial orientation in driving organizational performance. The findings highlight the importance of fostering an entrepreneurial organizational culture that directs individual innovation toward strategic outcomes. This research provides valuable implications for organizational leaders aiming to enhance performance through integrated innovation and entrepreneurship strategies, and it sets the stage for future research exploring additional mediating factors and varied industry applications.

Keywords: Innovative work behavior, entrepreneurial orientation and organizational performance.

I. INTRODUCTION

The integration of innovative work behavior (IWB) and entrepreneurial orientation (EO) has emerged as a critical determinant of organizational performance (OP), particularly in small and mediumsized enterprises (SMEs) operating in dynamic and competitive markets. IWB is characterized by the proactive generation, promotion, and implementation of novel ideas within organizations, which is essential for achieving organizational success (Jardioui et al., 2019). Recent studies emphasize that supportive organizational climates, inclusive leadership, and robust knowledge-sharing practices significantly foster IWB, thereby enhancing organizational performance (Iqbal et al., 2021). Firms that cultivate environments conducive to creativity and continuous improvement are better positioned to sustain innovation and performance, as they enhance adaptability and problem-solving capabilities, which are crucial for addressing complex organizational challenges (Anwar et al., 2021). Entrepreneurial orientation, defined by its components of innovativeness, risk-taking, and proactivity, provides a strategic framework that enables firms to leverage IWB for competitive advantage (Cuevas-Vargas et al., 2019). Organizations with high EO actively pursue new opportunities, adapt to market fluctuations, and respond effectively to environmental pressures. This alignment between EO and IWB has been shown to facilitate not only innovation but also the adoption of environmentally sustainable practices, which are increasingly important for meeting Sustainable Development Goals (SDGs) such as SDG 8 - Decent Work and Economic Growth) and SDG 9 - Industry, Innovation, and Infrastructure (Bhatti et al., 2020).

Despite the strong empirical foundation linking EO to performance, much of the existing literature has focused on isolated constructs of EO, IWB, and OP, leaving a significant gap in understanding the integrative effects of these components, especially within SMEs.Research underscores EO's impact on overall organizational success, particularly through fostering innovation, resilience, and proactive market

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engagement (Ahn et al., 2017). Studies indicate that EO serves as a mediator that strengthens the relationship between innovation capabilities and performance outcomes. For instance, SMEs that effectively combine EO with knowledge management and a learning-oriented culture exhibit improved adaptability and enhanced decision-making processes (Sarsah et al., 2020). Furthermore, an EO-driven culture positively influences organizational agility and responsiveness, which are essential in turbulent market conditions (Isichei et al., 2020). However, the mediating role of EO between IWB and OP remains under-explored, highlighting a critical research gap. While EO is recognized for its contributions to firm performance, empirical analyses on its mediating role, particularly in the context of SMEs that must continuously innovate to remain competitive, are limited. The present study aims to address this research gap by examining the interconnected roles of IWB, EO, and OP, with a focus on SMEs. Although individual studies have explored these variables, few have analyzed the mechanisms through which IWB influences organizational outcomes via EO. This investigation seeks to determine whether EO strengthens the link between IWB and OP, with implications for achieving SDG goals, particularly in fostering sustainable economic growth through entrepreneurial practices (Zollo et al., 2020; Taan et al., 2023).

Moreover, this study highlights the practical implications of cultivating EO as a mediating factor. Integrating EO within SMEs can catalyze organizational learning, drive continuous innovation, and foster a culture that supports risk-taking and proactive behavior. Empirical evidence suggests that by mediating IWB, EO enables firms to adapt to rapid changes, pursue growth opportunities, and develop resilient organizational structures capable of sustaining performance (Pérez & Guevara, 2023). The novelty of this research lies in its comprehensive examination of the mediating role of EO between IWB and OP. By emphasizing the integrative framework that connects these constructs, this study offers a unique contribution to the literature, addressing a critical research gap and proposing a model that aligns with sustainability objectives in SMEs. The findings are expected to have significant theoretical and practical implications, especially for policymakers and business leaders aiming to enhance organizational resilience and performance in alignment with SDG 8 and SDG 9. This research will also contribute to the broader discourse on the strategic management of innovation within SMEs, providing actionable insights into how fostering an entrepreneurial culture can drive sustained performance and growth.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT Innovative Work Behavior

Research on Innovative Work Behavior (IWB) highlights its fundamental role in fostering creativity and problem-solving capabilities, essential for organizational success. IWB refers to the intentional creation, support, and application of novel ideas within a work environment (Xu & Suntrayuth, 2022). Studies demonstrate that factors such as organizational culture and leadership significantly influence IWB by establishing climates where employees feel safe to share and implement innovative ideas (Srirahayu et al., 2023). For example, Xu & Suntrayuth (2022) show that fostering psychological safety and open communication channels enables IWB, reinforcing a firm's adaptive and competitive capacity. Despite this, a counterargument posits that without appropriate support for knowledge sharing, the benefits of an innovation-supportive culture may not materialize fully (Phung et al., 2017). Yet, Mansoor et al. (2021) counterbalance this by evidencing that inclusive leadership amplifies IWB by directly impacting employees' commitment to innovation, particularly when coupled with well-managed knowledge-sharing practices.

Entrepreneurial Orientation

Entrepreneurial Orientation (EO), encompassing risk-taking, innovativeness, and proactivity, further aligns with and enhances IWB's contributions. High levels of EO allow organizations to proactively pursue innovative projects and adapt to evolving market demands (Shahid et al., 2022). Recent studies underscore EO's positive influence on an organization's innovation capability, which enhances long-term performance (Diniz, 2024). However, some studies argue that EO's effectiveness in promoting innovation can be contingent upon organizational learning culture, suggesting that EO alone may not consistently yield innovative outcomes without a concurrent learning-oriented framework (Shahid et al., 2022). This argument

is substantiated by (Choi et al., 2020), who assert that EO's effectiveness is significantly bolstered when embedded within a knowledge-sharing and learning-oriented culture. In particular, firms committed to green innovation and sustainable practices reveal the versatility of EO, highlighting its impact beyond traditional profit-oriented metrics by contributing to environmental performance as well (Okręglicka et al., 2023).

Organizational Performance

Organizational Performance, commonly assessed through indicators such as profitability, customer satisfaction, and quality standards, is intricately linked to both IWB and EO. Research suggests that EO serves as a catalyst for enhancing OP, particularly by fostering an environment where proactive and innovative behaviors flourish (Lin & Chung, 2023). In high-turbulence environments, EO's positive effects on OP are often amplified, especially when combined with a learning-oriented culture that supports continuous adaptation (Adam et al., 2022). Nevertheless, critics argue that EO's contributions to OP may be overstated if organizations lack robust organizational learning structures, as EO without sufficient learning mechanisms can lead to strategic rigidity rather than adaptability (Shahid et al., 2022). However, Na-Allah & Ahmad (2022) support EO's efficacy, indicating that firms with strong EO and an aligned organizational culture achieve better innovation and organizational performance.

The Impact of Innovative Work Behavior on Organizational Performance and Entrepreneurial Orientation

Innovative Work Behavior significantly contributes to organizational performance, characterized by metrics such as profitability, customer satisfaction, and market competitiveness. Defined as the proactive creation, promotion, and application of new ideas, IWB is crucial in driving organizational adaptability and resilience in dynamic market environments (Xu & Suntrayuth, 2022). Empirical studies highlight that an organizational climate fostering psychological safety and creativity directly enhances IWB, which subsequently improves OP by enabling firms to respond more effectively to challenges and opportunities (Battistelli et al., 2019). A supportive climate for innovation cultivates employee willingness to share and implement innovative ideas, thus enriching the organization's adaptability to complex market demands. Innovation-driven climates enable firms to outperform competitors by promoting operational flexibility (Xu & Suntrayuth, 2022). Conversely, some researchers argue that without an embedded culture of knowledge sharing, the potential benefits of IWB may not fully materialize, suggesting that IWB alone is insufficient for optimal OP (Setyawasih et al., 2022). IWB's influence on OP is significantly amplified when paired with knowledge management practices, which facilitate the effective use of innovative ideas across the organization. This perspective suggests that while IWB is essential, its impact may be limited if not integrated within a broader framework of organizational learning and knowledge dissemination (Efridah, 2019). Nevertheless, these findings underline the critical role of IWB in enhancing organizational agility, adaptability, and long-term performance sustainability. Innovative Work Behavior (IWB) is pivotal in fostering an entrepreneurial orientation (EO) within organizations by enhancing employee willingness to take risks, act proactively, and pursue novel opportunities.

EO encompasses risk-taking, innovativeness, and proactivity, enabling organizations to align with market trends and adopt new strategies (Haholongan & Kusdinar, 2019). Studies reveal that IWB nurtures EO by empowering employees to generate and experiment with new ideas, which leads to higher levels of organizational risk-taking and responsiveness (Erić-Nielsen, 2024). Battistelli et al. (2019) assert that EO, particularly within firms promoting IWB, translates into enhanced market adaptability and innovation-driven competitiveness, as employees are more engaged in proactive behaviors that align with EO's principles. Some scholars, however, posit that a high level of EO might not inherently lead to increased IWB unless paired with a supportive environment that facilitates knowledge-sharing (Setyawasih et al., 2022). IWB's influence on EO is strengthened in organizations with robust knowledge-sharing frameworks. In particular, knowledge management practices ensure that innovative behaviors are not isolated but effectively aligned with the organization's broader strategic goals, thus maximizing EO's benefits. This view underscores the argument that while IWB drives EO, its impact is maximized within firms that

actively support collaborative knowledge sharing, establishing a robust foundation for ongoing innovation and entrepreneurial agility. Therefore, this study hypothesis:

H1: innovative work behavior has an effect on organizational performance.

H2: innovative work behavior has an effect on entrepreneurial orientation.

The Impact of Entrepreneurial Orientation on Organizational Performance

Entrepreneurial Orientation significantly impacts Organizational Performance by driving firms toward innovation and proactive market strategies. EO dimensions—innovativeness, risk-taking, and proactivity—are instrumental in developing competitive advantages, especially within SMEs (Xu & Suntrayuth, 2022). Research highlights that EO enables organizations to recognize and exploit opportunities, leading to improved financial performance and customer retention (Setyawasih et al., 2022). Moreover, recent studies show that EO is especially beneficial in turbulent market conditions, as organizations with a strong EO tend to exhibit higher resilience and adaptability (Özdaşli et al., 2023). Critics, however, argue that the EO-OP relationship can be contingent on specific organizational factors, such as knowledge management and organizational learning (Efridah, 2019). While EO enhances OP, this relationship is significantly moderated by the presence of a learning-oriented culture. Furthermore, some studies suggest that without structured knowledge management, the EO benefits may be limited, as innovative practices may lack coherence with broader organizational strategies (Efridah, 2019). These findings underscore the notion that while EO enhances OP, its effectiveness is maximized when coupled with a supportive learning environment that aligns innovative actions with organizational goals. Therefore, the following hypothesis was developed:

H3: entrepreneurial orientation influences the organizational performance.

The Mediation of Entrepreneurial Orientation on the Influence of Innovative Work Behavior on Organizational Performance

Entrepreneurial Orientation is hypothesized to mediate the relationship between Innovative Work Behavior and Organizational Performance, suggesting that EO channels IWB efforts into effective strategic actions that drive performance improvements. EO, which emphasizes proactivity, risk-taking, and innovativeness, enables organizations to capitalize on IWB by integrating innovative ideas into actionable strategies (Haholongan & Kusdinar, 2019). This mediating role is highlighted by Setyawasih et al. (2022), who found that EO effectively translates IWB into enhanced OP by fostering an environment conducive to risk-taking and innovation, thereby allowing IWB to impact OP positively. Furthermore, Liao et al. (2022) support this view, demonstrating that EO can bridge the gap between IWB and OP by aligning innovative practices with broader market strategies, particularly in SMEs that require agility in dynamic markets. Conversely, some studies challenge the mediating role of EO, arguing that IWB may independently contribute to OP without necessarily being channeled through EO. For instance, organizations with strong knowledge management frameworks may directly apply IWB outputs toward OP, bypassing EO as an intermediary (Efridah, 2019). However, empirical evidence suggests that while IWB can influence OP, the presence of EO amplifies and focuses these efforts, leading to more structured and sustainable performance improvements. Thus, EO's mediating role is vital in converting IWB into concrete organizational achievements by establishing a proactive, risk-taking culture that aligns innovative behavior with performance goals. The hypothesis proposed as follows:

H4: entrepreneurial orientation can mediate the effect of innovative work behavior on organizational performance.

III. METHODS

This research was conducted on 36.387 SME in the Province of Bali, Indonesia (Small & Medium Enterprise Cooperative Service in Bali Province, 2024). The sample size was determined using the Slovin formula, assuming a sampling error of 5%, the sample size of this study was 396. Data were collected from managers representing SME as research respondents. This research was conducted using an online questionnaire with the Google Forms application. 396 questionnaire links were sent to respondents via email, of the responses 117 were returned and confirmed valid, with an 29.55% validity rate. Data analysis was

carried out using variance-based structural equation modelling with a partial least squares approach (Hair et al., 2017) with Warps PLS 7.0 (Kock, 2020). The variables were measured using items developed and employed in previous studies to ensure the study's validity and reliability. Multiple items were used to test each construct, and each item was evaluated using a five-point Likert scale that ranged from 1 (strongly disagree) to 5 (strongly agree). Innovative work behavior was measured using nine items adapted from research (Janssen, 2020): 1. Creating new ideas for difficult issues; 2. Searching out new working methods, techniques, or instruments; 3. Generating original solutions for problems; 4. Mobilizing support for innovative ideas; 5. Acquiring approval for innovative ideas;

6. Making important organizational members enthusiastic for innovative ideas; 7. Transforming innovative ideas into useful applications; 8. Introducing innovative ideas into the work environment in a systematic way; 9. Evaluating the utility of innovative ideas. Entrepreneurial orientation was measured using nine items adapted from research(Chou et al., 2020): 1 We are usually the first to find and introduce new products technologies; 2 We are usually the first to introduce new innovations in our market area; 3 We are the innovation leader in the market; 4 We proactive in pursuing market opportunities; 5 We act in anticipation of future problems needs or changes; 6 We track industry trends in anticipation of future developments; 7 We willing to try new management marketing services and produce technology; 8 We aggressively maximize potential opportunities; 9 We contribute to activities improving the innovation process. Organization Performance was measured using eight items adapted from research (Abbas et al., 2019): 1 Our firm profit goals have been achieved; 2 Our firm sales goals have been achieved; 3 Our firm return on investment goals have been achieved; 4 Our products have a higher quality than those of our competitors; 5 We have a higher customer retention rate than our competitors; 6 We have a better reputation among major customer segments than our competitors; 7 We have a lower employee turnover rate than that of our competitors; 8 We have been more effective in new product development than our competitors.

Table 1. Descriptive statistics of variables studied

	Theoretic	Theoretical Score		Actual Score		SD
	Min	Max	Min	Max		
Innovative work behavior	1	5	3.111	4.778	4.133	0.429
Entrepreneurial orientation	1	5	3.111	4.889	4.292	0.511
Organizational behavior	1	5	3.125	4.875	4.084	0.475

Source: The Authors, 2024

For IWB, the mean score of 4.133, close to the maximum observed score of 4.778 (see table 1), indicates a relatively high level of innovative activity within the sample, suggesting that employees are actively engaging in idea creation and implementation within their organizations. The low standard deviation (0.429) reveals minimal variability across the sample (Hair et al., 2017), indicating a consistent level of IWB. This homogeneity aligns with recent literature, which posits that supportive work climates are critical in fostering and stabilizing high levels of IWB across organizations (Shah & El-Gohary, 2022). Specifically, research highlights that organizational climate significantly influences innovative work behavior, emphasizing the importance of creating an environment conducive to innovation (Shanker et al., 2017). EO shows a mean score of 4.292, which, similar to IWB, is on the upper end of the actual score range (3.111 to 4.889), highlighting a strong presence of entrepreneurial activities such as risk-taking, proactivity, and innovativeness. The standard deviation of 0.511 is slightly higher than that of IWB, suggesting more variability in EO across the sample.

This finding aligns with existing literature that suggests EO levels can vary depending on organizational support for entrepreneurship and the perceived market turbulence (Fontana & Musa, 2017). Research indicates that organizations with higher EO scores are typically more agile and better positioned for sustained competitive advantage, especially when leveraging EO as a response to dynamic market demands (Skica et al., 2021). OP presents a mean score of 4.084, with a standard deviation of 0.475, indicating moderate variability among organizations' performance levels in the sample. This suggests that while many organizations exhibit high performance levels, there is some variation, potentially due to differing levels of EO and IWB within the firms. Studies by Shah & El-Gohary (2022) align with these findings, asserting that

OP tends to improve with higher EO and IWB levels. However, they caution that the benefits of EO and IWB on OP are often contingent upon robust knowledge-sharing practices and a supportive learning culture (Le & Lei, 2019).

IV. RESULTS AND DISCUSSION

The APC value of 0.524, significant at p<0.001 (see table 2), suggests a strong positive association among the variables. An APC below 0.05 is considered statistically significant (Hair et al., 2017), which indicates that the relationships between IWB, EO, and OP are well-supported within this model. Studies support this alignment, indicating that high APC values reflect the efficacy of entrepreneurial behaviors and innovation-focused work environments in enhancing organizational performance. Furthermore, the significant APC corroborates findings that IWB positively influences EO, which in turn drives OP through risk-taking and proactive strategies (Shah & El-Gohary, 2022).

Table 2. Results of goodness of fit research model

Evaluation	Value	Criterion
Average path coefficient (APC)	0.524*	significant if < 0.05
Average R-squared (ARS)	0.577*	significant if < 0.05
Average block VIF (AVIF)	2.224	acceptable if <= 5

^{*}All significant at p< 0.001

The ARS of 0.577, also significant at p<0.001, measures the variance explained by the model, demonstrating its high explanatory power. An ARS above the threshold of 0.05 indicates that the model captures a substantial portion of the variability in OP (Hair et al., 2017), affirming that both EO and IWB serve as robust predictors of organizational outcomes. High ARS values are aligned with recent research underscoring the positive impact of EO on OP, particularly in competitive markets where innovation and proactive behaviors are critical for sustained success. Moreover, the ARS supports theoretical perspectives suggesting that organizations with a strong EO and a high level of IWB are better equipped to meet complex challenges, as these factors contribute to resilience and adaptability in fluctuating markets (Xu & Suntrayuth, 2022). AVIF, at 2.224, indicates acceptable multicollinearity within the model, as it falls below the conservative threshold of 5.0 (Hair et al., 2017). AVIF values below this threshold suggest minimal multicollinearity, confirming that the predictor variables (EO and IWB) function independently without redundancy. This result aligns with theoretical assertions that while EO and IWB are interconnected, they each uniquely contribute to enhancing OP, thereby supporting the model's robustness (Fu, 2024). The AVIF score demonstrates that the variables remain distinct, reinforcing the premise that a well-defined EO encourages IWB without causing overlap in their contributions to OP.

Table 3. Validity and reliability test results

Variables		Factor Loading	AVE > 0,5	Q-square > 0	Composite reliability > 0.7	Cronbach's alpha > 0.7
Innovative work behavior	Iwb1	0.772	0.764		0.833	0.775
	Iwb2	0.792				
	Iwb3	0.736				
	Iwb4	0.809				
	Iwb5	0.775				
	Iwb6	0.741				
	Iwb7	0.736				
	Iwb8	0.780				
	Iwb9	0.809				
Entrepreneurial	Eo1	0.765	0.710	0.561	0.901	0.875
orientation	Eo2	0.816				
	Eo3	0.791				
	Eo4	0.762				
	Eo5	0.802				

Organizational performance	E06 E07 E08 E09 Op1 Op2 Op3 Op4 Op5 Op6 Op7	0.748 0.752 0.788 0.821 0.792 0.805 0.817 0.741 0.789 0.745 0.812 0.763	0.710	0.585	0.845	0.788
	Op8	0.763				

^{*}All significant at p< 0.001

Each variable's factor loadings (see table 3) exceed the minimum threshold of 0.7, with IWB values ranging from 0.736 to 0.809, EO from 0.748 to 0.821, and OP from 0.741 to 0.817, signifying robust item-level reliability across constructs. These high factor loadings indicate strong alignment between the items and their respective constructs (Hair et al., 2017), affirming that each indicator effectively captures the essence of its underlying variable. Studies on organizational behavior frequently support that factor loadings above 0.7 indicate adequate item reliability, enhancing construct validity by reducing measurement error. The Average Variance Extracted (AVE) values for IWB (0.764), EO (0.710), and OP (0.710) surpass the threshold of 0.5, confirming strong convergent validity. This outcome suggests that each construct explains a substantial portion of variance among its indicators, consistent with the premise that higher AVE values contribute to a reliable model. Convergent validity is further underscored by these AVE scores, which align with literature emphasizing the importance of AVE in validating theoretical constructs within organizational studies. Composite reliability values of 0.833 for IWB, 0.901 for EO, and 0.845 for OP exceed the 0.7 benchmark, demonstrating high internal consistency.

Composite reliability is critical as it ensures that the variables consistently measure the intended constructs, reinforcing the model's reliability. These results emphasize that reliability coefficients above 0.7 denote strong construct reliability, which is particularly significant in models exploring behavioral and organizational performance constructs. Cronbach's alpha values are also above 0.7 across all constructs (IWB at 0.775, EO at 0.875, and OP at 0.788), indicating robust internal consistency. While Cronbach's alpha primarily addresses the homogeneity of the scale items, its consistency with composite reliability reinforces the reliability of the measures. Literature supports the reliance on Cronbach's alpha values above 0.7 for confirming scale consistency, as exemplified that alpha values over 0.7 to validate consistency in studies involving complex organizational constructs. Finally, Q-square values, with EO at 0.561 and OP at 0.585, are positive, meeting the criterion of Q-square values greater than zero. These positive values indicate predictive relevance, suggesting that the model accurately forecasts the impact of EO and IWB on OP. Positive Q-square values confirm that the model is capable of explaining future variations in organizational performance, supporting research that endorses Q-square as a criterion for assessing model predictability.

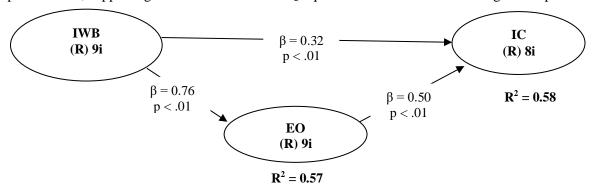


Fig 1. Research model

The path coefficient (see table 4) and (see figure 1) of 0.756 from IWB to EO indicates a robust positive relationship, suggesting that higher levels of IWB strongly foster EO within organizations. This finding aligns with research showing that innovative behavior among employees, such as generating and implementing new ideas, contributes significantly to building an entrepreneurial organizational culture (Bhatti et al., 2020). By actively engaging in IWB, employees can foster a proactive, risk-taking environment that characterizes EO, which is essential for organizations operating in dynamic, competitive environments. This strong linkage supports prior findings that EO is significantly bolstered by a culture of innovation, as organizations with high IWB exhibit elevated EO, leading to enhanced organizational adaptability (Xu & Suntrayuth, 2022).

Table 4. Path coefficient

Variables	Innovative work behavior	Entrepreneurial orientation		
Entrepreneurial orientation	0.756*			
Organizational performance	0.316*	0.499*		

All significant at p<0.001*

The path coefficient between IWB and OP, at 0.316, also indicates a positive relationship, though not as strong as the IWB-EO link. This value suggests that while IWB contributes directly to OP, its impact is more pronounced when mediated through EO. Research supports this view, indicating that while innovative behaviors within an organization improve performance outcomes, the benefits are maximized when these behaviors are channeled through structured entrepreneurial activities (Shah & El-Gohary, 2022). This pathway reflects the notion that IWB enhances OP directly but does so more effectively by first enhancing EO, which then drives OP. Studies further confirm that organizations fostering both innovation and entrepreneurship tend to outperform those focusing on innovation alone (Fontana & Musa, 2017).

The EO-OP path coefficient of 0.499 illustrates a strong, positive relationship, suggesting that EO is a key driver of organizational performance. EO's dimensions—risk-taking, innovativeness, and proactivity—equip organizations to seize new opportunities and navigate competitive pressures, contributing directly to enhanced performance outcomes (Ciampi et al., 2021). This significant pathway aligns with theories emphasizing that EO facilitates strategic decision-making and resource allocation that lead to better performance, particularly in volatile markets. The strength of this coefficient indicates that EO is a critical intermediary, effectively bridging the relationship between IWB and OP by enabling organizations to turn innovative ideas into measurable outcomes (Nguyen et al., 2023).

Table 5. Mediation analysis

No	Variable	$P \rightarrow D$	$P \rightarrow M$	$M \rightarrow D$	$P \rightarrow D$	VAF	Result
VAF	relationship	without M			with M	value	
1	Innovative work	0.316*	0.756*	0.499*	0.377*	0.544	partially
	behavior \rightarrow						mediate
	Entrepreneurial						
	orientation \rightarrow						
	Organizational						
	performance						

Notes: P: predictor, D: dependent, M: mediator variable; * means p < 0.001.

The direct effect of IWB on OP, represented by the coefficient of 0.316 (p < 0.001), implies that innovation-oriented behaviors among employees positively influence organizational performance, aligning with studies indicating that IWB supports OP by fostering adaptability and problem-solving capabilities (H. T. N. Nguyen et al., 2023). This direct relationship demonstrates that organizations encouraging IWB can achieve higher performance levels by embedding a culture of continuous improvement and innovation. However, the VAF value and partial mediation result imply that while IWB impacts OP, the presence of EO enhances the efficacy of this relationship. The path coefficient from IWB to EO (0.756, p < 0.001) underscores the substantial influence of IWB on fostering EO within organizations. This pathway aligns with research suggesting that innovative behaviors contribute to a proactive, risk-taking culture that is central to EO (Flores Pérez & Guevara, 2023). As employees engage in IWB, they create an environment conducive to entrepreneurial thinking, making EO a logical mediator in this relationship.

EO serves as an organizational framework that channels innovation into strategic, performance-enhancing actions, supporting studies that emphasize the critical role of EO in amplifying the impact of IWB on OP. The mediated path, or indirect effect of IWB on OP via EO, is represented by the product of IWB's influence on EO (0.756) and EO's influence on OP (0.499), resulting in a mediated effect coefficient of 0.377 (p < 0.001). This significant mediated pathway highlights EO as a valuable intermediary, demonstrating that the benefits of IWB are fully realized when coupled with an entrepreneurial orientation. EO allows organizations to strategically apply innovative behaviors in a manner that maximizes performance outcomes, which is especially beneficial in competitive and dynamic markets (Mamun et al., 2022). The VAF value of 0.544, exceeding the 0.2 threshold for partial mediation, confirms that EO only partially mediates the relationship between IWB and OP. This partial mediation indicates that while EO significantly enhances the impact of IWB on OP, IWB still contributes independently to OP. Studies support this, suggesting that while entrepreneurial orientation magnifies IWB's effects on performance, innovation independently drives certain organizational outcomes by fostering flexibility and responsiveness (Shah & El-Gohary, 2022).

Discussions

The Impact of Innovative Work Behavior on Organizational Performance

The statistical analysis reveals that IWB positively affects OP, this finding aligns with existing literature, which emphasizes that IWB, encompassing creativity, problem-solving, and knowledge application, is integral to enhancing organizational outcomes (Cho & Lee, 2020). IWB fosters adaptability and enables organizations to remain competitive by continuously improving processes and products (Zhang et al., 2024). Specifically, employees engaged in IWB can better address complex challenges, supporting a culture of continuous improvement that enhances OP (Nguyen et al., 2021). However, the moderate strength of this relationship suggests that while IWB is crucial, it may not be the sole driver of OP. Some researchers argue that without a structured framework, such as EO, the impact of IWB on OP may be constrained (Iqbal et al., 2021). EO provides the strategic direction that channels innovative efforts toward specific organizational goals, amplifying the effectiveness of IWB (Pérez & Guevara, 2023). Thus, while IWB has a direct influence on OP, integrating it with EO could further enhance its impact (Mamun et al., 2022). This direct link between IWB and OP reflects the importance of cultivating an innovation-friendly organizational culture that empowers employees to contribute creatively (Gul, 2019). Future research could explore the conditions under which IWB exerts its strongest impact, considering potential moderating factors such as organizational size, industry type, and market stability (Liu, 2024). While IWB positively influences OP, it is most effective when complemented by a broader organizational strategy, such as EO, that directs innovation toward strategic objectives (Moustaghfir et al., 2020).

The Impact of Innovative Work Behavior on Entrepreneurial Orientation

The relationship between IWB and EO, represented by this study, suggests that innovative work behaviors significantly drive EO within organizations (Huang, 2023). This positive relationship highlights that organizations that foster an environment conducive to IWB are more likely to cultivate a proactive, risk-taking, and innovative orientation among employees (Kiani et al., 2021). Research supports this view, indicating that employees who engage in innovative activities help create a culture that aligns with EO principles, which is essential for navigating competitive markets (Kreiner et al., 2022). Critics argue, however, that without adequate support and alignment with organizational goals, IWB alone may not be sufficient to sustain EO (Syahchari et al., 2022). Some scholars posit that structured EO strategies are necessary to fully leverage IWB, particularly in achieving consistency in risk-taking and proactivity (Azar & Ciabuschi, 2017). Thus, while IWB fosters EO, its impact may vary depending on organizational support structures and strategic alignment (Ha, 2022). Nonetheless, the strong association between IWB and EO in the data supports the notion that innovation at the individual level contributes significantly to building an entrepreneurial organizational culture (Cai et al., 2020). The findings emphasize the need for management to foster a supportive climate for IWB to enhance EO effectively (Rakthai et al., 2019). This approach not only promotes innovation but also strengthens the strategic orientation of the organization, empowering it to respond more effectively to dynamic market demands (Perlines et al., 2019).

The Impact of Entrepreneurial Orientation on Organizational Performance

Entrepreneurial Orientation's impact on Organizational Performance indicating a robust positive influence (Razak, 2024). EO, characterized by dimensions of risk-taking, proactivity, and innovativeness, allows organizations to seize new market opportunities and navigate external challenges effectively (Smirnov, 2019). This strong relationship aligns with previous research showing that EO contributes directly to OP by enhancing a firm's strategic decision-making and resource allocation capabilities (Mao et al., 2021). Some scholars contend, however, that EO alone may not guarantee improved OP, particularly in highly volatile markets (Jaiyeola et al., 2022). Critics argue that without support for continuous learning and adaptation, EO can sometimes lead to strategic rigidity (Liu, 2024). For instance, EO's impact on OP is moderated by factors such as organizational learning, suggesting that while EO is crucial, its effectiveness may vary across different organizational contexts (Mao et al., 2021). Despite these considerations, the data affirm EO's vital role in driving OP, particularly when organizations strategically align EO with innovation and adaptability (Kreiner et al., 2022). EO's significant influence on OP highlights the necessity for organizations to cultivate an entrepreneurial mindset across departments, allowing them to implement innovative solutions that contribute to long-term performance outcomes (Azar & Ciabuschi, 2017).

The Mediation of Entrepreneurial Orientation on the Influence of Innovative Work Behavior on Organizational Performance

Entrepreneurial Orientation (EO) partially mediates the relationship between Innovative Work Behavior (IWB) and Organizational Performance (OP), with a VAF value of 0.544, confirming partial mediation (Bratianu et al., 2023). This suggests that while IWB has a direct positive effect on OP, EO enhances this relationship by serving as an intermediary pathway that channels innovative behaviors into performance-enhancing strategies (Wang et al., 2023). The mediated effect, underscores EO's critical role as an amplifier of IWB's impact on OP (Pinela et al., 2022). The partial mediation implies that although IWB influences OP independently, EO enhances the strategic application of IWB, aligning it with organizational goals for maximum performance gains (Mahmood & Hamzah, 2018) . This supports the perspective that EO provides a structured framework through which innovative behaviors translate into measurable performance outcomes, especially in competitive and dynamic environments (Martínez-Climent et al., 2019). However, counterarguments suggest that IWB can independently contribute to OP, particularly in fostering flexibility and responsiveness, which are advantageous in less structured settings (Cvijić et al., 2019). The findings underscore the importance of integrating EO as part of the organizational strategy to fully leverage the benefits of IWB on OP (Mahmood & Hamzah, 2018). Organizations should consider cultivating both innovative behaviors and a strong entrepreneurial orientation to maximize performance, particularly in contexts that demand adaptability and strategic innovation (Kiani et al., 2021). This mediation analysis reinforces the notion that EO not only complements but also amplifies the positive effects of IWB on OP, establishing a synergistic relationship that supports organizational success (Cai et al., 2020).

V. CONCLUSIONS

The study demonstrates that IWB positively impacts OP, this finding highlights that encouraging employee creativity and problem-solving can elevate organizational outcomes, fostering adaptability essential for competitive environments. However, the moderate strength of this relationship suggests that IWB alone may be insufficient for optimizing OP; it requires alignment with a structured framework such as EO to channel efforts strategically. Furthermore, the strong association between IWB and EO, underscores the role of innovative work behaviors in cultivating an entrepreneurial organizational culture. EO itself significantly influences OP, showing that EO's risk-taking and proactive dimensions drive improved performance outcomes. Critically, EO partially mediates the relationship between IWB and OP, confirming that while IWB impacts OP independently, the presence of EO enhances this impact by providing a structure for innovation-driven strategies. Thus, the study's findings support a model where EO and IWB interact synergistically, advancing OP in dynamic organizational contexts. This research adds to the literature on innovation and entrepreneurship by empirically demonstrating that EO can mediate the relationship between

IWB and OP. While prior studies have investigated the individual impacts of EO and IWB on OP, this study uniquely highlights EO's mediating role, showing that EO amplifies the performance benefits of IWB by aligning employee innovation with strategic objectives. Additionally, the study provides empirical support for theories positing that both EO and IWB are necessary for sustainable performance gains, particularly in competitive and volatile environments.

By examining EO as a partial mediator, the study also advances understanding of the interplay between innovation at the individual level and entrepreneurial strategies at the organizational level. It reinforces the notion that for innovation to translate into performance, it should be directed by strategic entrepreneurship, bridging the gap in literature regarding how EO can serve as a structural facilitator in the IWB-OP link. Despite its valuable insights, the study has limitations. The reliance on self-reported data could introduce response bias, as participants may overstate innovative and entrepreneurial behaviors. Additionally, the cross-sectional design restricts conclusions about causality, as the data capture only one point in time. Longitudinal studies could better capture the dynamic relationship between IWB, EO, and OP, particularly as organizational changes occur over time. The study's context, potentially limited to specific industries or organizational sizes, may also impact the generalizability of the results. Organizational settings with varying market demand or employee demographics may exhibit different patterns of IWB, EO, and OP interactions. Future studies could explore these variables in various industry sectors or international contexts to enhance generalizability. For practitioners, the study underscores the importance of fostering both innovation and entrepreneurship within organizations. Management should create supportive environments that encourage employee creativity while implementing strategic frameworks, such as EO, to channel innovative efforts into organizational growth. By adopting both IWB and EO, organizations can position themselves for sustainable competitive advantage, especially in industries requiring rapid adaptation.

Theoretically, this study contributes to the literature on organizational innovation and entrepreneurship by demonstrating EO's partial mediation role, supporting a dual-strategy approach where both IWB and EO are essential for optimizing OP. The findings challenge the traditional view that innovation alone drives performance, proposing instead that EO can significantly enhance the utility of IWB. This nuanced understanding of the IWB-EO-OP relationship could inspire future theoretical models that address the mechanisms through which entrepreneurial strategies maximize the benefits of innovation. Future research could build on these findings by exploring other mediating or moderating factors, such as organizational learning, that might influence the IWB-OP relationship. For instance, examining how different organizational climates, such as learning-oriented cultures, might interact with EO and IWB could offer insights into maximizing performance outcomes. Similarly, studies could investigate the role of market stability or environmental dynamism as potential moderators that may affect the strength of the relationships between IWB, EO, and OP. From an academic perspective, longitudinal studies could provide a deeper understanding of how EO and IWB evolve over time and their cumulative impact on OP. Additionally, comparative studies across industries and cultural contexts could determine the extent to which these findings hold universally or are context-specific. By expanding the scope and design of studies on IWB, EO, and OP, future research could contribute to more generalizable and practical applications for enhancing organizational performance.

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